



**UNIDROIT Working Group on the
Legal Nature of Voluntary Carbon Credits
Second session (hybrid)
Rome, 22-24 April 2024**

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ISSUES PAPER

1. The International Institute for the Unification of Private Law (“UNIDROIT” or “the Institute”), in collaboration with the World Bank Group (WBG), has undertaken a project to analyse the Legal Nature of Voluntary Carbon Credits.
2. This document provides a discussion of issues that the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits (the “VCCs Working Group” or “Working Group”) may wish to consider at its second session, to be held in Rome and online from 22 to 24 April 2024.
3. This document contains a revised version of the sections of the Issues Paper ([Study LXXXVI – W.G.1 – Doc. 2](#)) and Addendum ([Study LXXXVI – W.G.1 – Doc. 2 Add.](#)) from the first session relating to Preliminary Matters (Part I).
4. Part II of this document suggests a possible structure of the future instrument to be considered by the Working Group. Part III instead relates to the content of the future instrument and is based on the Working Group’s first session, as well as the intersessional work carried out following the Working Group’s first session, which included close collaboration with the secretariat of the United Nations Commission on International Trade Law (UNCITRAL). Pursuant to a decision adopted at its 56th session, the UNCITRAL Commission requested its secretariat to prepare a detailed study on the aspects of international trade law related to voluntary carbon credits, in coordination and collaboration with UNIDROIT as well as with other organisations such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Hague Conference on Private International Law (HCCH). In January 2024, UNIDROIT and UNCITRAL produced a draft Joint Study on the Legal Nature of Verified Carbon Credits Issued by Independent Carbon Standard Setters (the “UNCITRAL/UNIDROIT Joint Study”). The UNCITRAL/UNIDROIT Joint Study sets out a mapping exercise in the area of verified carbon credits (VCCs) to help States assess the options available to them in addressing relevant legal issues, in particular as regards the legal nature of VCCs. The draft UNCITRAL/UNIDROIT Joint Study was considered at a Joint Meeting of the UNCITRAL Expert Group and the UNIDROIT Working Group held in Vienna on 31 January and 1 February 2024 (the “UNCITRAL/UNIDROIT Joint Meeting”). The UNCITRAL/UNIDROIT Joint Study was finalised in March 2024 and will be presented to the UNCITRAL Commission in June and July 2024.¹
5. The UNCITRAL/UNIDROIT Joint Meeting was followed on 2 February 2024 by an intersessional Working Group meeting chaired by UNIDROIT and the World Bank Group (WBG) focusing on the type of instrument to be developed by the Working Group. The Working Group agreed in principle to develop a soft law instrument that may take the form of principles plus commentary.

¹ See UNCITRAL/UNIDROIT study on the legal nature of verified carbon credits issued by independent carbon standard setters, A/CN.9/1191, 14 March 2024, available at [1191_advance_copy_1.pdf \(un.org\)](#) and enclosed hereto as Annexe III (hereinafter “UNCITRAL/UNIDROIT Joint Study”).

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I. PRELIMINARY MATTERS

A. Background to the Project

6. On 24 January 2022, the International Swaps and Derivatives Association (ISDA) submitted a proposal to UNIDROIT recommending that UNIDROIT consider a project to analyse the legal nature of voluntary carbon credits. ISDA's proposal was expressly supported by the Government of Paraguay in a letter received by the UNIDROIT Secretariat on 9 May 2022.

7. At its 101st session (Rome, 8-10 June 2022), the UNIDROIT Governing Council unanimously recommended the inclusion of a project to analyse the legal nature and other private law aspects of voluntary carbon credits in UNIDROIT's 2023-2025 Work Programme, with high priority.² The Governing Council's recommendation was unanimously endorsed by the UNIDROIT General Assembly at its 81st session (Rome, 15 December 2022).³

8. Following receipt of the mandate, the UNIDROIT Secretariat organised an exploratory consultative workshop in collaboration with the WBG and ISDA, held at ISDA's headquarters in London on 27 March 2023. The purpose of this first exploratory consultative workshop was to identify relevant private law issues in the field of voluntary carbon credits with a view to begin delineating, albeit preliminarily, the scope of the project. A discussion paper was prepared by the Secretariat to guide the deliberations. The workshop was attended by 24 participants, including representatives from international organisations, industry associations and academic institutions, as well as private practitioners and members of the UNIDROIT Secretariat.

9. An [update](#) on the preparatory work of the project, drawing on the conclusions of the first exploratory consultative workshop as well as on the Secretariat's own research, was presented to the UNIDROIT Governing Council at its 102nd session (Rome, 10-12 May 2023). On this occasion, the Governing Council confirmed the authorisation to establish a Working Group in collaboration with the WBG. The Council also encouraged further coordination in this area with other international organisations, such as UNCITRAL.

10. A second exploratory consultative workshop was held at the WBG's office in Vienna on 11 July 2023. This second workshop was attended by 28 participants, including experts from international organisations, development banks, academic institutions and the private sector, as well as representatives from the UNIDROIT Secretariat. The second exploratory consultative workshop closed with the participants noting that next steps would be delineated in coordination with UNCITRAL in light of UNCITRAL's 56th Commission Session held in Vienna on 3-21 July 2023 and the Colloquium on Climate Change and the Law of International Trade organised by the UNCITRAL secretariat in Vienna on 12-13 July 2023.

11. Following its 56th Session, UNCITRAL's Commission gave its secretariat a mandate to conduct exploratory work in the area of voluntary carbon credits in cooperation with UNIDROIT and other organisations. In this context, UNCITRAL and UNCITRAL-nominated experts participated in the first session of the Working Group. Furthermore, as noted above, the UNCITRAL/UNIDROIT Joint Meeting was held in Vienna in February 2024 and the two organisations co-authored the UNCITRAL/UNIDROIT Joint Study.

B. Purpose of the Project

12. The legal nature of voluntary carbon credits determines issues such as the registration, issuance, transfer, and retirement of the credits and impacts broader considerations such as

² See UNIDROIT 2022, [C.D. \(101\) 4 rev](#), paras 50-60.

³ See UNIDROIT 2022, [A.G. \(81\) 3](#), paras 75-78.

collateralisation and insolvency. Greater clarity on the legal nature of voluntary carbon credits would significantly contribute to the development of an efficient and more robust global voluntary carbon market (VCM).

13. The main objective of the UNIDROIT project is to provide guidance on private law issues so as to enhance confidence in VCC transactions and support the development of a well-functioning VCM. A strong VCM could play a central role in fighting climate change, help achieve the goals of the Paris Agreement, and facilitate the fulfilment of the United Nations Sustainable Development Goals (UNSDGs). Given that a significant share of the projects that generate VCCs are located in developing economies, a reliable VCM also provides an opportunity to increase capital flow to emerging markets and provide funding to climate mitigation projects.⁴

14. While regulation *per se* is outside the scope of the project, there are certain aspects touched upon by the project which border on regulatory issues. The Working Group may thus wish to take these into account to ensure coherence between the recommendations for private law and any regulatory approaches.

C. Format and Title

15. UNIDROIT's fundamental statutory objective is to prepare modern and, where appropriate, harmonised uniform rules of private law.

16. The uniform rules drawn up by UNIDROIT may take the form of various types of international law instruments, depending on the characteristics of the particular project. For example, in keeping with the Institute's intergovernmental structure, legal instruments developed by UNIDROIT may take the form of international conventions, designed to apply automatically in preference to a State's domestic law once all the formal requirements of that State's domestic law for their entry into force have been completed.⁵

17. At the same time, however, alternative forms of harmonisation or modernisation have become increasingly popular in areas where a binding instrument is not felt to be essential. Such alternatives may include model laws, which States may take into consideration when drafting domestic legislation,⁶ or general principles which legislators, judges, arbitrators and contracting parties may decide whether to adopt.⁷ Where a subject is not judged ripe for uniform rules, another alternative consists in legal guides, typically addressing new business techniques or types of transactions, or the framework for the organisation of markets both at the domestic and the international level.⁸

18. The Working Group discussed the type of instrument to be developed during the intersessional meeting held in Vienna on 2 February 2024. Given the lack of a mandate to work on a hard law instrument such as an international convention or treaty, the Working Group considered soft law options. A model law was not considered suitable in light of the state of the market and the need to explain the nature of VCCs with reference to existing domestic frameworks. The Working Group instead focused on principles with commentary or a legal guide with recommendations. It was observed that these types of instruments were likely to be the most appropriate considering the need for flexibility and guidance, as well as the desirability to offer greater clarity to the market through

⁴ See, e.g., UNCITRAL/UNIDROIT Joint Study, para 50.

⁵ See, e.g., [2001 Convention on International Interests in Mobile Equipment](#) (the "Cape Town Convention"); [1995 UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects](#).

⁶ See, e.g., [UNIDROIT Model Law on Factoring](#).

⁷ See, e.g., [UNIDROIT Principles on Digital Assets and Private Law](#).

⁸ See, e.g., UNIDROIT | FAO | IFAD [Legal Guide on Contract Farming](#).

the use of commentary. The Working Group thus tentatively agreed to proceed with the drafting of a set of principles and commentary, subject to the approval of UNIDROIT's Governing Council.

19. As to the title of the instrument, at the UNCITRAL/UNIDROIT Joint Meeting the expert group discussed the appropriateness of the word "voluntary". It was noted that it is the purchase that is voluntary rather than the unit itself and it was suggested that reference be made to *verified carbon credits* or *verified carbon units* rather than voluntary carbon credits. This would underscore that what distinguishes these instruments from other types of climate financing tools is the fact that the project-based emission reductions or removals represented by the carbon credit have been independently recognised and verified by a third party. Moreover, reference to verified carbon credits or units would potentially encompass credits verified by States as well as credits verified by independent carbon crediting programmes. Use of the acronym "VCC" in this paper thus refers to "verified carbon credit" rather than "voluntary carbon credit".

20. It is suggested that the title of the instrument could be "UNIDROIT Principles on the Legal Nature of Verified Carbon Credits". Once the project has advanced sufficiently, the endorsement of UNIDROIT's Governing Council may be sought for an appropriate title.

D. Target Audience

21. As consistent with all UNIDROIT instruments, the prospective international instrument should be relevant to all jurisdictions irrespective of the legal tradition (*e.g.*, both common law and civil law jurisdictions) and should aim to reduce the legal uncertainty which practitioners, judges, legislators and market participants face in relation to VCCs, including issues pertaining to the issuance, ownership and transfer of VCCs.

22. In particular, the Working Group is encouraged to consider the potential use of any future instrument by developing countries, including in aiding jurisdictions with limited resources develop relevant international law frameworks to better participate in the VCM.

E. Composition of the Working Group

23. Consistent with UNIDROIT's established working methodologies, the VCCs Working Group is composed of experts selected for their expertise in the fields of carbon credit trading, environmental law, property law, contract law, secured transactions, and digital technology. Experts participate in a personal capacity and represent the world's different legal systems and geographic regions. Due to the specific nature of the project, particular focus is placed to ensure representation from developing economies, especially from the African, Latin American, and Asia-Pacific regions, where many of the climate mitigation projects giving rise to VCCs are situated.

24. To date, the Working Group is composed of the following members:

- Filippo Annunziata, Professor of Financial Markets and Banking Law, Università Bocconi Milano (Italy)
- Ipshta Chaturvedi, Partner, Dentons Rodyk (Singapore) (nominated by UNCITRAL)
- Luca Enriques, Professor of Corporate Law, University of Oxford (United Kingdom/Italy)
- Megumi Hara, Professor of Law, Chuo University (Japan)
- Caroline Kleiner, Professor of Law, University Paris Cité (France)
- Matthias Lehmann, Professor of Private Law, University of Vienna (Austria)
- Ludovino Lopes, Founding Partner, Ludovino Lopes Sociedade de Advogados (Brazil/Portugal)
- Kelvin Low, Professor of Private Law, National University of Singapore (Singapore)

- Andrea Tosato, Associate Professor of Commercial Law, University of Nottingham (United Kingdom) and Visiting Associate Professor in Law, University of Pennsylvania (United States of America)
- Géraud de Lassus St-Geniès, Professor of Law, Laval University (Canada) (nominated by UNCITRAL)
- Rolf H. Weber, Professor, University of Zurich (Switzerland)
- Zhang Xiaoping, Associate Professor of Law, Central University of Finance and Economics (People's Republic of China) (nominated by UNCITRAL)

25. Organisations, industry associations, legal practitioners, financial sector representatives and members of academic institutions with expertise in the field of VCCs and private law have been invited to participate as observers in the Working Group. It is expected that, in addition to contributing to the discussions of the Working Group, participation of these stakeholders will assist in the promotion, dissemination and implementation of any international instrument that is ultimately developed and adopted.

26. To date, the below organisations have joined the Working Group as institutional observers:

- Hague Conference on Private International Law (HCCH)
- Asia Development Bank (ADB)
- Asia-Pacific Financial Forum (APFF)
- Environmental Defense Fund (EDF)
- Frank J. Guarini Center on Environmental, Energy and Land Use Law at New York University School of Law
- Inter-American Development Bank (IADB)
- International Emissions Trading Association (IETA)
- European Law Institute (ELI)
- International Law Institute (ILI)
- International Organization of Securities Commissions (IOSCO)
- International Swaps and Derivatives Association (ISDA)
- Nigerian Securities and Exchange Commission
- Stock Exchange of Thailand
- TOSCA Research Group, Centre for Responsible Digitalisation
- United Nations Framework Convention on Climate Change (UNFCCC) (nominated by UNCITRAL)
- West African Alliance on Carbon Markets and Climate Finance

27. The following individuals have joined the Working Group as observers, in a personal capacity:

- Dessanin Ewèdew Thierry Awesso, Teaching Assistant, Université Côte d'Azur (France/Togo)
- Malik R. Dahlan, Emeritus Professor of International Law and Public Policy, Queen Mary University of London (United Kingdom)
- Blanca López Bassa, Chief Legal Officer, Paskay (Peru)
- Marisa Martin, Pollination (United States of America)

- Gabriela Melgarejo, Researcher, Centro de Educación de Derecho, Economía y Política (CEDEP) (Paraguay)
- Jason Norman Lee, Managing Director, Legal & Regulatory, Temasek International Pte. Ltd (Singapore)
- Cameron Prell, Managing Director, The dCarbon Group (United States of America)
- Rodrigo Jesús Rodríguez Tornquist, Professor, Universidad Nacional de San Martín (Argentina)
- Munkh-Orgil Tseng, Member of the State Great Hural (Parliament) (Mongolia)
- Ingrid York, Partner, White & Case LLP (United Kingdom)
- Peter Zaman, Partner, Holman Fenwick Willan LLP (Singapore)

28. José Antonio Moreno Rodriguez, Member of UNIDROIT's Governing Council, as well as Suzanne Howarth and Antenor Madruga, respectively UNIDROIT Correspondents for Australia and Brazil, participate in the Working Group as observers. Professor Louise Gullifer (University of Cambridge) acts as a Senior Advisor to the UNIDROIT Secretariat for this project.

F. Methodology and Timeline

29. The Working Group will undertake its work in an open, inclusive, and collaborative manner. As consistent with UNIDROIT practice, the Working Group will not adopt any formal rules of procedure and will seek to make decisions through consensus.

30. The Working Group will meet at least twice a year for three days in Rome, Italy. Meetings will be held in English without translation. Remote participation will be possible, although experts will be expected to attend in person. In the interest of cooperation with UNCITRAL and in the context of the support provided by the WBG, other meetings may take place in different locations.

31. The documents for the Working Group meetings will generally be distributed at least ten days in advance of each session. After each session of the Working Group, the UNIDROIT Secretariat will share a high-level summary of the meeting with all participants. Such document will also be published on the UNIDROIT website.

32. The present project is a high priority project on the current UNIDROIT Work Programme for the period 2023-2025. The following would be a tentative work plan:

- Development of an international instrument on the Legal Nature of VCCs over five Working Group sessions:⁹
 - (a) *First session*: 10-12 October 2023
 - (b) *Second session*: 22-24 April 2024
 - (c) *Third session*: 4-6 September 2024
 - (d) *Fourth session*: January 2025
 - (e) *Fifth session*: April 2025
- Consultations and finalisation: second half of 2025
- Adoption by the Governing Council of the complete draft in 2026.

⁹ Intersessional subgroup meetings may be conducted remotely when deemed necessary.

G. Intersessional Work

33. A subgroup of the Working Group met remotely on 13 December 2023 specifically to consider the legal nature of VCCs and whether VCCs can be the subject of proprietary rights. The subgroup addressed what it means to be the subject of proprietary rights and analysed possible approaches to establishing that VCCs could be subject to proprietary rights including by considering: (i) existing categories of objects of property rights; (ii) whether VCCs possess most or all of the characteristics of things that are capable of being the subject of proprietary rights; and (iii) whether the establishment of an entirely new type of object of proprietary right was warranted.

34. The Working Group met on 2 February 2024 at the World Bank premises in Vienna and online, following the UNCITRAL/UNIDROIT Joint Meeting. The Working Group primarily discussed the type of instrument to be developed and tentatively agreed, subject to the approval of UNIDROIT's Governing Council, to proceed with the development of a set of principles and commentary.

35. A subgroup of the Working Group met remotely on 27 February 2024 to discuss the proposed draft structure and content of the future instrument, included here as Annexe I.

H. Relationship with Existing International Instruments and Initiatives

36. The UNIDROIT project on the Legal Nature of Voluntary Carbon Credits is included in UNIDROIT's areas of work related to Sustainable Development and Law and Technology. The project aligns with UNIDROIT's ongoing initiative to analyse the role private law plays in the achievement of the UNSDGs, in particular towards the implementation of climate action. Because VCCs are often issued in the form of digital certificates, the project is complementary to the recently adopted [UNIDROIT Principles on Digital Assets and Private Law](#) (the "DAPL Principles") which establish clear rules relating to certain private law aspects of digital assets, with a focus on proprietary rights.¹⁰

37. UNIDROIT's previous work in the area of Capital Markets and Intermediated Securities, in particular the [Geneva Securities Convention](#), the [Principles on Close-Out Netting](#) and the [Legislative Guide on Intermediated Securities](#) may also be relevant to the analysis of the legal nature of VCCs. In addition, the Working Group may wish to consider the [Guide on Best Practices for Electronic Collateral Registries](#), developed by the Cape Town Convention Academic Project. Finally, the UNIDROIT [Principles for International Commercial Contracts](#) may be relevant for any contract law analysis.

38. The project may also draw on ongoing initiatives and existing instruments of UNCITRAL. For example:

- In 2021, the UNCITRAL Commission heard a proposal to examine (i) how existing UNCITRAL texts could be aligned with climate change mitigation, adaptation and resilience goals, and (ii) whether further work could be done by UNCITRAL to facilitate such goals in the implementation of those texts or the development of new texts. In furtherance of such a proposal and on the basis of expressions of interest by several of its member States, the UNCITRAL secretariat commissioned two studies on the private law aspects of climate change, the results of which have been summarised in Notes issued by the UNCITRAL secretariat (together, the "UNCITRAL Studies").¹¹

¹⁰ In particular, the DAPL Principles cover digital assets which are capable of being subject to control, and they provide guidance on issues related to private international law, control and transfer, custody, secured transactions, procedural law including enforcement, and insolvency.

¹¹ Specifically, the UNCITRAL Studies examine the scope for a contribution by UNCITRAL to climate change mitigation, adaptation and resilience by addressing: (i) private law issues relating to clean investments; (ii) private law and the incorporation of climate considerations into business decisions; and (iii) UNCITRAL instruments and climate action. See UNCITRAL Secretariat, *Work Programme: Possible future work on climate change mitigation, adaptation and resilience*, A/CN.9/1120, 15 May 2022; UNCITRAL Secretariat, *Work*

- Following a request by the UNCITRAL Commission, on 6 October 2023, the UNCITRAL secretariat circulated a questionnaire to all member States of the United Nations, with a view to gathering information on their existing legislation on carbon trading, the state of VCMs in their country, and on the legal nature of emissions allowances/carbon credits and VCCs under their domestic law (the “UNCITRAL Questionnaire”). The results of the UNCITRAL Questionnaire are addressed in the UNCITRAL/UNIDROIT Joint Study.
- In addition, the project may draw on the [UNCITRAL Model Law on Secured Transactions](#) as well as the [1997 UNCITRAL Model Law on Cross-Border Insolvency](#) and the 2004 UNCITRAL Legislative Guide on Insolvency Law (“UNCITRAL LGIL”). The UNCITRAL secretariat continues to explore issues related to the applicable law in insolvency proceedings in the context of the ongoing efforts of Working Group V.¹²

39. The HCCH has been participating in the VCCs project as an institutional observer. In March 2024, the HCCH’s Permanent Bureau sought and received the mandate from HCCH’s Council on General Affairs and Policy to, *inter alia*: (i) study the relevant private international law (PIL) aspects of voluntary carbon markets in partnership with relevant subject matter experts and observers and subject to available resources; and (ii) contribute to the UNIDROIT Project on the Legal Nature of Voluntary Carbon Credits.¹³

40. Several initiatives and projects of the WBG may also be informative. In particular, the WBG has been focusing on Emission Reductions Purchase Agreements (ERPAs), as well as carbon pricing and results-based climate finance projects. It is important to note the Climate Warehouse Project, which develops digital infrastructure to foster greater transparency, trust, and integrity in the carbon markets. Examples include the metadata global platform Climate Action Data Trust (CAD Trust).¹⁴ The CAD Trust has developed a decentralised and open-source metadata platform that links, aggregates and harmonises all major carbon credit registry data to enhance transparent accounting, in line with Article 6 of the Paris Agreement. The CAD Trust uses blockchain technology to create a decentralised record of carbon market activity, aiming to contain the risk of double counting, improve transparency, and increase trust in carbon credit data. Further, Scaling Climate Action by Lowering Emissions (SCALE) is an umbrella multi-partner trust fund within the results-based climate finance programmes of the WBG.¹⁵

41. Additional international initiatives and studies may be relevant and should be taken into account by the Working Group when developing the international instrument to avoid duplication of efforts and overlap. These include, but are not limited to, the following:

- The *Integrity Council for Voluntary Carbon Markets* (ICVCM), an independent governance body for the VCM, is concentrated on the supply side of the VCM. It has established the Core Carbon Principles (CCPs), which set out key principles for high-integrity carbon credits, as well as an Assessment Framework which includes the detailed criteria the ICVCM employs to assess whether carbon crediting programmes and specific categories of carbon credits meet the CCPs.¹⁶ Independent carbon crediting programmes assessed as CCP-eligible will be able to use the CCP label on carbon credits from approved categories.

Programme: Possible future work on climate change mitigation, adaptation and resilience, A/CN.9/1153, 10 May 2023. Both documents are available at <https://uncitral.un.org/en/climatechangecolloquium>.

¹² For additional information, see [Working Group V: Insolvency Law | United Nations Commission On International Trade Law](#).

¹³ See [HCCH, CGAP 2024, Conclusions and Decisions, March 2024](#), paras 18-19.

¹⁴ For additional information, see <https://climateactiondata.org/>.

¹⁵ In addition to those mentioned above, there are also a number of initiatives aimed at providing net zero corporate guidance, including in relation to the use of crediting and VCCs. See UNCITRAL/UNIDROIT Joint Study, para. 73.

¹⁶ For additional information, see <https://icvcm.org/the-core-carbon-principles/>.

- In December 2023, the *International Chamber of Commerce* (ICC) published its third report on *Proposals for Effective Carbon Pricing*, providing recommendations concerning, in particular, issues related to carbon leakage and carbon linkage.¹⁷
- The *International Emissions Trading Association* (IETA) has published a report addressing the evolution of the VCM.¹⁸ IETA also provides standardised documentation for emission trading, including documents that address primary and secondary over-the-counter emission markets.¹⁹
- The *International Organization of Securities Commissions* (IOSCO) published a Discussion Paper in November 2022 with the aim of advancing the discussion on VCMs and the role financial regulators may play in promoting their integrity.²⁰ In December 2023, IOSCO followed up with a Consultation Report outlining a proposed set of Good Practices to promote the integrity and orderly functioning of VCMs.²¹
- The *International Swaps and Derivatives Association* (ISDA) published a white paper in December 2021 which investigated the legal treatment of voluntary carbon credits²² and considered certain other aspects of transactions in voluntary carbon credits (such as when they might be regulated as derivatives).²³ The white paper also recommended steps to further develop legal certainty in voluntary carbon credits at both the global and jurisdictional level. An additional paper exploring the legal nature of voluntary carbon credits under French, Japanese and Singapore law was published in November 2022.²⁴ In December of the same year, ISDA published the *Verified Carbon Credit Transactions Definitions*, which are a definitional booklet that provides a set of standardised terms for the trading and retirement of VCCs in the secondary market.²⁵ Version 2.0 of the *Verified Carbon Credit Transactions Definitions* was released in February 2024. The document is in the form of a standard definitional booklet for physically settled secondary market VCC transactions and is accompanied by template confirmations for VCC spot, forward and option transactions.²⁶
- The *Voluntary Carbon Markets Integrity Initiative* (VCMI)²⁷ is an international non-profit organisation consisting of a multi-stakeholder project bringing together representatives of civil society, businesses, local communities, and governments to establish guidance on how voluntary carbon credits can be used and claimed as part of credible net-zero decarbonisation strategies. Alongside this work, the VCMI provides support to countries in building capacity to bring high-integrity carbon credits into the carbon market. In November 2023, the VCMI

¹⁷ See ICC (2023), *ICC proposals for effective carbon pricing: Leakage and linkage considerations*, available at <https://iccwbo.org/news-publications/policies-reports/principles-and-proposals-for-effectivcarbon-pricing/>.

¹⁸ See IETA, *The Evolving Voluntary Carbon Market*, March 2023, available at <https://www.ieta.org/resources/reports/the-evolving-voluntary-carbon-market-paper/>.

¹⁹ See <https://www.ieta.org/resources/trading-documents/>.

²⁰ See IOSCO, *Voluntary Carbon Markets Discussion Paper*, CR/06/22, November 2022, available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD718.pdf>. IOSCO also published a Final Report on the compliance carbon market. See IOSCO, *Compliance Carbon Markets Final Report*, FR/09/23, July 2023, available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD740.pdf>.

²¹ IOSCO, *Voluntary Carbon Markets Consultation Report*, CR/06/2023, December 2023, available at [CR06/2023 Voluntary Carbon Markets \(iosco.org\)](https://www.iosco.org/library/pubdocs/pdf/IOSCOPD740.pdf).

²² At the time of publishing, the term “voluntary carbon credits” was a commonly used term to refer to VCCs bought and sold outside of compliance trading schemes.

²³ ISDA, *Legal Implications of Voluntary Carbon Markets*, ISDA, December 2021, available at <https://www.isda.org/2021/12/01/legal-implications-of-voluntary-carbon-credits>.

²⁴ ISDA, *The Legal Nature of Voluntary Carbon Credits: France, Japan and Singapore*, ISDA, November 2022, available at <https://www.isda.org/a/PlcgE/Legal-Nature-of-Voluntary-Carbon-Credits-France-Japan-and-Singapore.pdf>.

²⁵ ISDA, *2022 ISDA Verified Carbon Credit Transactions Definitions*, available at <https://www.isda.org/book/2022-isda-verified-carbon-credit-transaction-definitions/>.

²⁶ See Linklaters, *The 2022 ISDA Verified Carbon Credit Transactions Definitions: Version 2.0*, available at assets.isda.org/media/5af592d3/1f1561b4-pdf/.

²⁷ For additional information, see <https://vcmintegrity.org/>.

released the second version of its Claims Code of Practice (first published in June 2023). The VCMCI Claims Code of Practice addresses integrity issues on the demand side of the VCM by offering guidance to companies and other non-state actors on how they can credibly make use of carbon credits as part of their voluntary climate commitments and on how they communicate their use of those credits.²⁸

- Six of the main carbon crediting programmes issued a joint statement at the 2023 United Nations Climate Change Conference (COP28), noting that they “are embarking on a collaboration to promote integrity throughout 2024 to create the next step-change in the dependability of carbon markets”.²⁹ In particular, the signatories undertook to, among other things: (i) learn from each other’s best practices; (ii) support the independent assurance of programmes by the ICVCM; (iii) seek to align standards to common principles for the quantification and accounting of removals and reductions; (iv) work to extend the durability of carbon sinks, including by insuring against reversals; (v) create indicators to promote community benefits of projects on the ground, to underline sustainable development achievements and to safeguard against negative harm; (vi) improve the transparency around the use of carbon credits; and (vii) work to improve and enhance the flow of finance to developing countries to help them achieve and go beyond their nationally determined contributions.³⁰

42. It should be noted that the VCC field is a rapidly evolving space; government regulatory agencies are also exploring the use and legal nature of VCCs.³¹

II. STRUCTURE OF THE INSTRUMENT

43. Based on the discussions held to date, the following list of topics is suggested for consideration by the Working Group at its second session:

- The scope of the instrument and a set of definitions;
- The analysis pursuant to which VCCs can be the subject of proprietary rights;
- Relevant conflicts of law aspects;
- Aspects relevant to the recordation and issuance of VCCs;
- Aspects relevant to the transfer of VCCs;
- Aspects relevant to the retirement, reversal, and cancellation of VCCs;
- Intermediation, including registries and custody;
- Secured transactions and collateralisation; and
- Insolvency.

²⁸ See VCMCI, Claims Code of Practice V.2, November 2023, available at <https://vcminegrity.org/wp-content/uploads/2023/11/VCMCI-Claims-Code-of-Practice-November-2023.pdf>.

²⁹ COP 28 ICP Joint Statement, 4 December 2023, available at <https://www.ieta.org/wp-content/uploads/2023/12/COP28-ICP-joint-statement.pdf>.

³⁰ COP 28 ICP Joint Statement, 4 December 2023, available at <https://www.ieta.org/wp-content/uploads/2023/12/COP28-ICP-joint-statement.pdf>.

³¹ For example, in December 2023 the United States Commodities Futures Trading Commission (CFTC) announced that it had approved a proposed guidance and request for public comment regarding the listing for trading of VCCs derivative contracts. The proposed guidance outlines factors that a CFTC-regulated exchange should consider when addressing requirements of the Commodity Exchange Act (CEA) and CFTC regulations that are relevant to the contract design and listing process. CFTC, *CFTC Issues Proposed Guidance Regarding the Listing of Voluntary Carbon Credits Derivatives Contracts*, 4 December 2023, available at <https://www.cftc.gov/PressRoom/PressReleases/8829-23>.

44. A preliminary proposed structure for the instrument is included in Annexe I for consideration by the Working Group.

III. CONTENT OF THE FUTURE DOCUMENT

A. Introduction

1. Main stages in the life cycle of a VCC

45. For background purposes, this section sets out the main stages in the life cycle of a VCC.³² The Working Group may consider whether any of the below should be included in the instrument as part of the introduction or commentary.

46. Development of a climate mitigation project: The first step in the establishment of a VCC starts with the development of a project aiming at mitigating greenhouse gas (GHG) emissions (“climate mitigation project”). Climate mitigation projects generally fall into two categories: (i) reduction projects that either reduce GHG emissions from current sources, such as renewable energy projects, or prevent the release of GHG emissions into the atmosphere, such as by limiting the loss of natural resources that absorb carbon; or (ii) removal projects that remove GHG from the atmosphere. Climate mitigation projects may adopt either nature- or technology-based solutions to achieve the GHG reductions or removals.³³

47. The term “project proponent” or “project owner” is often used to indicate the individual or organisation that has “overall control and responsibility” for the climate mitigation project.³⁴ Project proponents usually research and conceive the climate mitigation projects and are the ones to whom the VCCs are first issued in the registry of first call.³⁵ They are responsible for developing a project description, submitting the project for registration with the applicable third-party issuer, and for monitoring the project’s activities.³⁶ Project proponents may not be the same as the “project developers”, *i.e.*, the entities responsible for the development and management of the climate mitigation project, and may also not be the owners of the land or other assets (such as titles or permits) required to develop the climate mitigation projects.³⁷

48. Validation and Registration: In order for VCCs to be issued in relation to a climate mitigation project, the climate mitigation project must be registered with an independent third party. This could be a public entity or an independent carbon crediting programme (ICCP).³⁸ ICCPs are private entities, each of which has its own set of rules and regulations, as well as approved methodologies to assess the climate impact of the projects they are asked to register.³⁹ Examples of such ICCPs include, but

³² See generally UNCITRAL/UNIDROIT Joint Study.

³³ UNCITRAL/UNIDROIT Joint Study, para. 54.

³⁴ See, e.g., Verra “Program Definitions”, 21 December 2021, v4.3, available at <https://verra.org/wp-content/uploads/2022/12/vcs-program-definitions-v4.3-final.pdf>.

³⁵ Study LXXXVI – W.G.1 – Doc. 3, Summary Report of the First Session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits, January 2024 (hereinafter “UNIDROIT Summary Report WG1”), para. 19.

³⁶ See, e.g., Verra, “Develop a verified carbon standard (VCS) project”, available at <https://verra.org/programs/verified-carbon-standard/develop-a-vcs-project/>.

³⁷ UNCITRAL/UNIDROIT Joint Study, para. 56.

³⁸ See UNCITRAL/UNIDROIT Joint Study, para. 11.

³⁹ See UNCITRAL/UNIDROIT Joint Study, para. 57. As explained by Verra, “[m]ethodologies are essential to quantifying real and accurate greenhouse gas (GHG) benefits of a project” and they “provide requirements and procedures to determine project boundaries, identify the baseline, assess additionality, monitor the relevant parameters, and ultimately quantify the GHG emission reductions or removals”. Verra, “Methodologies”, available at <https://verra.org/methodologies-main>.

are not limited to, the Verified Carbon Standard (Verra),⁴⁰ the Gold Standard,⁴¹ the American Carbon Registry,⁴² Climate Action Reserve,⁴³ and Puro Earth.⁴⁴

49. Before registering a climate mitigation project, the ICCP will assess whether it complies with that ICCP's rules and regulations and accepted methodologies. This assessment process involves an *ex-ante* validation to determine whether the project design document (PDD) conforms with the ICCP's rules and to evaluate the reasonableness of assumptions, limitations, and methods that support a claim about the outcome of future activities.⁴⁵

50. Verification: After the climate mitigation project has been validated and is registered, the actual GHG reductions or removals achieved by the project over a particular period (the "verification period") must be verified by an approved third-party verifier before any VCC can be issued. Generally, verification entails confirming that the climate mitigation project conforms with the parameters of the PDD and that the GHG reductions or removals are real, measurable, permanent, additional, unique, and traceable.⁴⁶ This is demonstrated through a process known as the measurement, reporting, and verification (MRV) process. As described by the WBG, the MRV process is "the multi-step process to measure the amount of GHG emissions reduced by a specific mitigation activity".⁴⁷

51. The validation and verification of a climate mitigation project's claimed climate impact is typically carried out by third-party verification bodies ("third-party verifiers"). Third-party verifiers are independent assessment bodies that develop quality assurance programmes to confirm that the activities of a climate mitigation project have resulted in the claimed GHG emissions reductions or removals. Typically, third-party verifiers will be accredited by the ICCP and hired by the project proponent.⁴⁸

52. Issuance: Once the GHG reductions or removals achieved have been verified, the ICCP issues the VCCs into the registry account of the project proponent. Each VCC is given a unique serial number and recorded on a VCC registry. VCC registries are record-keeping systems for registered climate mitigation projects for which VCCs are issued. Some registries, though not all, are operated by the same organisation as the ICCP that has issued the VCC. The registries store information and track the VCC at every step of its life cycle (*i.e.*, issuance, transfer, retirement, and cancellation).⁴⁹ Once the VCCs have been recorded, the project proponent can be issued tradable VCCs for each metric tonne of CO₂ equivalent reduced or removed from the atmosphere.

53. Transfer: Once issued, a VCC can be sold on the open market, either over the counter (OTC) or, for some VCCs issued by certain ICCPs and from certain types of methodologies, through an

⁴⁰ For additional information, see Verra website at <https://verra.org/programs/verified-carbon-standard/>.

⁴¹ For additional information, see Gold Standard website at <https://www.goldstandard.org/>.

⁴² For additional information, see American Carbon Registry website at <https://americancarbonregistry.org/>.

⁴³ For additional information, see Climate Action Reserve website at <https://www.climateactionreserve.org/>.

⁴⁴ For additional information, see Puro Earth website at <https://puro.earth/puro-standard-carbon-removal-credits/>.

⁴⁵ See, e.g., Verra, "Program overview", available at <https://verra.org/programs/verified-carbon-standard/#how-it-works>; IOSCO, *Voluntary Carbon Markets Consultation Report*, CR/06/2023, December 2023.

⁴⁶ IOSCO, *Voluntary Carbon Markets. Discussion Paper*, CR/06/22, November 2022, pp. 9-10 and pp. 13-15.

⁴⁷ WBG, "What You Need to Know About the Measurement, Reporting and Verification (MRV) of Carbon Credits", 27 July 2022, available at [https://www.worldbank.org/en/news/feature/2022/07/27/what-you-need-to-know-about-the-measurement-reporting-and-verification-mrv-of-carbon-credits#:~:text=MRV%20seeks%20to%20prove%20that,of%20CO2%20equivalent%20\(tCO2eq.](https://www.worldbank.org/en/news/feature/2022/07/27/what-you-need-to-know-about-the-measurement-reporting-and-verification-mrv-of-carbon-credits#:~:text=MRV%20seeks%20to%20prove%20that,of%20CO2%20equivalent%20(tCO2eq.)

⁴⁸ IOSCO, *Voluntary Carbon Markets. Discussion Paper*, p. 9; see also UNCITRAL/UNIDROIT Joint Study, para. 60.

⁴⁹ UNCITRAL/UNIDROIT Joint Study, para. 61.

exchange market. A VCC may be sold directly or through intermediaries such as brokers (including but not limited to banks and traders⁵⁰) or exchanges.

54. Primary and secondary markets: There are two types of VCCs markets: the primary and the secondary market. The “primary market” for VCCs refers to the first purchase of the VCC post-verification, often made directly from the project proponents who are first issued the VCCs by the ICCP. The “secondary market” for VCCs refers instead to any subsequent sale of the VCC along a chain.⁵¹ Sellers and buyers on the secondary market may include, for example, financial institutions, traders, non-governmental organisations, and corporate entities. VCC buyers may choose to hold on to the VCC, to further trade it, to seek any applicable adjustments for use in the compliance market (if the VCC is eligible for use within a compliance market), or to retire the VCC.⁵²

55. Retirement, reversal, suspension, and cancellation: If a VCC holder wishes to “claim the benefit” of a VCC, the VCC holder must retire the credit.⁵³ Claiming the benefit of the VCC can take various forms, such as the use of a VCC as an offset in a compliance programme or making a statement, when reporting the VCC holder’s emission inventory, that the VCC holder holds, and is retiring, a VCC. Once retired, a VCC is no longer tradable, and all that is left is a record of it.⁵⁴

56. Reversal is the term used to describe the event in which the GHGs that have already been verified as removed escape back into the environment. For example, a reversal would occur if trees that had been planted and generated VCCs subsequently burn down, or carbon that had been stored in a reservoir leaks. To anticipate and address such potential occurrences, climate mitigation projects that could be subject to a reversal would generally have to divert some of the VCCs they generate to what is known as a “buffer pool”. In the event of a reversal, the ICCP would cancel the equivalent number of credits in that buffer pool, such that there would be no need to unwind the VCC transactions that had already happened.⁵⁵ An issue could potentially arise if the buffer pool is

⁵⁰ IOSCO, *Voluntary Carbon Markets Consultation Report*, CR/06/2023, December 2023, p. 22.

⁵¹ UNIDROIT Summary Report WG1, para. 16.

⁵² UNCITRAL/UNIDROIT Joint Study, para. 62.

⁵³ See, e.g., UNCITRAL/UNIDROIT Joint Study, para. 35. VCCs holders may also retire them without making any claim, simply as means to support the underlying mitigation action.

⁵⁴ UNCITRAL/UNIDROIT Joint Study, para. 63. According to Section 8.2 of the Verra Terms of Use (available at https://verra.org/wp-content/uploads/Verra-Registry-TOU-September-2021_FINAL.pdf), upon the retirement of a VCC, “(a) all legal and beneficial title and interests in such Instruments will be extinguished; and (b) neither Verra, the User, nor any other person with Legal or Beneficial Ownership Rights will have any further rights to take the benefit of such Instruments nor the underlying Environmental Benefits corresponding to such Instruments”. Section 8.5 of the Verra Terms of Use further provides, in part, that “no person has any further rights to take the benefit of the cancelled or retired Instruments or the underlying Environmental Benefits corresponding to such Instruments”.

Section 9 of the Gold Standard Terms of Use (available at <https://globalgoals.goldstandard.org/standards/T-Preview-V1.1-Registry-App-Terms-of-Use.pdf>) similarly provides, in relevant part, that:

The Account Holder acknowledges and agrees that if the Account Holder retires Units in The Gold Standard Registry: (a) the Account Holder is retiring such Units permanently; (b) neither the Account Holder nor any third party has any further rights to take the benefit of such Units nor the underlying Environmental Benefits corresponding to such Units; and (c) the Account Holder will procure that all relevant third parties enter into such agreements as are necessary to ensure that neither the Account Holder nor any third parties have any further rights to take the benefit of such Units nor the underlying Environmental Benefits corresponding to such Units.

Subject to clause 17, any instruction by the Account Holder to The Gold Standard Registry to retire Units in accordance with this clause 9 is irrevocable, and the Account Holder acknowledges that any such instruction will not be reversed.

The Gold Standard acknowledges and agrees that, once the Account Holder has complied with this clause 9 and The Gold Standard has retired the Units, The Gold Standard will not take any action to exercise or purport to exercise any right or interest, or deal with or otherwise use, the retired Units or the underlying Environmental Benefits corresponding to such Units and considers that no person has any further rights to take the benefit of the retired Units or the underlying Environmental Benefits corresponding to such Units.

⁵⁵ UNIDROIT Summary Report WG1, para. 28; UNCITRAL/UNIDROIT Joint Study, para. 28.

exhausted, for example if an entire forest is wiped out by wildfire. However, Working Group experts have noted that such a scenario has not yet arisen.⁵⁶

57. As to suspension, an ICCP may suspend a VCC holder’s account and the holder’s ability to deal with the VCCs in its account if, for example, the ICCP (i) believes that the VCC holder has failed to comply with the applicable Terms of Use; (ii) believes that any of the units the VCC holder holds were created fraudulently or listed illegally; or (iii) the certification of the units is withdrawn.⁵⁷ Suspension may result in the permanent cancellation of the VCCs, whereby “all legal and beneficial title and interests” in the credits will be “extinguished”.⁵⁸ Barring such breach of the ICCP rules, the ICCP will only act in relation to a VCC on the instruction of the account holder in which that VCC sits.

2. Reasons for the instrument

58. The instrument should set out the reasons why it is being developed. Here, the Working Group discussed developing an instrument to provide clarity on the legal nature and private law aspects of VCCs, focusing in particular on proprietary law. The primary focus of the instrument is to facilitate transactions in VCCs and increase their predictability. The instrument is intended to provide guidance and reduce the legal uncertainty which practitioners, judges, arbitrators, legislators, and market participants would otherwise face in dealing with transactions in VCCs.

59. At this stage, Working Group participants observed that the analysis on the legal nature of VCCs should be carried out irrespective of the use case for the VCC, since this is subject to change. As noted above, VCCs may be used in a number of different ways. These include, for example, to voluntarily mitigate the impact of a positive emission that has occurred elsewhere, or if the VCC is of an eligible type, for submission against a compliance obligation to balance emissions with mitigations.⁵⁹ VCCs may also simply be bought as an investment, to be held and subsequently sold, or they may be bought to contribute towards the mitigation efforts of a third country from which the VCC has originated.⁶⁰ VCCs are issued before a holder determines their use case, which can change over time. It has therefore been observed that their legal nature should not depend on determination of their use.

60. Instead, the instrument will focus on VCCs where they are the subject of dispositions and acquisitions and where interests in VCCs are to be asserted against third parties.

B. Scope and Definitions

1. Scope

[Draft] Principle [1]

Scope

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

⁵⁶ UNIDROIT Summary Report WG1, para. 28.

⁵⁷ See, e.g., Gold Standard, Terms of Use, Section 10.1, available at <https://globalgoals.goldstandard.org/standards/T-Preview-V1.1-Registry-App-Terms-of-Use.pdf>.

⁵⁸ Verra, Terms of Use, Verra Registry, September 2021, Section 8.2, available at https://verra.org/wp-content/uploads/Verra-Registry-TOU-September-2021_FINAL.pdf. See also UNCITRAL/UNIDROIT Joint Study, para. 67.

⁵⁹ Compliance schemes are set up in a number of different ways with different units being eligible within each scheme. This is outside the scope of this paper.

⁶⁰ See UNCITRAL/UNIDROIT Joint Study, para. 51.

61. As noted in the UNCITRAL/UNIDROIT Joint Study, markets require certainty regarding the private law characterisation of the thing that is being traded. This is necessary in order to address a range of legal issues including how this thing may be acquired and sold, what rights its owner may assert over it, how it will be treated upon insolvency of any market participant, and whether it may be used as securities.⁶¹ Currently, several jurisdictions do not specify the legal nature of VCCs under private law.⁶²

62. At its first session, the Working Group largely agreed that the instrument should focus on the private law issues arising from the trading of carbon units that have been verified, certified, recorded, and issued by private non-State entities.⁶³ It was generally accepted that the instrument should address the primary market in the sense of considering the first person to whom the VCC is issued and the subsequent transfer of that VCC. The instrument would then focus on establishing a legal framework for the secondary market in order to support the drawing of funds into climate mitigation projects.⁶⁴

63. With the possible exception of issues related to when a VCC comes into existence, the instrument should not address issues related to the creation of the VCC, including issues concerning the quality or the integrity of the underlying climate mitigation project or the process whereby that project was validated and verified.⁶⁵ It was observed by the Working Group that, from the market's perspective, the different verification processes, standards, and issues affecting the quality of the credits were very much reflected in the price the market was willing to pay for the particular credit.⁶⁶

64. The Working Group also agreed that the instrument would not address regulatory questions, including issues of environmental law and questions relating to the implementation of Article 6 of the Paris Agreement. Likewise, issues related to tax, pricing, and accounting would fall outside the scope of the instrument.⁶⁷

65. Open questions for discussion include the extent to which the instrument should address non-verified credits issued on an *ex-ante* basis, *i.e.*, in anticipation of achievements of emission reductions, primarily as a means of prefinancing.⁶⁸ Because *ex-ante* credits have not yet been verified, they may be used in facilitating investment into VCMs, but they cannot be retired.

Questions for the Working Group:

1. *Do you agree with proposed Principle 1?*
2. *How specific should the Commentary be with respect to the definition of the scope?*
3. *Should the instrument cover VCCs issued by any third party, including State entities, or should it be limited to VCCs issued by ICCPs?*
4. *Should the instrument address unverified ex-ante units?*
5. *Are there any other issues or topics that should be specifically included as being within, or outside, the scope of the instrument?*

⁶¹ UNCITRAL/UNIDROIT Joint Study, para. 88.

⁶² UNCITRAL/UNIDROIT Joint Study, para. 91.

⁶³ See UNIDROIT Summary Report WG1, para. 14.

⁶⁴ See UNIDROIT Summary Report WG1, paras. 16-17.

⁶⁵ See UNIDROIT Summary Report WG1, para. 33.

⁶⁶ See UNIDROIT Summary Report WG1, para. 12.

⁶⁷ See UNIDROIT Summary Report WG1, para. 39. For additional details on what is meant by "accounting", see UNIDROIT Summary Report WG1, paras. 37-38.

⁶⁸ See UNIDROIT Summary Report WG1, para. 12. The UN-REDD Programme defines *ex-ante* crediting as "[t]he issuance of carbon offsets in expectation of future emission reductions". UN-REDD Programme, "Ex-ante crediting", available at <https://www.un-redd.org/glossary/ex-ante-crediting>.

2. Definitions

66. As discussed by the Working Group, it is important that the definitions included in the instrument provide support for the instrument's substantive principles. The below includes some suggestions as to key terms that should be defined with proposed language for the Working Group's consideration:

67. Verified Carbon Credits: A VCC is a unit issued on the basis of a climate mitigation project and represents the achievement of a reduction or removal of one tonne of CO₂ equivalent as certified and verified by a third-party issuer. VCCs are not themselves the GHG reduction or removal. A question for the Working Group's consideration is whether the VCCs to be addressed by the present instrument should be limited to those VCCs which are capable of being retired, on the notion, for example, that this would be consistent with the policy objective of fighting climate change. An alternative approach would be to not so limit the definition of VCCs but state that VCCs are capable of being used in multiple ways, and delineate the possible use cases in the commentary.

68. Independent Carbon Crediting Program (ICCP): An ICCP is a private entity with which the climate mitigation project is registered if the climate mitigation project has achieved acceptable third-party validation in accordance with the rules of that ICCP. The ICCP also issues VCCs once there has been an acceptable third-party verification report of a climate mitigation project's GHG reductions or removals. An ICCP is independent of the person who carries out the climate mitigation project, as well as of the party that carries out the validation of that project and the verification of its mitigation outcomes. The Working Group is encouraged to consider the minimum criteria that ICCPs should possess. It has been suggested that such minimum criteria could include, for example, that the ICCP possess a reliable system against the double-registration of climate mitigation projects to ensure the exclusivity of any VCCs that are ultimately issued.

69. Third-party Verifier: A third-party verifier is an independent third party accredited or recognised by the ICCP as entitled to carry out validation, and/or verification, and/or certification, as the case may be, in accordance with the ICCP rules. Third-party verifiers are independent assessment bodies that develop quality assurance programmes to confirm that the activities of a climate mitigation project have resulted in the claimed emissions reductions or removals in accordance with an ICCP's applicable methodology. As to minimum criteria, it was noted during the first session of the Working Group that it may suffice for the instrument to specify that third-party verifiers should be independent, and that the choice of applicable methodologies should be based on the best available scientific standards.⁶⁹ The Working Group is encouraged to consider whether any further criteria are necessary.

70. VCC Registry: A VCC registry is a record of information related to VCCs operated by a legal entity. VCC registries store information relating to the VCC at every step of its life cycle (*i.e.*, issuance, transfer between registry accounts, retirement, and cancellation). Persons have accounts with a registry. A person with an account is entitled to give instructions to the registry in relation to the VCCs which are recorded as in that person's account. This includes an instruction to a registry that the VCC can be "transferred" to another person's account within that registry⁷⁰ so that that other person can give instructions to the registry in relation to that VCC. This "transfer" is not necessarily a transfer of proprietary rights (that would depend on the applicable law).

71. Working Group participants stressed the need to have a definition that focuses on what the recording of a VCC on a registry means, rather than providing any indication as to the quality or integrity of the registry. In addition, the importance of differentiating between the record itself and the entity that administers it was noted. For example, see the suggested definition of "registry" and

⁶⁹ UNIDROIT Summary Report WG1, para. 18.

⁷⁰ At the date of this document, no intra-registry transfers are possible.

“registrar” in Section III.G.1 below. The operation of the registry by way of accounts with the registrar is also discussed below at Section III.G.1. Again, the Working Group is encouraged to consider the minimum criteria required of VCC registries in the context of the instrument. These would include those minimum criteria that allow registries to provide the necessary level of individuation, exclusivity, and rivalrousness for a VCC to be considered to have the characteristics of an object of proprietary rights (see Section III.B.3 below).

72. Additional terms that the Working Group may consider defining in the instrument include but are not limited to the following: issuance; recordation;⁷¹ transfer; retirement; reversal; cancellation; climate change mitigation project; project proponent or project owner; and primary and secondary market.

Questions for the Working Group:

6. *Do you have any comments on the proposed definitions?*
7. *Should the definition of VCC be limited further, for example, including reference to the capability of being retired?*
8. *What are the minimum criteria that each of the definitions of ICCP, third-party verifier, and VCC registry should include to support the substantive principles?*
9. *Are there any other terms that should be defined?*

3. VCCs can be the subject of proprietary rights

[Draft] Principle [3]

General Principles

A verified carbon credit can be the subject of proprietary rights.

73. One of the fundamental issues to be addressed by the instrument is whether it is possible to recommend that a national system of property law, whatever that may be, can apply to VCCs. A system of property law refers to a system whereby:

- (i) the holder of a VCC can have a right to a VCC as against third parties (as opposed to, for example, a personal right against the VCC seller on a purely contractual, bilateral basis);
- (ii) the holder of a VCC has a cause of action and remedies against anyone who takes that VCC from them;
- (iii) the holder of a VCC can transfer a proprietary right in that VCC to someone else;
- (iv) the holder of a VCC can grant a security right over that VCC;
- (v) the holder of a VCC has the right to enjoy the benefits of that VCC;
- (vi) if the VCC holder becomes insolvent, that VCC forms part of the VCC holder’s estate available for distribution to the VCC holder’s creditors; and
- (vii) if the VCC holder dies, the VCC can pass to another person by the law of succession.

⁷¹ The term “recordation” has been suggested as an alternative to the term “registration” to differentiate between the recording of a VCC on a registry and the registration of a climate mitigation project by an ICCP.

74. If a VCC can be the object of proprietary rights, the above-listed consequences would usually follow. The application of property law to a VCC therefore means that several significant questions that arise if a VCC is traded in a market can be answered according to well-developed principles in whatever national law is applicable. This, in turn, increases legal certainty and enables the VCM to flourish. It is also relevant that most stakeholders currently treat the VCC as property from the moment VCCs are issued up to the moment in which they are retired. Moreover, there are likely to be strong public policy reasons for treating VCCs as capable of being the object of proprietary rights and thus enabling the VCM to grow and increase the flow of funds to climate mitigation projects. Indeed, at its first session the Working Group emphasised that, to attract the necessary scale of investment needed for VCCs to become a vehicle for raising climate finance, one had to make the VCCs property.⁷²

75. However desirable it may be to reach the conclusion that VCCs can be the object of proprietary rights, it is also fundamental that the Working Group address why it is possible for a VCC to be the object of proprietary rights and what conditions need to be satisfied for this to be the case. Several potential reasons are outlined below for consideration.

76. *First*, if a State passes legislation saying that a VCC is capable of being the object of proprietary rights, then it has to be possible for the property law of that State to apply to a VCC. It will be necessary for any given State to work out precisely how this can be achieved, but it has to be possible as a matter of analysis. This, in turn, means that a VCC has to have some, if not all, of the characteristics that an object of proprietary rights has in that State.

77. *Second*, such characteristics are similar at a very general level in most States and are not merely descriptive. Rather, they exist because it is difficult or impossible to apply the consequences of the application of property law to something that does not have those characteristics. For example, if something is not capable of identification, it is not possible for A to transfer it to B, since B will not know whether they have it or not. It is also not possible to know whether B has taken it from A, because it is not possible to know what the thing is. If something is not capable of being controlled, that is, one person can exclude another from it, it is not possible to know whether B has “taken” it from A because the concept of “taking it” has no meaning. If it is not rivalrous, that is, the thing can be exactly reproduced and used many times, it makes no sense to say that B has taken it from A, since B cannot prevent A from “having” it; they both can “have” it.

78. *Third*, and most practically, States are likely to reject a recommendation that there should be legislation that a VCC should be capable of being the object of proprietary rights if that recommendation is not properly supported and explained.

79. *Fourth*, the conclusion that a VCC is capable of being the object of proprietary rights means that the answers to many of the other issues that arise in the context of the present project (such as issues relating to transfer, secured transactions, insolvency) are relatively straightforward to address. Generally, for many of these issues it is possible to say that national property law applies. However, the Working Group may wish to consider whether there need to be some special rules of private law (property law) that should apply to VCCs that do not apply to all objects of proprietary rights, and in this respect the reasoning of why a VCC is capable of being the object of proprietary rights is likely to be important.

80. *Fifth*, the reasoning of why a VCC is capable of being the object of proprietary rights is likely to guide the Working Group in deciding what recommendations to make as to what should change in the market to enable this conclusion to be reached.

⁷² UNIDROIT Summary Report WG1, para. 51.

81. At its first session and in subsequent intersessional meetings, the Working Group considered possible approaches to determining that a VCC can be the subject of proprietary rights. These included analysing whether VCCs could fall within existing categories of property by focusing on (i) their substance and (ii) their form.

82. As to the substance approach, if it were possible to conclude that a VCC embodied a right against a person that the first holder could transfer to the second holder by virtue of the transfer of the VCC, then the conclusion that a VCC is capable of being the subject of proprietary rights would be entirely unexceptional. The Working Group thus considered what transferable rights could be deemed to be embodied in a VCC.

83. The right of the account holder to instruct the VCC registry to retire or to transfer the VCC: While VCC registries are not registries of title,⁷³ their role is to record the issuance, transfer, retirement and cancellation of VCCs.⁷⁴ It is understood that such rights are generally provided by all VCC registries and appear to be exclusive to the account holder.⁷⁵

84. Specific representations and warranties provided to the VCC holder: The Verra system requires project proponents and third-party verifiers to provide the ICCP and all the constituents who participate in the process a warranty and a representation (in the form of a deed) about the nature of what it is that they are offering. Among other things, project proponents represent and warrant that all of the information they provide is true and complete, all project documentation is true and accurate, and that they hold full legal and equitable title and rights to all reductions generated by the projects.⁷⁶ In turn, the third-party verifier specifically represents and warrants, *inter alia*, that it has independently verified the reductions or removals generated by the climate mitigation project in accordance with the Verra Program Rules and that all factual information provided in relation to the deed or verification report are true, accurate and complete in all material respects.⁷⁷ Such representations are made to (i) Verra; (ii) each person who is an account holder holding Verra-issued VCCs relating to the project at any given time; (iii) each person on whose behalf the Verra-issued VCCs relating to the project were retired by an account holder; and (iv) each of the successors and assigns of those persons.⁷⁸ Verra units have thus been structured to create a series of rights that are capable of being claimed against somebody, irrespective of a contractual nexus. However, this approach is not uniform across ICCPs. It is not the case with respect to VCCs issued by the Gold

⁷³ See, for example, Section 9 of the Verra Terms of Use, which indicates in part that “Verra does not in any way guarantee legal title to the Instruments and the User relies on any content obtained through the Verra Registry at its own risk” and that “Verra is under no obligation to verify or otherwise enquire into the validity of, or legal title to, the Instruments or any Related Instruments and does not recognize any interest in an Instrument or any Related Instruments other than the interest of the entity named as the holder of the Instrument in the Registry or any Approved Sub-Register”.

Similarly, Section 12.2 of the Gold Standard Terms of Use provides that “the Account Holder acknowledges and agrees that The Gold Standard does not in any way guarantee legal title to the Units and the Account Holder relies on any content obtained through The Gold Standard Registry at its own risk. For the avoidance of doubt, The Gold Standard is under no obligation to verify or otherwise enquire into the validity of, or legal title to, the Units”.

⁷⁴ See, e.g., Verra Terms of Use, Section 3.1 and Gold Standard Terms of Use, Section 8.

⁷⁵ For example, the [Verra Registry](#) provides that “[a]n active Verra Registry account is required for any entity wishing to register projects or issue, retire, or transfer units”. The Verra Registry User Guide further provides that “Any person or entity wanting to participate in the Verra Registry must establish an account” and indicates that a General Account “allows the Account Holder to register projects, issue credits, transfer or export credits to counterparties, received transfers of credits from counterparties and retire VCU on its behalf. A General Account Holder can also retire credits on behalf of third parties”.

⁷⁶ See Verra Registration Representation issued in respect of the project, Section 2.2, available at <https://verra.org/programs/verified-carbon-standard/vcs-program-details/>.

⁷⁷ See Verra Verification Representation issued in respect of verification, Section 2.2, available at <https://verra.org/programs/verified-carbon-standard/vcs-program-details/>.

⁷⁸ See Verra Registration Representation issued in respect of the project, Section 2.3, and Verra Verification Representation issued in respect of the verification, Section 2.3.

Standard, for example.⁷⁹ It was also observed during the first session of the Working Group that, as the market for VCCs considerably scales, the Verra structure may not hold, since project proponents and third-party verifiers are unlikely to continue to accept that level of liability.⁸⁰

85. The problem with the substantive approach described above is that the VCC registries in which VCCs are recorded are the creation of private actors and, as such, are unlikely to be consistent across the board and across jurisdictions and could be amended at any time.⁸¹ If none of the above is considered sufficient to embody a right that can be the subject of property, then VCCs risk amounting to certified information. This information is a set of facts (*i.e.*, that the removal of one tonne of CO₂ equivalent from the atmosphere has taken place and that someone has certified that this is the case according to a particular methodology). However, without more, this is just information and information is non-rivalrous⁸² and cannot be the subject of proprietary rights.⁸³

86. It was thus suggested by Working Group participants that the instrument could note that, in practice, VCCs may sometimes involve transferable rights. However, this would not be one of the fundamental features of VCCs enabling it to be the subject of proprietary rights.

87. As to the form approach, if a VCC does not embody a right against an identified person, then it could still have a form that brings it within an acknowledged type of “thing” that is capable of being the subject of proprietary rights. For example, if the VCC took the form of a piece of paper (such as a paper certificate) then, as a tangible, there would be no doubt that that piece of paper is capable of being the subject of proprietary rights.

88. Where VCCs are not issued as paper, they could be issued, for example, as digital assets within the definition adopted in the DAPL Principles.⁸⁴ According to the DAPL Principles, digital assets such as tokens issued on a blockchain and which can be controlled using public/private key cryptography are things which can be the subject of proprietary rights. It would thus be straightforward to recommend that VCCs issued in the form of digital assets be capable of being the subject of proprietary rights.

89. The problem is that, at present, neither paper nor digital assets are widely used as the form of VCCs. VCCs are not tokenised on a blockchain. Rather, the records are kept by the VCC registry.⁸⁵ The question thus arises whether the existence of such information may be sufficient to determine that the VCC also exists as a certificate recorded in digital form and whether this may support a finding of proprietary rights.⁸⁶ An analogy could be drawn to intellectual property (IP) or registered

⁷⁹ UNCITRAL/UNIDROIT Joint Study, para. 72.

⁸⁰ UNIDROIT Summary Report WG1, para. 64.

⁸¹ UNIDROIT Summary Report WG1, para. 66.

⁸² Information can be duplicated, shared with different people, and does not provide anyone with exclusivity.

⁸³ See, *e.g.*, UNIDROIT Summary Report WG1, para. 70.

⁸⁴ DAPL Principle 2(2) defines a digital asset as “an *electronic record which is capable of being subject to control*”. According to DAPL Principle 6(1), a person has control of a digital asset if that person has (i) the exclusive ability to prevent others from obtaining substantially all of the benefit from the digital asset; (ii) the ability to obtain substantially all of the benefit from the digital asset; and (iii) the exclusive ability to transfer the abilities in (i) and (ii) to another person.

⁸⁵ For example, the Verra Registry Terms of Use provide at Section 11.4(k) that “once project information has been uploaded or posted to the Verra Registry; such project information cannot and shall not be deleted, removed, expunged or altered, except in accordance with Verra’s normal operating procedures or as required by a relevant Scheme Regulator. Any subsequent changes or additions to information previously posted shall be posted as an update/amendment, but shall not replace the original posting”.

⁸⁶ However, see Section 13 of the Gold Standard Terms of Use providing in part that “GSF reserves all rights to, *inter alia*, create digital representations of Units, rights to Units or embedding Units as an underlying component in any compound or complex arrangement or undertaking, whether dematerialized or digitalized on an information technology system, including but not limited to Digital Ledger Technology (DLT) or Blockchain, or not” and that “GSF reserves all rights to create financial instruments or securities, utility tokens, non-fungible

movable goods, assets whose existence can be argued to be similarly identified through the act of registration.

90. Moving away from the possibility of simply using existing law, another approach discussed by the Working Group consists in determining whether it can be demonstrated that a VCC possesses certain essential characteristics of things that are capable of being the subject of proprietary rights across different legal families and jurisdictions. If this were the case, national property law should be able to apply to a VCC. Such an approach would require: (i) an analysis of the essential characteristics of a thing that can be the subject of proprietary rights across legal families; (ii) consideration of whether a VCC possesses these characteristics; and (iii) consideration of whether any recommendations need to be made so that VCCs possess these characteristics.

91. What follows is a preliminary consideration of (i) the essential characteristics of a thing that can be the subject of proprietary rights, and (ii) whether VCCs can be deemed to possess these characteristics. The Working Group is encouraged to consider whether the below characteristics are sufficient to determine whether a VCC can be treated as property across legal families or whether additional features should be included to identify a universal common ground against which the proprietary aspects of VCCs may be assessed.

92. Individuation/identification: One has to know what one has, *i.e.*, what is the subject of the proprietary right. This requirement would appear satisfied in the case of VCCs, since every VCC has a unique serial number and is separately recorded in a VCC registry. A point for further consideration is whether the VCC can be considered individuated from the moment of certification because certification relates to one specific project and all the registry is doing is enabling that individuation to be perceived by the outside world. However, because of its dematerialised nature, it could be argued that a VCC only exists once it has been recorded in a database or registry.

93. Excludability/control: This relates to the idea that, for one to have a proprietary right in a thing, one has to be able to prevent someone else from having a proprietary right in that same thing. In relation to tangibles or digital assets, possession or exclusive control is used, respectively, to achieve excludability, although possession or exclusive control does not necessarily equate to ownership. But excludability can also come from the recording of the VCC on a registry, for example. Excludability, or capacity for control, does not mean that A has a foolproof system to stop B from obtaining possession or control. It is rather the fact that the thing is capable of being possessed or controlled that is enough. So, the fact that the VCC registry can be hacked does not necessarily stop the VCC from having this characteristic.⁸⁷

94. Both individuation and excludability are features deemed important in some legal systems because they enable people to know who owns what. In other words, possession or control is a means of publicity that A has a proprietary right to a thing. However, in some jurisdictions (*e.g.* common law countries) transfer of possession or control in a non-title register may not equate with

tokens, crypto currencies, or similar crypto/digital assets representing credits issued by Gold Standard, Units or rights to Units recorded and transferred on DLT and blockchain networks and protocols”.

⁸⁷ Among other things, the Verra Terms of Use provide at Section 13.6 that “Neither Verra nor the Verra Registry Software Provider assumes any responsibility for, and neither shall be liable for, any damages to, or viruses that may infect, the User's equipment or other property on its Verra Registry Account and Program Sub-Accounts or Omnibus Account and Business Sub-Accounts, or the User's access to and use of the Verra Registry”. In addition, Section 11.4(p) provides that “Verra may, in its sole discretion, with or without cause or prior notice to the User (i) temporarily or permanently cease to operate the Verra Registry; (ii) temporarily or permanently cease to make Instrument issuances or other services described hereunder available; or (iii) terminate or suspend the User's access to the Verra Registry in accordance with Clause 14 of these Terms of Use”.

The Gold Standard Terms of Use similarly provide that the account holder “is solely responsible for any damage to computer systems or loss of data that may result from the Account Holder's access to The Gold Standard Registry or SC App” and that “The Gold Standard does not warrant that The Gold Standard Registry software is free of bugs or errors” (see Section 17) and that the Gold Standard may temporarily suspend a user's account if certain conditions are met (see Section 10).

who owns what (or who has a proprietary right in what). However, a means of publicising this may be a persuasive point for some jurisdictions in relation to VCCs.

95. Rivalrousness: This term refers to the idea that if one person does something with a thing (e.g., uses it, transfers it, destroys it), another person cannot do the same with that thing. Rivalrousness is important because if the same thing can be transferred multiple times by the same person a property law regime cannot sensibly apply to it. Information is non-rivalrous as it can be used, held, and 'transferred' by many people at the same time. Tangibles, on the other hand, are rivalrous by nature. Intangibles which consist of a right are also rivalrous by nature, in that the obligation can only be owed to one person at a time. Digital assets are also rivalrous, largely because if A transfers a digital asset to B, A cannot transfer that same digital asset to C. The recordation system provided by VCC registries may indicate that a VCC is likely to be rivalrous. A question for the Working Group is whether a VCC's capability of being retired is a necessary component of a VCC's rivalrousness.

96. Ability to independently sue, irrespective of contractual privity: a question for the Working Group's consideration is whether the ability to independently sue, irrespective of contractual privity, is an important element of an *in rem* right. The nature of a right *in personam* is basically a series of contractual rights to sue. Whereas if you hold the right and have the ability to sue without the need for privity of contract, that is a characteristic of having a proprietary right which is currently available under the Verra system but not under the rules and regulations of other ICCPs. The Working Group is encouraged to consider whether this feature represents an essential feature of a property right, or whether it is a characteristic relevant to the particular type of property.

97. Capability of being transferred: the Working Group should also consider whether a VCC needs to be capable of being transferable in order for it to be the subject of proprietary rights. At its first session, Working Group participants observed that it would be highly unlikely to find VCCs which were not transferrable since the creation of a carbon credit was a non-trivial process that was carried out for the purpose of monetising or transferring the unit. If a VCC was issued under circumstances that provided for an absolute ban on transfer, then there would be some difficulties in saying that that particular credit was capable of being subject to proprietary rights. Yet, it was also noted that, under French law, there were carbon credits labelled "*bas-carbone*"⁸⁸ that were not transferable by law and that in civil law jurisdictions it was possible to have an object which was subject to property rights but which could not be transferred.⁸⁹

98. If it is possible to conclude that VCCs have all or most of the above characteristics, then there is a strong basis for recommending that they should be capable of being the subject of proprietary rights. This is because: (i) a national property regime will be able to apply to them; and (ii) States will be comfortable that, even if VCCs do not fit within existing types of objects of proprietary rights, there is a reasonably close analogy with those types of objects.

Questions for the Working Group

10. *Do you agree with the above characteristics as essential features of things that have proprietary rights?*
11. *Is there a need to be more prescriptive? For example, in relation to the type of registry in which the VCC would have to be recorded? Would the registry need to be public?*
12. *Are there any other characteristics or features that should be added to ensure that the test is as widely applicable and jurisdictionally neutral as possible?*

⁸⁸ See Décret n° 2018-1043, 28 November 2018, art. 4, available at <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000037657959>.

⁸⁹ UNIDROIT Summary Report WG1, paras. 41-43.

13. *Are there any features or characteristics specific to VCCs that should be included?*
14. *Should any recommendations be made so that VCCs do possess such features or characteristics?*
15. *Is a VCC's capability of being retired essential to the VCC being considered rivalrous?*
16. *Does the definition of VCC need to be adapted to reflect the minimum characteristics of property as described above?*

C. Conflicts of Law

99. The many cross-border actions and transactions that take place throughout a VCC's life cycle render the question of the applicable law and jurisdiction particularly complex, especially since the different stages of the commercialisation and circulation of VCCs and their participants are multi-sited.⁹⁰ Traditional connecting factors may not adequately apply to transactions in VCCs given, for example, the existence of multi-seated legal agreements, the potential for the digitisation of VCCs in the secondary market, and the possibility for the application of cross-border securities laws.⁹¹ Indeed, the circulation of VCCs also raises questions about possible connecting factors and potential substantial links between project proponents, VCC holders, and the place where the climate mitigation project is carried out, with implications on the applicable law.⁹² In addition, overriding mandatory rules and public policy may limit default to party autonomy rules.⁹³ Greater clarity on the role of party autonomy, applicable law, and jurisdiction in the case of disputes arising from the creation and cross-border circulation of VCCs would contribute to greater certainty in the VCM.⁹⁴

100. In the DAPL Principles, Principle 5 addresses the applicable law for proprietary issues in general and only concerns choice-of-law issues. It does not address the question of a tribunal's personal or subject matter jurisdiction.⁹⁵ Similarly to the case with VCCs, Principle 5 recognises that the usual connecting factors for choice-of-law rules (*e.g.*, the location of persons, offices, activity, or assets) usually have no useful role to play in the context of the law applicable to proprietary issues relating to digital assets, since digital assets are intangibles that have no physical situs. Instead, Principle 5 focuses on providing an incentive for those who create new digital assets or govern existing systems for digital assets to specify the applicable law in or in association with the digital asset itself or the relevant system.⁹⁶

Questions for the Working Group:

17. *Can the approach to applicable law adopted in the DAPL Principles be of guidance to the applicable law issues arising in relation to VCCs, or is anything more specific required?*

D. Recordation and Issuance

101. The Working Group is encouraged to define recordation and issuance and to consider whether any specific principles are needed to address these constitutive phases of VCCs. "Recordation" refers to the moment in which the VCC is recorded in a VCC registry and, among other things, provided with a unique serial identification number. It is the creation of the record that recognises the outcome of the reduction or removal activity. In other words, a VCC cannot be issued unless it has been

⁹⁰ UNCITRAL/UNIDROIT Joint Study, para. 155.

⁹¹ UNCITRAL/UNIDROIT Joint Study, paras. 156-157.

⁹² UNCITRAL/UNIDROIT Joint Study, para. 159.

⁹³ UNCITRAL/UNIDROIT Joint Study, para. 158.

⁹⁴ UNCITRAL/UNIDROIT Joint Study, para. 160.

⁹⁵ DAPL Principles, Commentary, paras. 5.2-5.3.

⁹⁶ DAPL Principles, Commentary, para. 5.4.

certified by a third-party issuer and recorded on a VCC registry.⁹⁷ Once recorded, the VCCs are issued to the project proponent who may then choose to sell them to a VCC buyer. Working Group experts have noted that issuance and recordation may, but need not, occur simultaneously.

102. Questions related to a VCC's recordation and issuance are crucial to the legal nature of VCCs and concern both the proprietary features of VCCs discussed above in Section III.B.3, as well as issues of ownership in VCCs.

103. *First*, a point for the Working Group's consideration is whether a VCC can be considered individuated from the moment of its certification, since the certification of a VCC relates to one specific climate mitigation project and all that the registry is doing by recording the VCC is enabling that individuation to be perceived by the outside world. However, because of its dematerialised nature, it could be argued that a VCC only exists once it has been recorded in a database or registry and provided with its unique serial identification number.

104. If this is the case, the Working Group should consider whether there are any features of the platform—beyond the VCC's mere existence on the registry—that are necessary for the VCC to be said to possess the core characteristics of property described in Section III.B.3 above. This would include considering whether anything further is needed for the recorded unit to be capable of being uniquely identifiable and individuated, as well as being deemed subject to the exclusive control of the VCC holder.

105. *Second*, a separate but related question is whether the role of a VCC registry is to act as a title registry or whether its purpose is simply to recognise the VCC as a dematerialised asset, and thus act as the vehicle by which the VCC is individuated and the holder achieves control and exclusivity over the VCC. Currently, most VCC registries make it clear in their Terms of Use that they are not acting as registries of title.⁹⁸ Yet, the question arises as to whether recordation in a qualifying VCC registry could give rise to a presumption of title. The question is complicated further by the fact that, increasingly, VCCs may be held on a VCC registry by agents or intermediaries on behalf of a third party (see Section III.G below addressing intermediation, including registries and custody).

106. Finally, the Working Group should consider the impact of fraudulent activity on a VCC's ability to be subject to proprietary rights. This includes the eventuality that the same climate mitigation project may be certified by two different third-party issuers and registered onto two different registries. Relevant questions include whether the VCCs issued by each third-party issuer in such a scenario could be considered proprietary. It has been noted by Working Group participants that both sets of VCCs would likely be proprietary, yet likely valueless, since they do not in fact represent what they claim to be (*i.e.*, an exclusive recognition of the removal or reduction of one specific tonne of CO₂ equivalent). It was also noted that, given the complexity of the resulting proprietary issues and the danger of delving into out-of-scope matters concerning the integrity of market participants, the instrument should be limited to addressing this eventuality through the definitions of what it covers. For example, by specifying that covered third-party issuers are ones that take reasonable steps to avoid the double-registration of existing climate mitigation projects (see above Section III.B.2).

Questions for the Working Group:

18. Do you agree with the way 'recordation' and 'issuance', have been defined?

19. Is it correct to state that the 'issuance' of a VCC occurs after the VCC has both been recorded?

⁹⁷ See UNIDROIT Summary Report WG1, para 93.

⁹⁸ See, *e.g.*, Verra Terms of Use, Section 9.1 (stating that "the User acknowledges and agrees that Verra does not in any way guarantee legal title to the Instruments and the User relies on any content obtained through the Verra Registry at its own risk").

20. Should the instrument specifically address ownership / title in VCCs? Or should the instrument rely on exclusivity / control as a proxy for possession?

E. Transfer

107. Essential to a well-functioning VCM is market participants' ability to easily transfer VCCs and obtain good title to the assets upon a transfer. Key questions that emerge are thus how and when a transfer is completed and what rights and responsibilities VCC sellers and buyers, as well as intermediaries, have in relation to the transfer of the asset.⁹⁹

1. Transfer of title

108. VCCs are currently traded OTC, through private bilateral contracts, or on exchange-traded markets. Efforts are underway to promote greater standardisation of the contracts through which VCCs are transferred.¹⁰⁰ For example, in February 2024, ISDA published the second edition of its *Verified Carbon Credit Transactions Definitions*, a standard definitional booklet for physically settled secondary market VCC transactions, accompanied by template confirmations for VCC spot, forward and option transactions.¹⁰¹ IETA also provides standardised documentation for emission trading, including documents that address primary and secondary OTC emission markets.¹⁰²

109. Issues that currently cause uncertainty in the VCM include the conditions under which a transfer of VCCs should be deemed completed and the exact moment at which title passes from the seller to the buyer. As already noted, VCC registries are not registries of title. The VCC registries' own rules and Terms of Use normally provide for freedom of contract, specifying that the parties are free to determine how they would transfer title or the interest in their underlying credits to each other. Where the registry acts as a facilitator of the transfer process, it is to react to a bilateral arrangement carried out between the individuals, which is in the individual's interest to then ensure it be brought to the attention of the registry, so that the registry can adjust the account record. Thus, the transfer of title generally occurs on the basis of bilateral contractual agreements, with the registries simply updating their records on the basis of instructions received from the parties.¹⁰³

110. It follows that, in practice, sale contracts of VCCs are often concluded before VCCs are transferred from the seller's VCC registry account to the buyer's account. A question for consideration is thus whether it must be considered that transfer of title occurs either at the moment of the conclusion of the sale contract or upon the transfer of the VCCs from one VCC registry account to another.¹⁰⁴

111. During the Working Group's first session, it was observed that this is an issue that depends on the applicable law and may be further complicated by the fact that VCCs are not tangibles. For example, it was noted that, in the United Kingdom, the notion of title passing whenever the contracting parties said it passed would only work for the sale of goods because there was a specific provision in the Sale of Goods Act that so said. Such a provision would unlikely apply to VCCs, as they are not tangible assets. Yet, it was observed that, under French and German law, title passed when the contract so said, meaning this was a question that would depend on the legal system. The

⁹⁹ See UNIDROIT Study LXXXVI – W.G.1 – Doc. 2, Issues Paper, October 2023, para. 99.

¹⁰⁰ See, e.g., UNCITRAL/UNIDROIT Joint Study, paras. 132-133.

¹⁰¹ See Linklaters, *The 2022 ISDA Verified Carbon Credit Transactions Definitions: Version 2.0*, available at assets.isda.org/media/5af592d3/1f1561b4-pdf/.

¹⁰² See <https://www.ieta.org/resources/trading-documents/>.

¹⁰³ UNIDROIT Summary Report WG1, para. 95.

¹⁰⁴ See UNCITRAL/UNIDROIT Joint Study, para. 134.

approach taken in the DAPL Principles is to say that things like the issue of when title passes are matters for what is referred to as “other law”, meaning national law.¹⁰⁵

2. Fraud and innocent acquisition

112. During the first session, the Working Group emphasised the importance of further distinguishing the contract between the VCC seller and the buyer and the fact that VCCs might be capable of being the subject of proprietary rights. If the transfer was deemed to be a transfer of proprietary rights, then the relevant question was what happened if defective proprietary rights purported to be transferred (for example, if the VCC was transferred without authorisation or by someone who did not own it and that VCC was then transferred on to someone else).¹⁰⁶

113. Working Group participants explained that, under an ERPA or the equivalent, the seller usually made certain representations around ownership and typically included representations around the fact that the title being transferred was unencumbered. If there was a breach of such representations, then the buyer had the right to sue for damages or some other remedy. For example, a misrepresentation might constitute an event of default within the contract, which might lead to termination of the agreement, and the buyer might be able to claim the cost of buying alternative credits in addition to damages. These would be the bare minimum protections expected from the buyer.¹⁰⁷

114. Participants in the Working Group generally agreed that including an innocent acquisition rule, while not strictly necessary, would be beneficial to facilitate trade and scale the market. An innocent acquisition rule would provide that, if a buyer acquires a VCC and he or she has no notice that the seller did not own the VCC, the buyer nonetheless obtains good title. Such a provision is included in the DAPL Principles. Pursuant to DAPL Principle 9, if somebody obtains control of a digital asset and is an innocent acquirer under the rules of the relevant State, then that innocent acquirer takes free of competing claims from previous owners. The reason for including such a provision in the present instrument would be to recommend, for most jurisdictions, either a change or a clarification in the law, because it would not be a given in many jurisdictions unless something was said about it.¹⁰⁸

3. Supervening circumstances and remedies

115. The Working Group also considered the impact of, for example, regulatory changes causing non-performance of contracts and/or the non-delivery of VCCs.

116. During the Working Group’s first session, it was observed that a regulatory change could be seen as a *force majeure* event, depending on the law applicable to the transfer contract. It was clarified that the contracts, other than *force majeure*, also usually addressed (i) a change in law that made it impossible or impracticable for the relevant party to perform, as well as (ii) a change in circumstances, meaning instances where something happened to make the whole project commercially untenable (comparable to a hardship clause).¹⁰⁹

117. It was thus suggested that supervening circumstances be included as a possible topic for the Working Group’s discussions, focusing first on supervening circumstances in general and then on

¹⁰⁵ See UNIDROIT Summary Report WG1, paras. 115-116.

¹⁰⁶ UNIDROIT Summary Report WG1, para. 108.

¹⁰⁷ UNIDROIT Summary Report WG1, para. 109.

¹⁰⁸ UNIDROIT Summary Report WG1, para. 110.

¹⁰⁹ UNIDROIT Summary Report WG1, para. 112.

addressing the possible differences in order to avoid going into the multiple categorisations applied by legal systems to terms like *force majeure*, change of circumstances, or hardship.¹¹⁰

118. With respect to possible remedies in the event of non-performance or non-delivery, Working Group participants raised the right to substitution, meaning the legal right to replace that intangible asset for another comparable but different asset. If a particular climate mitigation project does not issue the VCCs sought by the buyer, then the contract often provides that the seller could try to deliver something of equivalence. What credits would be deemed “equivalent” for purposes of fulfilling any substitution obligation would depend on the nature of the VCC that the buyer wanted to have delivered and whether something equivalent was available and the relevant terms of the contract.¹¹¹

Questions for the Working Group:

21. *Should the instrument address the passage of title or leave this to other law?*
22. *Should the instrument include an innocent acquisition rule?*
23. *Should the instrument address supervening circumstances?*

F. Retirement, Reversal and Cancellation

119. Related issues pertain to the impact of retirement, reversal, or cancellation on the proprietary nature of a VCC.

120. With respect to retirement, as noted above, once retired, a VCC is no longer tradable. It is essentially “consumed” and all that is left is a record of it. Working Group participants noted that, once retired, a VCC could likely no longer be the object of proprietary rights since at that point the VCC could no longer be transferred, nobody could own it, and nobody could take security over it.¹¹²

121. A VCC buyer could contractually agree with the VCC seller that the seller would retire the credit on the buyer’s behalf. In such an instance, the VCC would not actually move from the seller’s account to the buyer’s account, but the seller would instruct the registry to cancel the VCC. The consequences of a failure to retire would be driven by what had been agreed on a bilateral contractual basis between the buyer and the seller with respect to the obligation to retire.¹¹³

122. Issues could potentially arise if a VCC is said to have been retired in error or if, for example, a VCC seller sells a VCC that has already been retired. Working Group participants observed that it was likely possible to find out where and when a VCC had been retired, as well as who had issued the instruction to retire. This is either public information or would be a matter of disclosure in any claim that arose regarding the retirement of the VCC. It was explained that there are mechanisms within the VCC registry that could be applied, in limited circumstances and at the discretion of the various ICCPs, to determine when and in what circumstances the registries could undo transactions that had happened, such as the retirement of a credit.¹¹⁴

123. As to reversal and cancellation, a VCC’s existence as a tradable asset might be compromised by subsequent external events.¹¹⁵ For example, the U.S. Commodities and Futures Trading Commission (CFTC) observed that “VCCs issued for a project or activity may have to be recalled or cancelled due to carbon removed by the project or activity being released back into the atmosphere,

¹¹⁰ UNIDROIT Summary Report WG1, para. 113.

¹¹¹ UNIDROIT Summary Report WG1, para. 122.

¹¹² UNIDROIT Summary Report WG1, para. 103.

¹¹³ UNIDROIT Summary Report WG1, para. 23.

¹¹⁴ UNIDROIT Summary Report WG1, para. 24.

¹¹⁵ See UNCITRAL/UNIDROIT Joint Study, para. 138.

or due to a reevaluation of the amount of carbon reduced or removed from the atmosphere by the project or activity”.¹¹⁶

124. As described above, instances of reversal are generally addressed through the “buffer pools” maintained by the relevant ICCP. Issues may arise, however, if these buffer pools are exceeded, for example in the event of a wildfire destroying an entire forest. With respect to cancellation, VCCs may be cancelled if it is subsequently shown, for example, that the project proponent failed to abide by the ICCP’s rules and regulations or applicable methodologies, or there were flaws in the third-party verifier’s independent verification of the claimed reductions or removals.

125. It is now understood that VCCs do not all possess the same quality, with some VCCs carrying a higher risk of reversal or cancellation.¹¹⁷ At its first session, the Working Group discussed, *inter alia*, whether, in the absence of an express contractual provision, a VCC seller had an obligation to guarantee the quality of the underlying climate mitigation project and which party bore the risk of the continued validity of the VCC.¹¹⁸ It was observed that once one moved away from the climate mitigation project and the first VCC trade in the primary market, it would be extremely unusual or impossible to have such a guarantee, as no seller would be comfortable giving any sort of comfort around compliance, especially as the tradable instrument became highly liquid. It was further noted that normally one would look at whether the third-party verifier had insurance in order to recover against the third-party verifier if a mistake was made in the verification process. However, this could be a problem, as usually such insurance was limited.¹¹⁹ Alternatively, the VCC holder could insure against such event being an insurable loss.

126. At the moment, VCMs largely operate on a “buyer beware” model, where VCC buyers are expected to carry out proper diligence on, for example, the project proponent and its track record. Nevertheless, should a buyer find that the VCCs it purchased are later cancelled, or if the buyer faces legal actions due to the lack of environmental integrity of the VCCs used to substantiate a mitigation claim, questions could arise regarding the available legal remedies.¹²⁰

127. In the context of transactions on the primary market, the parties would likely rely on the buyer-seller contract. If the cancelled credits had already been retired, reversing the process would be challenging. If the holder was instead still holding the VCCs, then the holder would likely be able to rely on its contract to determine who was liable for that loss, since the holder bought something which was now valueless. In general, the seller would normally have to deliver further credits from the same climate mitigation project, if available. If these were not available, then there might be alternative credits that satisfied criteria with which the buyer was comfortable. The usual final fallback would be that the buyer had to be made whole for its loss, having to buy other credits in the market. In that circumstance, it would be possible to obtain credit support regarding the buyer’s exposure to the seller in respect of that performance.¹²¹

128. The issue might be different with respect to the secondary market, where the question is who bears the risk in a chain. In the event of an inappropriate cancellation, Working Group participants noted that there would also most likely be a claim against the third-party issuer that had

¹¹⁶ CFTC, “Commission Guidance Regarding the Listing of Voluntary Carbon Credit Derivative Contracts; Request for Comment”, 27 December 2023, p. 89417, available at <https://www.federalregister.gov/documents/2023/12/27/2023-28532/commission-guidance-regarding-the-listing-of-voluntary-carbon-credit-derivative-contracts-request>.

¹¹⁷ For instance, GHG removed from the atmosphere through forestry-based projects have a greater risk of reversal because of exposure to wildfires.

¹¹⁸ UNIDROIT [Study LXXXVI – W.G.1 – Doc. 2](#) – Issues Paper, October 2023 (hereinafter “UNIDROIT Issues Paper WG1”), para. 102

¹¹⁹ UNIDROIT Summary Report WG1, para. 114.

¹²⁰ See UNIDROIT Issues Paper WG1, para. 104; UNCITRAL/UNIDROIT Joint Study, para. 138.

¹²¹ UNIDROIT Summary Report WG1, para. 26.

made the cancellation.¹²² The Working Group was informed that Switzerland had introduced legal provisions addressing cancellations in 2021, although they had not yet been tested in practice.¹²³

Questions for the Working Group:

24. *Should the instrument address the impact on a VCC holder's proprietary rights of a VCC's retirement, reversal or cancellation?*
25. *Should the instrument address the consequences of a VCC being retired, reversed or cancelled in error?*

G. Intermediation

1. VCC registries

129. Subject to the views of the Working Group, it may be helpful to include a principle dedicated to the registry, defining terms and (in the commentary) explaining how a registry typically works. However, the detail of this principle will have to be fleshed out in the light of the information provided by the ICCP representatives invited to present during the second session of the Working Group,¹²⁴ as well as further discussion by the Working Group. The below draft is intended to give a sample structure of how the principle could look.

[Draft] Principle [X]

Registry

1. A 'registry' is an electronic [database] [record] operated by a registrar in which the following information is recorded:
 - a. The serial number of a VCC;
 - b. The name of the person to whose account the VCC is credited.
 - c. [Anything else to add?]
2. A 'registrar' is a person who operates a registry.
3. A 'registry account' is an account maintained by a registry to which VCCs may be credited or debited.
4. A 'registered [holder]' is a person to whose registry account a VCC is credited.
5. A 'registry account agreement' is the agreement between a registered holder and the registrar governing the registry account.

¹²² UNIDROIT Summary Report WG1, para. 27.

¹²³ The legal provision on cancellation (Art. 973h CO), in force since February 2021, provides as follows (unofficial translation): "The beneficiary of a ledger-based security may demand that the court cancel the security, provided that he or she furnishes credible evidence of his or her original power of disposal and of the loss thereof. Following cancellation of the instrument, the beneficiary may also exercise his or her right outside the ledger or, at his or her own expense, demand that the obligor allocate a new ledger-based security. In addition, Articles 982-986 apply mutatis mutandis to the procedure for and effect of cancellation. The parties may make provision for a simplified form of cancellation consisting in a reduction of the number of public calls for presentation or a curtailment of the time limits".

¹²⁴ Representatives from ICCPs and VCC registries have been invited to present to the Working Group during its second session. The representatives have been asked to focus on how the VCCs are created/issued, evidenced, identified/individualised, transferred, encumbered and retired or otherwise cancelled. The indicative list of questions shared with the ICCPs and VCC registries representatives is included as Annexe II.

6. A registrar owes the following duties to a registered holder in relation to a VCC credited to the registered holder's account:
 - a. The registrar is obliged to comply with an instruction given by the registered holder to transfer the VCC into the account of another person [unless: (i) the registrar is prohibited from complying with the instruction by other law or by any agreement between the registrar and a third party to which the registered holder is a party or has consented; (ii) the registrar is not obliged, by other law or by an agreement with the registered holder, under certain circumstances, to comply with the instruction];
 - b. The registrar is obliged to comply with an instruction given by the registered holder to retire the VCC;
 - c. [Anything further to add?]
7. A registrar has no proprietary right in a VCC registered in the registry it operates.
8. A VCC registered in a registry is not available for the satisfaction of claims of creditors of the registrar.
9. If a registrar enters into an insolvency-related proceeding, a VCC registered in a registry does not form part of that registrar's assets available for distribution to its creditors.
10. If a registrar enters into an insolvency-related proceeding, the insolvency representative must take reasonable steps for all VCCs registered in the registry accounts to be transferred to accounts in another registry.

130. As described in Section III.B.2 above, a registry is a record of information related to VCCs operated by a legal entity (here called a "registrar"). It appears from the discussion at the first Working Group session that the registrar operates accounts for market participants. An account holder has a contract with the registrar whereby the registrar agrees to comply with the instructions of the account holder in relation to the VCCs recorded in that account. However, this does not mean that the account holder necessarily has a proprietary right in a VCC recorded in its account. This will depend on the facts and the applicable law; for example, an account holder could be a custodian of a VCC for another person. It is suggested in the draft principle that the relationship between an account holder and the VCCs in that person's account be called "holding", so that a person that has a VCC recorded in its account be called the "registered holder". It is also suggested that a VCC recorded in an account be "credited" to that account.

131. A registered holder can give an instruction to the registrar to transfer a VCC recorded in its account to be recorded in the account of another account holder. Whether such a change results in a transfer of title between the two account holders will depend on the facts and the applicable law (see above Section III.E.1). It is suggested that a transfer be seen as a debit of the transferor's account and a credit of the transferee's account. A registrar is also obliged to comply with the instruction of the registered holder to retire the credit.

132. Paragraphs 1 to 3 are just placeholders pending more information about how the registry works. Questions for discussion include whether it is correct to describe the registry as a database or as a record, and whether it is right to say that it is always electronic, or whether the possibility of a hard copy registry should be included. Paragraph 3 is taken from the UNIDROIT Geneva Securities Convention (GSC) and is drafted on the assumption that the registry operates by means of accounts with its users. The terminology may need to be adapted if the system is different.

133. The word "holder" in paragraph 4 is in square brackets as it presupposes the verb "hold" being used for the relationship between a person who is connected with a VCC by an action of the

registry. A verb other than “holds” could be used and therefore the noun would then be different. The important point here is that, while the register is not a register of title, a registry entry which connects a person with a VCC gives that person a relationship with the VCC that may or may not be ownership (depending on the applicable law) and that relationship needs a name. In that sense the “name” could be seen as the equivalent of some uses of “possession” in relation to tangibles or “control” in relation to digital assets (although in the DAPL Principles “control” is even more of a factual concept, as it consists of the controller having the ability to transfer control and to prevent others gaining control, whereas with VCCs, the “control” consists of being able to give instructions to the registry). The many possible meanings of “control” make it a difficult word to use here, unless absolutely necessary. It would have to be defined specifically and used rigorously according to the definition, and even then, confusion could occur. At present, and subject to the Working Group’s discussion, it is suggested that the concept of “holding” is sufficient and that “hold” is a suitably neutral word.

134. Paragraph 5 is also adapted from the GSC (art 1). Paragraph 6 is adapted from DAPL Principle 11 (the part in square brackets in paragraph 6(a) is a qualification added to the basic obligation to comply with client instructions in DAPL Principle 11(1)(b)). These are private law duties which are owed by a registrar. There may be other duties to add to this list, such as a duty to record the information in the account accurately. DAPL Principles 11(1) and (2) set out private law duties which are mandatory in that a State should not permit them to be excluded by the terms of the custody agreement. DAPL Principle 11(3) sets out duties that a State could make mandatory if it so chooses. The Working Group should consider what private law duties, if any, of the registrar to the registered holder should be mandatory.

135. Paragraphs 8 and 9 are taken from DAPL Principles 13(1) and (2). Principle 13(1) relates to the situation where the registrar is solvent, and Principle 13(2) where the registrar is in insolvency-related proceedings. Building on paragraph 7, paragraphs 8 and 9 could be seen as confirmatory of the lack of any proprietary right or interest of the registrar. However, they could also be seen as too obvious.

136. “Insolvency-related proceedings” will need to be defined: in the DAPL Principles the term is defined to include restructuring proceedings as well as other types of insolvency proceedings (see DAPL Principle 2(6)).

137. Paragraph 10 is taken from DAPL Principle 13(4) but modified for a registry. It is a very important point, but the Working Group should discuss whether it should be included here. There is a question of whether, in relation to a registrar, the transfer of information to another registry is a matter of private law or of regulation.

2. Custody

138. It is not clear from the discussion in the first Working Group whether a custody system already exists in the VCC market, or whether one is likely to develop. It is reasonably clear that a registry is not a custodian, as it merely records the information in relation to the VCC and does not owe any safeguarding duties. A custodian would be a registered holder of a VCC who held it for another person. This is different from a broker who was not a registered holder, and who therefore was merely a service provider (and whose contract would be governed by the applicable law). If a custody system is already operating or is likely to develop then a custody principle would be useful.

139. The below is a proposed principle concerning custody for the Working Group’s review and discussion.

[Draft] Principle [X]***Custody***

1. An 'intermediary' is a person who provides services to another person in respect of a VCC.
2. A 'client' is a person to whom an intermediary provides services.
3. A 'custodian' is 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] [holds the VCC for another person].
4. An agreement between an intermediary and a client is a custody agreement if:
 - a. It relates to a VCC;
 - b. It is entered into in the course of the intermediary's ordinary course of business; and
 - c. The intermediary is obliged to:
 - i. become the registered holder of the VCC (if this is not yet the case);
 - ii. hold the VCC as registered holder for the client; and
 - iii. instruct the registrar to retire the VCC if instructed by the client to do so.
5. A VCC held by a custodian for a client is not available for the satisfaction of claims of creditors of the custodian.
6. If a custodian enters into an insolvency-related proceeding, a VCC held by a custodian for a client does not form part of that custodian's assets available for distribution to its creditors.
7. A custodian owes the following duties to its client in relation to a VCC that it holds for that client:
 - a. the custodian is not authorised to instruct the registrar to transfer 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;
 - b. the custodian is obliged to comply with an instruction given by the client to instruct the registrar to transfer 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]
 - c. the custodian is obliged to safeguard the VCC.
8. Unless prohibited by the custody agreement or by other law, a custodian may hold VCCs of the same description for two or more of its clients as an undivided pool.
9. The duties owed by a custodian to its client may include:
 - a. the duty to keep a record of the VCC it holds for each client;
 - b. the duty at all times to securely and effectively maintain VCCs in accordance with the records it keeps for its clients;
 - c. the duty to acquire VCCs promptly if this is necessary to satisfy the duty under subparagraph (b);
 - d. the duty to separate the VCCs held for clients from the VCCs held for its own account;

- e. [subject to any right granted to the custodian or to another person, the duty to pass the benefits arising from VCCs to the client for whom it holds them.]
10. 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.
11. If a custodian enters into an insolvency-related proceeding, the insolvency representative must take reasonable steps for a VCC registered in the account of the custodian to be transferred to a registry account of the client or of a custodian nominated by that client.
12. Paragraphs 13 and 14 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 hold for those clients ('shortfall').
13. [The shortfall is met first by any digital assets of the same description maintained by the custodian for itself.]
14. Any [remaining] shortfall shall be borne by the clients for whom the custodian holds the VCCs as an undivided pool, in proportion to the respective quantity of VCCs of the same description that the custodian is obliged to hold for those clients.

140. Paragraph 1 suggests a possible definition of the term "intermediary" (although the word was not used or defined in the DAPL Principles; the term "service provider" was used instead). Whether this definition is helpful or accurate will depend on whether all the people who interact within the trading system (apart from buyers and sellers) actually provide services.

141. The wording in the first square bracket of paragraph 3 tracks DAPL Principle 10 closely and follows the technique used in the DAPL Principles in that it defines a custodian by referring to a "custody agreement", which is then defined. This was done in the DAPL Principles so that a "custody agreement" could be defined with some precision. This was considered necessary: (i) in order to differentiate custody from other types of agreements with intermediaries that existed (or could exist) in the market; (ii) because the DAPL Principles included some suggested private law duties of a custodian which would become terms of the agreement; and (iii) so that the definition of "custodian" could include a person who was obliged to "maintain" (or "hold") digital assets for a client but did not at a particular moment actually do so (because it had so far failed to acquire digital assets for a client, because a client had so far not transferred digital assets to a custodian, or because the custodian had exercised a right of use in respect of the digital assets). It may be that these concerns do not apply in the VCM, although as the market scales up it may be that practices such as a right of use become prevalent.

142. As to the reference to "services", if this is not thought appropriate for a VCC then the following wording could be used: "A custodian is a registered holder who has entered into a custody agreement with another person".

143. The wording in the second square bracket of paragraph 3 takes a different approach. It uses the verb "hold" for the action of the custodian vis-à-vis the VCC. There were objections to use of the

word “holds” in the DAPL Working Group for two reasons. First, because it was said to be confusing, as “hold” had a particular resonance in the securities world and, second, because a verb was needed that could apply both to custody and sub-custody. In the end the verb “maintains” was used. However, unless sub-custody is, or is likely to become, part of the VCC custody market, the verb “hold” could be appropriate.

144. The problem with the apparently simple approach of “holds the VCC for another person” is that it assumes that at the relevant moment (*i.e.*, when one needs to know whether the definition of “custodian” applies) the intermediary actually does hold the VCC for the “other person” (the client). As mentioned above, in relation to digital assets, it was thought that this was too limiting, since the custodian still owes duties to the client even if, at a particular moment, it does not actually hold a particular digital asset for that client. Further, the DAPL Working Group found it difficult to use the form of wording in the third square bracket when dealing with sub-custody. This may not be an issue in relation to VCCs.

145. Paragraph 4 is also definitional, that is, an agreement is not a custody agreement unless all the conditions are fulfilled. Once an agreement is a custody agreement, the duties set out in paragraph 5 apply (whether or not expressly included in the agreement). Paragraph 4 therefore only sets out quite basic obligations. It is based on DAPL Principle 10(3), but with the addition of an obligation to instruct the registrar to retire the VCC if instructed by the client, since the Working Group participants have noted that this is intrinsic to a “custody” agreement. However, sub-paragraph (c)(iii) could go into paragraph 7.

146. One aspect of DAPL Principle 10(3) and Principle 10(4) is, however, missing. This is the presumption that an agreement is a custody agreement unless it is made clear that the digital asset does not form part of the custodian’s assets for distribution to its creditors in the event of its insolvency. This presumption was included in the DAPL Principles as some arrangements with exchanges (which on their face looked very much like custody agreements) were actually agreements for title in the digital assets to be transferred to the exchange, who would then lend out the digital assets in the same way as a bank does. In such agreements, the client bears the insolvency risk of the intermediary. Unless this is, or is likely to be, a feature of the VCC market, the equivalent of the end of DAPL Principle 10(3) and Principle 10(4) will not be needed in the present instrument.

147. Paragraphs 5 and 6 mirror those in DAPL Principles 13(1) and 13(2). They may eventually go elsewhere in the present instrument, but they are placed here for now to demonstrate why it is so important to define “custodian”. The protection of the VCCs held for clients in the insolvency of a custodian is critical and has been found to be so in the analogous areas of book-entry securities and digital assets. However, given this powerful shifting of insolvency risk, it is very important that it is clear when this occurs, *i.e.*, exactly what a custodian is, as opposed to other intermediaries. “Insolvency-related proceedings” will need to be defined; in the DAPL Principles the term is defined to include restructuring proceedings as well as other types of insolvency proceedings (see DAPL Principle 2(6)).

148. Paragraph 7 is taken from DAPL Principle 11(1) and contains “mandatory” private law duties for a custodian. It is not clear at the moment whether a custodian of a VCC is likely to have a “right of use” (as with securities and digital assets). If not, then paragraph 7(a) will need to be modified. Paragraph 7(b) includes the text in square brackets qualifying the basic obligation: this is discussed above. Paragraph 7(c) is a basic obligation to safeguard, but (in the DAPL Principles) the content of that obligation can be made clearer by a State by making mandatory the optional private law duties set out in DAPL Principle 11(3).

149. Paragraph 8 addresses those instances in which VCCs are held in pools. The private law duties addressed in paragraph 9 are adopted from those set out in DAPL Principle 11(3) and are “optional” for a State to make mandatory. It is not clear how relevant they would be to custody of

VCCs (the duty in (e) seems particularly irrelevant) but are included for discussion. Paragraph 10 is taken from DAPL Principle 11(5) and is largely confirmatory of the obvious, but it gives the opportunity for commentary explaining how the principles on security rights apply in the situation of custody.

150. No principles on sub-custody are included at the moment since there does not seem to currently be a market practice in this regard. However, the Working Group is encouraged to discuss whether sub-custody principles should be included.

151. As to the proposed provisions on custodians and insolvency-related proceedings, it is not clear whether the DAPL Principles which give guidance as to the actions of an insolvency representative on the insolvency of a custodian should be included in the present instrument, but they are included here for information and discussion (adapted to apply to custody of a VCC). The provisions on shortfall are taken from the GSC, which are also included in the DAPL Principles. Note that paragraph 13 was optional for States under the GSC (and is optional also under the DAPL Principles); whether the shortfall is borne first by the custodian is a policy decision for States.

Questions for the Working Group:

26. *The Working Group is invited to comment on the proposed principle on registries, including, but not limited to, the following:*

- a. *Is the description of the operation of "accounts" with the person operating the registry correct?*
- b. *Is the description of the relationship between the account holder and the VCC recorded in the account correct? If so, are the words "hold" and "holder" suitable to describe that relationship?*
- c. *What private law duties, if any, of the registrar to the registered holder should be mandatory?*
- d. *Should proposed paragraph 10 be included here?*

27. *The Working Group is invited to comment on the proposed principle on custody, including but not limited to, the following:*

- a. *Do persons who are registered holders of VCCs for other persons (i.e. custodians) exist in the VCC market? Is a custody market likely to develop?*
- b. *Is the reference to "services" appropriate for the VCM?*
- c. *Is sub-custody part of the VCC custody market, or is likely to become part of the VCC custody market?*
- d. *Should the DAPL Principles which give guidance as to the actions of an insolvency representative on the insolvency of a custodian be included in the present instrument?*

H. Secured Transactions

[Draft] Principle [X]

Security

1. A VCC can be the subject of security rights.
2. Whether and how a security right in a VCC is created is governed by other law.

3. A security right in a VCC can be made effective against third parties if one of the following requirements is met:
 - a. The requirements of any method of third-party effectiveness provided by other law are fulfilled;
 - b. The secured creditor becomes the registered holder of the VCC; or
 - c. A custodian holds the VCC for the secured creditor [as set out in]; or
 - d. [The secured creditor enters into a control agreement with the grantor and the custodian who holds the VCC for the grantor of the security right.]
4. [A control agreement is an agreement in relation to a VCC made between the grantor, the custodian who holds the VCC for the grantor and the secured creditor, which includes either or both of the following provisions:
 - a. that the custodian is not permitted to comply with any instructions given by the grantor in relation to the VCC without the consent of the secured creditor;
 - b. that the custodian is obliged to comply with any instructions given by the secured creditor in relation to the VCC in such circumstances and as to such matters as may be provided by the agreement, without any further consent of the grantor.]
5. A security right in a VCC that is made effective against third parties by one of the methods set out in paragraph 3(b)(c) [or (d)] has priority over a security right in that VCC only by a method that is not set out in paragraph 3(b), (c) [or (d)]
6. A security right in a VCC can be enforced by:
 - a. Selling it and applying the net proceeds of sale in or towards the discharge of the secured obligation; or
 - b. Appropriating the VCC as the secured creditor's own property and setting its value against, or applying its value towards the discharge of, the secured obligation, providing that the security agreement provides for realisation in this manner and specifies the basis on which the VCC is to be valued for this purpose;
 - c. Close-out netting under a close-out netting provision;
 - d. Any other method of enforcement under other law.
7. If the security right is enforced under 6(a), (b) or (c), any surplus value not required for satisfaction of the secured obligation must be transferred to a subordinate competing claimant (if any) and any balance must be remitted to the grantor.

152. The above is proposed language for a principle on security for the Working Group's consideration. The difficulty with a principle on security is that the law of secured transactions differs considerably between jurisdictions. The generic term used in international instruments such as the UNCITRAL Model Law on Secured Transactions for a security interest or right is "security right", as this is thought to work for most legal cultures.

153. The commentary will need to explain that the meaning of "security right" will depend on the applicable secured transactions law. Some jurisdictions term everything that has a security function a "security right", while others treat devices such as retention of title or outright transfer of title according to their form and not as security rights. For this reason, it may not be indicated to define "security right" as this will not be jurisdiction neutral.

154. Many jurisdictions will accommodate a device which operates somewhat like a security device but is an outright sale and repurchase of assets (a "repo"). In certain jurisdictions this is not treated as creating a security right. The Working Group may wish to consider whether it is necessary to

include a principle on repos in the instrument, which may depend on whether they are common in the VCM or likely to become so.¹²⁵

155. The language proposed in paragraph 1 follows from the earlier and fundamental principle that VCCs can be the subject of proprietary rights.

156. With respect to paragraph 2, as with the definition of “security right”, the law as to the creation of a security right in an asset varies between jurisdictions. For example, some jurisdictions require writing for a security right to be created and others do not. It would be problematic if the rules on creation of a security right in a VCC were different from those governing creation of a security in all other types of assets. The Working Group should discuss whether it makes sense for the present instrument to leave this matter up to other law.

157. As to paragraph 3, jurisdictions differ as to what is required to make a security right effective against third parties. For example, many jurisdictions have a collateral registry in which security rights can be registered in order to achieve third-party effectiveness. This collateral registry is usually established by legislation and may be run by the State. A VCC registry is clearly not a collateral registry and so registration in the VCC registry will not meet the requirement of collateral registry registration in any State.

158. Many States also have alternative methods of third-party effectiveness, such as possession (of tangibles) and control (of some intangibles). These exist for a number of reasons: (i) to enable transactions on a market to take place quickly and efficiently without the need for registration; (ii) to encourage a secured creditor to take steps which will facilitate enforcement of the security right if necessary; and (iii) if a general practice of taking possession or control is established, then a potential secured creditor will discover about a previous security right (made effective against third parties by possession or control) when it attempts to take possession or control, since it will not be possible to do so given that the previous secured creditor will already have possession or control.

159. The Working Group may decide that the equivalent of “possession or control” should be an available method of third-party effectiveness for VCCs. Two equivalents to “possession or control” are suggested in sub-paragraphs 3(b) and 3(c). The first is that the secured creditor becomes the registered holder of the VCC, that is, that the VCC is transferred into the registry account of the secured creditor (the terms “registered holder” and “registry account” are defined in the registry principle above). The second is that a custodian (as defined in the custody principle above) holds the VCC for the secured creditor, so that the secured creditor becomes the client of that custodian. Both methods will facilitate enforcement and will prevent another secured creditor from doing the same thing (without the consent of the first secured creditor). Paragraph 3(d) is a possible additional method, taken from the world of intermediated securities, which was not included in the DAPL Principles. It is included at present for completeness and discussion.

160. Paragraph 4 relates to the “control agreement” route for third-party effectiveness. The idea behind a control agreement is that the grantor of the security right remains the client of the custodian but under certain restrictions. Paragraph 4(a) sets out “negative control”, that is, the custodian must not comply with any instructions of its client without the consent of the secured creditor. Paragraph 4(b) sets out “positive control”, that is, that the secured creditor is, under certain circumstances (such as on default of the secured obligation by the grantor) able to instruct the custodian to transfer, sell or otherwise dispose of the asset without the consent of the grantor, its client. Jurisdictions vary as to which of these (if either) is sufficient for third-party effectiveness of a security right over various types of intangible assets. The advantage of positive control is that that secured creditor is able to enforce the security right easily. The advantage of negative control is that the asset is likely to still

¹²⁵ See, e.g., UNIDROIT Summary Report WG1, para. 135.

be there when the secured creditor wants to enforce against it. It will be for the Working Group to decide whether either type of method of third-party effectiveness is suitable for the VCC market.

161. The above draft principle on security does not address interoperability. There seem to be no, or very few, situations in relation to other assets where registration in a private or title registry also has the effect of registration in a collateral registry. It is possible that this is the case with some IP registries which permit registration of security rights (further investigation would be required) and such a system was suggested for some platforms for the transfer of receivables in relation to [UNIDROIT's Model Law on Factoring](#). But the more usual method for securities and other financial instruments is to include the taking of control in the methods of third-party effectiveness. This does not make the asset registry a collateral registry, but it means that registration/recording at some level of the intermediary chain is enough to make the security right effective against third parties.

162. This mirrors the approach in DAPL Principle 16 and in many jurisdictions, where a security right over certain types of intangible assets made effective against third parties by "control" has priority over a security right in the same asset made effective against third parties by registration (or another non-control method). Instead of using the word "control", this draft sets out in detail the steps for third-party effectiveness in the context of VCCs in sub-paragraphs 3(b)(c) and (d). However, in the explanation below, for brevity, the word "control" (in inverted commas) is used.

163. There are a number of reasons for this rule in relation to assets other than VCCs. First, it recognises that the secured creditor who takes control is relying to the greatest extent possible on the asset for payment of the secured obligation, while a secured creditor that (only) registers the security right is likely to have taken security rights over many assets of the grantor. Second, it means that a secured creditor that takes control does not need to search the registry; it knows that it will have priority (over registered security rights). Third, it provides priority to the secured creditor who has put itself into the best position to enforce the security right. Fourth, it may facilitate certain market practices, such as margin lending. Not all jurisdictions have this rule, but many do. Some have it only in relation to documentary intangibles of which possession can be taken. Other jurisdictions (e.g., English law) do not have the rule at all. It will be for the Working Group to decide whether this type of priority rule is suitable for the VCM.

164. Paragraph 6 reflects the enforcement provision in the GSC (art. 33), which is based in part on the EU Financial Collateral Directive (relating to investment securities). It is included for consideration by the Working Group, on the basis that the VCM may resemble, or come to resemble, the securities market. Sub-paragraph 6(a) is a standard method of enforcement, which is likely to be available in a State under general secured transactions law. Sub-paragraph 6(b) has the effect that the secured creditor becomes the owner of the asset but has to return any surplus value to the grantor or to any subordinate secured creditor. It is useful for financial collateral, since a sale of a lot of securities (e.g., shares) may depress the market price, so the method in sub-paragraph 6(a) may be detrimental to the parties. Under sub-paragraph 6(b), the assets do not need to be sold immediately, but can be kept by the secured creditor. However, sub-paragraph 6(b) requires immediate valuation of the asset, so that any surplus value can be calculated, and therefore the method of valuation is to be specified in the security agreement (and the method is only available if it is specified in that agreement). Sub-paragraph 6(c) addresses close-out netting, which may or may not be relevant for the VCC market; the Working Group will need to discuss this.

165. Finally, paragraph 7 makes it clear that the secured creditor is only entitled to the value that is needed to meet the secured obligation, and any excess must go to any junior secured creditor (or other competing claimant) or to the grantor. Some of the wording is taken from Article 79 of the UNCITRAL Model Law on Secured Transactions, including that of "competing claimant", which is wider than "subordinate secured creditor". Article 79 is somewhat complex, and the Working Group will need to decide what level of detail is required in the present instrument as to the mechanics of enforcement.

Questions for the Working Group:

28. *The Working Group is invited to comment on the above proposed principle on security.*
29. *Is it necessary to include a principle on repos in the instrument?*
30. *Should the instrument leave the creation of the security right up to other law?*
31. *Are the proposed methods for third-party effectiveness suitable for the VCM?*
32. *Is close-out netting relevant to the VCM?*
33. *What level of detail is required in the present instrument as to the mechanics of enforcement?*

I. Insolvency

166. Issues of the applicable treatment in case of insolvency are closely related to the legal nature of VCCs. The relevant insolvency could be, for example, that of (i) a person with a proprietary right in a VCC, who may or may not have, as a debtor, granted to his or her creditor a security right in a VCC as collateral; (ii) the project proponent that is still the VCC holder or who is no longer the VCC holder (depending on the stage of the climate mitigation project and the VCC's circulation); (iii) the ICCP, the third-party verifier or the VCC registry.

167. The insolvency of a project proponent whose project has already generated VCCs that are transacted on the secondary market could raise legal questions, especially if those VCCs are the result of GHG removals. For instance, one could wonder whether the disappearance of the legal entity responsible for ensuring that the carbon remain stored in the reservoirs (*e.g.*, trees, soils, subsurface) would affect the validity of the VCCs that have been generated by the climate mitigation project and which are traded on the secondary market.¹²⁶

168. In the context of digital assets, DAPL Principle 19 builds on DAPL Principle 3(1) (which provides that digital assets can be the subject of proprietary rights) and confirms that a proprietary right in a digital asset that is made effective against third parties is effective against relevant parties in an insolvency-related proceeding. However, because VCC registries are generally owned and operated by private entities, the risk of the insolvency of a VCC registry and its consequences for a VCC holder are likely to be factors that are specific to VCCs. Indeed, the insolvency of a VCC registry may lead to the “perishing” of the digital VCC.¹²⁷

169. This is especially relevant if considering VCCs as proprietary because embodying certain rights, as described above in the substantive approach (see Section III.B.3); if the VCCs are conceptualised as rights against the VCC registry, if the registry is wound up and no one takes over its functions, then, by definition, trading is no longer available. Although a new register could be created, this would give rise to a completely different VCC, since liabilities could not be transferred. Keeping in mind that the opposite of a right is a liability, while the right is on the part of the VCC holder, the liability is on the part of the registry. That liability could be novated, but that presupposes a rescue, which cannot be assumed. If there was no rescue and in the absence of a regulated registry system, if the entity were wound up, then the VCCs would be lost. The suggested principle 10 of the proposed registry principle above addresses this eventuality, but it would probably need to be in tandem with regulation.

¹²⁶ UNCITRAL/UNIDROIT Joint Study, para. 148.

¹²⁷ UNIDROIT Issues Paper WG1, paras. 122-123.

170. Likewise, to the extent that some VCCs take the Verra form, where there are not only rights against the registry, but also rights against the third-party verifier and the project proponent, if any of those entities became bankrupt, then the resulting warranty becomes essentially valueless.¹²⁸

171. At the first session, doubts were expressed as to whether moving to a form-based regime would solve the issue. It was explained that if the form was maintained by a bankrupt entity, and the bankrupt entity stopped maintaining the form, then there would be instances where the entire ledger would be wiped out, unless one had a separate right against the registry to force the registry to re-create the register, which, again, would be useless if the registry were insolvent.¹²⁹ A possible way of addressing this would be to establish a duty on the insolvency officer of the registry to transfer the registered information to another registry.

Questions for the Working Group:

34. What should be the essential features of a principle on insolvency?

35. Could a duty on the insolvency officer of the registry to transfer the registered information to another registry be established?

IV. NEXT STEPS

172. The third session of the VCCs Working Group has been tentatively scheduled to take place from Wednesday 4 September to Friday 6 September 2024.

173. The Chair and the Secretariat will coordinate any intersessional work with members of the Working Group.

¹²⁸ UNIDROIT Summary Report WG1, para 138.

¹²⁹ UNIDROIT Summary Report WG1, para 141.

ANNEXE I

PRELIMINARY DRAFT STRUCTURE

Section heading	Proposed content
Introduction	<ul style="list-style-type: none"> • Main stages in VCC life cycle • At this stage, analysis on legal nature is irrespective of use case for VCCs • Will not analyse whether used to comply with statutory obligation or calculate net-zero compliance • Anticipate that VCCs may be transferred
Section I: Scope and Definitions	<p><u>Principle 1 Scope</u>: <i>These Principles address the private law relating to verified carbon credits</i></p> <ul style="list-style-type: none"> • Principles address private law aspects that arise from issuance of VCC onwards, i.e., in relation to primary and secondary markets • Principles do not address: <ul style="list-style-type: none"> ○ Underlying climate mitigation projects ○ Integrity issues ○ Regulatory questions including issues of environmental law ○ Tax ○ Accounting <p><u>Principle 2 Definitions</u>:</p> <p>Terms to define should include:</p> <p><i>Verified Carbon Credits</i></p> <ul style="list-style-type: none"> • Project-based. • Represent the achievement of a reduction or removal of one tonne of CO₂ equivalent as recognized by third party issuer. • Issued by third party issuer and registered with unique serial number in a Registry. • Capable of being used in different ways (e.g., for trading, for compliance purposes, for mitigation contribution claims, to retire and make statement). <p><i>Third-party issuer</i></p> <ul style="list-style-type: none"> • Could be government or could be independent carbon standard setter. • What are minimum criteria? E.g., reliable system against double-registration to ensure exclusivity. <p><i>Third-party verifier</i></p> <ul style="list-style-type: none"> • Independent assessment bodies that develop quality assurance programmes to confirm that the activities of a climate

Section heading	Proposed content
	<p>mitigation project have resulted in the claimed emissions reductions or removals.</p> <p><i>VCC registry</i></p> <ul style="list-style-type: none"> • What are minimum criteria to ensure that registries provide necessary level of individuation and control? E.g., provision of unique serial/identification number. • Features of what registry means, not about quality or integrity. • Differentiate between record itself and entity that administers it. • Additional terms to define may include: <i>issuance, certification, recordation, transfer, retirement, reversal, cancellation, climate change mitigation project, project proponent, primary market for VCCs, secondary market for VCCs</i> <p><u>Principle 3 General principles: A verified carbon credit can be the subject of proprietary rights.</u></p> <ul style="list-style-type: none"> • Core minimum characteristics that a VCC needs to possess for it to be recognized as capable of being the subject of proprietary rights by most legal families: must be identifiable, exclusive, and rivalrous. • Refer to definition for fulfillment of criteria. • Registry as vehicle by which achieve the above. • VCCs may also embody rights (against ICCP, VCC registry). • Control <ul style="list-style-type: none"> ○ Do not have same factual control as have in DA context. ○ Control as exclusive ability to instruct the Registry once VCC is issued into account?
Section II: Conflicts of Law	<p><u>Principle [xx] Applicable law:</u></p> <ul style="list-style-type: none"> • Party autonomy • Mandatory rules • Default rules in case of no choice of law (see DAPL Principle 5)
Section III: Issuance and Recordation	<ul style="list-style-type: none"> • Address the moment in which VCCs come into existence. • Issues around “ownership” (exclusive control?) and “title” (left to other law?) and role of registries. • Control as proxy for ownership?
Section V: Transfer	<ul style="list-style-type: none"> • Often done through bilateral contracts; principle of party autonomy.

Section heading	Proposed content
	<ul style="list-style-type: none"> • When is transfer complete or effected (e.g., defer to contract or requires registry registration). <p><u>Principle [xx] Innocent acquisition:</u></p> <ul style="list-style-type: none"> • Discuss whether to include <p><u>Principle [xx] Rights of a transferee:</u></p> <ul style="list-style-type: none"> • Supervening circumstances (e.g., force majeure).
Section VI: Retirement, Reversal and Cancellation	<ul style="list-style-type: none"> • Effect of retirement • Effect of reversal (buffer pool, exhaustion of buffer pool) • Effect of subsequent cancellation of VCC and remedies for VCC holder
Section VII: Intermediation	<ul style="list-style-type: none"> • Types of intermediaries <ul style="list-style-type: none"> ◦ Owners (e.g., banks – have contractual right against bank) ◦ Custodians ◦ Service providers • What are duties owed and what happens in insolvency • Custody as one type of intermediation <ul style="list-style-type: none"> ◦ Is the registry a custodian? ◦ VCC holder may act as custodian (VCC holder can conclude contract with a client whereby client acquires the right to instruct the VCC holder to either retire or sell on its behalf).
Section VIII: Secured Transactions	<p><u>Principle [xx] Secured transactions: general:</u> <i>Verified carbon credits can be the subject of security rights.</i></p> <ul style="list-style-type: none"> • As in the DAPL Principles, this follows from the determination that VCCs can be the subject of proprietary rights. <p><u>Principle [xx] Third party effectiveness</u></p> <ul style="list-style-type: none"> • Currently, registries do not register security rights in VCCs. • Question of interoperability amongst registries (VCC registries and traditional registries). <p><u>Principle [xx] Priority of security rights</u></p> <p><u>Principle [xx] Enforcement of security rights</u></p>
Section IX: Insolvency	<p><u>Principle [xx] Effect of insolvency on proprietary rights in verified carbon credits:</u></p> <ul style="list-style-type: none"> • Insolvency of registry • Insolvency of VCC holder • Insolvency of project proponent

ANNEXE II**TOPICS AND QUESTIONS FOR ICCPS IN RELATION TO VCC REGISTRIES**

1. How the registry works and how registration is effected.
 - a. Are the registry operator and the VCC issuer the same legal entity?
2. The contractual arrangement between the registry and the account holder, and also the registry entity itself (both the legal entity and the physical infrastructure).
 - a. What are the contractual arrangements between VCC holder and registry operator?
 - b. What rights with proprietary effect, such as ownership rights, does the VCC holder have in relation to the VCCs in their account?
 - c. Are any such rights expressly dealt with in the Terms & Conditions? If so, how?
3. How the account itself works, including whether it is segregated or omnibus.
 - a. How are segregated accounts recorded?
 - b. Do you operate pooled accounts and, if so, how are they recorded?
4. Details on the account authority, access, maintenance, control, holding structure, custody arrangements, encumbrance and interoperability.
 - a. What are the rights of the account holder, the registry and any third parties in respect of these items?
 - b. What is your expectation in respect of VCCs in accounts if there were an insolvency event of the registry operator?
 - c. Does the registry operator have any rights to intercept and control or deal with VCCs in an account?
 - d. Apart from liens (or other security rights) arising out of law for unpaid registry fees, does the registry operator have any rights or encumbrances over the VCCs in an account?
 - e. Are there any circumstances where an issued VCC may be cancelled or retired without the consent of the VCC holder?
5. Transfer and title.
 - a. How do you consider title to transfer between accounts? Do you make a statement to the transferee that you are now holding the VCCs exclusively to their order?
6. Taking security over VCCs and how this should be able to be 'perfected'.

ANNEXE III**UNCITRAL/UNIDROIT STUDY ON THE LEGAL NATURE OF VERIFIED CARBON
CREDITS ISSUED BY INDEPENDENT CARBON STANDARD SETTERS**



**United Nations Commission on
International Trade Law**
Fifty-seventh session
New York, 24 June–12 July 2024

UNCITRAL/UNIDROIT study on the legal nature of verified carbon credits issued by independent carbon standard setters

Note by the Secretariat

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I. Introduction

A. Background of the study*

1. At its fifty-fourth session, in 2021, the Commission heard a proposal to examine: (i) how existing UNCITRAL texts could be aligned with climate change mitigation, adaptation and resilience goals; and (ii) whether further work could be done by UNCITRAL to facilitate those goals in the implementation of those texts or through the development of new texts. It had been added that public-private partnerships could be an area of focus for taking stock of existing texts, while legal uncertainty regarding the legal status of carbon credits traded in voluntary carbon markets could be a focus for future legislative work.¹

2. Broad support was expressed at that time for the Commission to consider the proposal further, based on more precise information on the work involved. It had been added that member States might need to carry out further internal consultations across different government agencies before a decision on future work could be taken, and that such work would need to be undertaken consistent with existing public international law frameworks, such as the Paris Agreement on climate change of 2015. After discussion, the Commission requested the secretariat to consult with interested States with a view to developing a more detailed proposal on the topic for presentation to the Commission for its consideration at its next session, in 2022.²

3. At its fifty-fifth session, in 2022, the Commission considered a note by the Secretariat summarizing the findings and recommendations of a study on private law aspects of climate change commissioned from an outside expert with a view to assisting the Commission to consider the desirability and feasibility of undertaking work in that area.³ At that time, there was wide agreement within the Commission on the importance of the topic and on the usefulness of exploring how UNCITRAL could offer its own contribution to the international community's efforts to combat climate change and mitigate its effects by updating existing private law instruments and developing new enabling legal mechanisms, if necessary.⁴ The Commission requested the secretariat to conduct further research in the area, in consultation with outside experts and interested organizations from both within and outside the United Nations system.⁵ It also requested the secretariat to organize a colloquium or an expert group meeting on the various legal issues surrounding climate change mitigation, adaptation and resilience, in conjunction with relevant and interested international organizations.⁶

4. At its fifty-sixth session, in 2023, the Commission had before it a note by the Secretariat on the subject,⁷ which provided additional information and comments received by the secretariat on the issues discussed in the two notes that the Commission had considered at its fifty-fifth session. The Commission also heard an oral report by

* The secretariat wishes to express its sincere thanks to its consultant Professor Géraud de Lassus St-Geniès and Ms. Giulia Previti (UNIDROIT), main authors of this study, to Ms. Priscila Andrade, and Professor Louise Gullifer (UNIDROIT), to Ms. Gérardine Goh Escolar (Deputy Secretary General of the Hague Conference on Private International Law), as well as to the various experts who participated in the first session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits (Rome, 10–12 October 2023) and the Joint Meeting of the UNCITRAL Expert Group and the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits (Vienna, 31 January–1 February 2024) for their contribution to the preparation of the study.

¹ *Official Records of the General Assembly, Seventy-sixth Session, Supplement No. 17 (A/76/17)*, para. 244.

² *Ibid.*, para. 246.

³ [A/CN.9/1120](#) and [A/CN.9/1120/Add.1](#).

⁴ *Official Records of the General Assembly, Seventy-seventh Session, Supplement No. 17 (A/77/17)*, para. 212.

⁵ *Ibid.*, para. 216.

⁶ *Ibid.*

⁷ [A/CN.9/1153](#) and [A/CN.9/1153/Add.1](#).

the secretariat on the results of the UNCITRAL Colloquium on Climate Change and International Trade Law.⁸ At that session, an idea that gathered wide support was that a mapping exercise beginning in the area of voluntary carbon credits, on which work was already under way at the International Institute for the Unification of Private Law (UNIDROIT), might represent a useful contribution by UNCITRAL to help States assess the options available to them in addressing relevant legal issues, in particular as regards the legal nature of voluntary carbon credits.⁹ It was also added that it would be important for such work to describe and analyse issues rather than to prescribe possible solutions or formulate models so as to avoid interference and duplication with the work of the competent bodies under existing international agreements in the area of climate change.¹⁰ In addition, it was stressed that such work should be inclusive, in particular as regards the participation of experts representing Member States, especially developing countries, and should give competent government officials the opportunity to provide substantive input and information on their policies and practices.¹¹

5. After discussion, the Commission requested the secretariat, within the mandate of UNCITRAL, to consult with all Member States of the United Nations with a view to developing a more detailed study on the aspects of international trade law related to voluntary carbon credits. It was added that such study should include consideration of outputs from other relevant forums and processes, including the United Nations Convention on Climate Change Conference (UNFCCC), and whether UNCITRAL efforts would be redundant. Furthermore, the Commission requested the secretariat to conduct such study in cooperation and collaboration with the secretariat of UNFCCC, UNIDROIT, the Hague Conference on Private International Law (HCCH) and other organizations with relevant expertise.¹²

6. With a view to operationalizing the above-mentioned coordination and cooperation, the secretariat and its appointed experts participated in the first session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits, held in Rome in October 2023 (see para. 20 below). Furthermore, on 31 January and 1 February 2024, a Joint Meeting of the UNCITRAL Expert Group and the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits was held in Vienna. At this phase in the implementation of their respective mandates, UNCITRAL and UNIDROIT agreed to jointly author the present study.

B. Issues of terminology and definition of fundamental concepts

7. While the term “voluntary carbon credits” is widely used, even by the stakeholders of carbon markets themselves, experts consulted for the preparation of this study recommended refraining from employing it. It was argued that this term lacked precision and that the word “voluntary” could entail confusion and be misleading. For these experts, the objects of the detailed study which the Commission had requested at its fifty-sixth session, in 2023, could more accurately be characterized as “verified carbon credits issued by independent carbon standard setters”. For greater clarity, suggestions were made to use this term.

8. In line with these suggestions, the term “verified carbon credits issued by independent carbon standard setters” is used in this study instead of “voluntary carbon credits”. To explain the reasons that have led to this shift in terminology, some fundamental concepts of carbon markets need be introduced at this early stage of the study.

⁸ *Official Records of the General Assembly, Seventy-eighth Session, Supplement No. 17 (A/78/17)*, para. 189.

⁹ *Ibid.*, para. 198.

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Ibid.*, para. 199.

9. Carbon markets may be defined as markets on which carbon credits are traded. However, not all carbon credits are the same. They may be created by different schemes and processes, they can represent, or enable their holders to do, different “things” or enable their holders to take different actions, and they may be used for different purposes. Thus, there are various types of carbon credits that may be bought and sold on carbon markets. This makes it difficult to provide a single, comprehensive, and accurate definition of what “carbon credits” are. The term “carbon credit” should therefore only be understood as a generic expression referring to any of the different types of units traded on carbon markets.

10. One specific type of carbon credits is called “verified carbon credits” (VCCs). A VCC may be defined as a unit that represents that one ton of CO₂ equivalent has been reduced (i.e., not emitted in the atmosphere) or removed from the atmosphere through a specific climate mitigation project, as recognized by a third-party issuer or a State.¹³ The reason why these credits are referred to as “verified” is because they are only issued after a verification process is carried out. During this process, a trusted independent third party verifies that a specific climate mitigation project has indeed led to the reduction or the removal of an amount of CO₂ equivalent that would have not occurred had the project not been implemented. The term “third party” indicates that the entity in charge of the verification process is not the one conducting the climate mitigation project itself nor the one issuing the VCCs. In sum, VCCs may be presented as carbon credits that have been produced by following a specific “recipe” which relies on a certification and verification process. It is only after this certification and verification phase has been completed that VCCs are issued (see para. 57 below).

11. There are mainly two kinds of entities that may issue VCCs: (i) public authorities (e.g., intergovernmental organizations, international bodies, States, sub-national governments); and (ii) independent carbon standard setters. Independent carbon standard setters are private law entities (i.e., not administered by public authorities) which certify that climate mitigation projects have generated reductions in greenhouse gas (GHG) emissions or removals of GHG from the atmosphere (see para. 57 below).¹⁴ Upon specific conditions, each of these independent carbon standard setters offers to issue VCCs when GHG reductions and removals, that have been verified according to its own standards, have occurred.

12. Regardless of whether issued by public authorities or independent carbon standard setters, it has become common in the world of carbon markets to refer to VCCs as “voluntary carbon credits”. Presumably, this qualification stems from the fact that the purchase of VCCs is in most cases – although not always – “voluntary”. This means that GHG emitters are usually not required by laws and regulations to purchase VCCs to comply with specific mandatory schemes. Laws and regulations may however permit the use of VCCs (whether issued by public authorities or independent carbon standard setters) to comply with specific mandatory schemes, without requiring their use for such purpose. In addition, many private companies purchase VCCs issued by independent carbon standard setters to demonstrate progress towards the achievement of voluntary mitigation targets (i.e., targets they have set for themselves without being compelled to do so by laws and regulations). Strictly speaking, it is therefore not the carbon credits themselves that are “voluntary”, but the demand or such credits (in the sense that the demand does not aim at fulfilling a legal obligation). In any cases, in practice, the term “voluntary carbon credits” has

¹³ The Intergovernmental Panel on Climate Change (IPCC) defines the word “mitigation” as “[a] human intervention to reduce emissions or enhance the sinks of greenhouse gases” (*Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the IPCC*, Annex I, p. 126).

¹⁴ Independent carbon standard setters are also sometimes referred to as certification standards bodies or independent crediting programmes. In the absence of an existing agreed standardized definition in the world of carbon markets, the term “independent carbon standard setters” will be used throughout the study.

come to be interpreted in different ways, to refer either to VCCs issued by public authorities, VCCs issued by independent carbon standard setters, or both.

13. In order to avoid any confusion as regards the object and scope of this study, the term “VCCs issued by independent carbon standard setters” has been chosen instead of “voluntary carbon credits”. In line with this approach, it has been noted during the consultations conducted for the preparation of this study that the markets on which VCCs issued by independent carbon standard setters are traded would be best characterized as “voluntary carbon markets in VCCs issued by independent carbon standard setters”.

14. For ease of reading, the following points should be noted: (i) the acronym “VCCs” is used throughout the study to refer to “verified carbon credits issued by independent carbon standard setters”; (ii) VCCs issued by public authorities are expressly referred to as such; (iii) the term “voluntary carbon credits” has been retained when used in the context of quotations or as the title of a document or an initiative; and (iv) the acronym “VCMs” is used to refer to “voluntary carbon markets where VCCs are issued by independent carbon standard setters”.

C. Scope of the study

15. In response to the request by the Commission at its fifty-sixth session to the secretariat, the following study provides a comparative overview of legal issues related to VCCs to help States assess the options available to them in addressing relevant legal issues, in particular as regards the legal nature of VCCs.

16. This study does not seek to analyse regulatory schemes that are administered by public authorities, whether at the domestic or international level, and that involve the issuance of carbon credits or require or permit the use of carbon credits for compliance purposes. Thus, regulated emissions trading schemes (ETS)¹⁵ such as cap-and-trade systems¹⁶ and baseline-and-credit mechanisms¹⁷ administered by public authorities (including the Paris Agreement Article 6.4 baseline-and-credit mechanism), the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) or the framework for cooperative approaches referred to in Article 6.2 of the Paris Agreement fall outside the scope of this study. Likewise, this study does not seek to discuss the carbon credits that may be issued under those schemes, such as emission allowances delivered under cap-and-trade systems, VCCs issued by public authorities under baseline-and-credit mechanisms, such as the instruments that may be delivered by the Article 6.4 Paris Agreement Supervisory Body (A6.4ERs¹⁸ and mitigation contribution), or internationally transferred mitigation outcomes (ITMOs).

17. It should be noted, however, that VCMs and schemes administered by governments which involve the issuance of carbon credits or require or permit the use of carbon credits for compliance purposes do not represent completely separate universes. There is indeed an increasing convergence between them, as VCCs may sometimes be used for compliance purposes under schemes established by States (see

¹⁵ In the context of this study, emissions trading schemes (ETS) should be understood as referring to any type of schemes that involve the issuance of carbon credits or require or permit the use of carbon credits. Cap-and-trade systems and baseline-and-credit systems are specific kinds of ETS.

¹⁶ In a cap-and-trade system, an upper limit on GHG emissions is fixed, and emission allowances are issued on the basis of this limit. Entities that are covered by this system receive, or must purchase, tradable emission allowances which each usually represent a permit to emit one ton of CO₂ equivalent. At the end of a compliance period, covered entities are required to surrender as many allowances as the amount of CO₂ equivalent they have emitted. See also para. 28 below.

¹⁷ In a baseline-and-credit mechanism, a GHG emission or GHG removal baseline is defined (according to a business-as-usual scenario, historical average, or performance standard or benchmark), and emission reductions or removals achieved that outperform that baseline are rewarded with carbon credits that can, in principle, be traded and used by another entity to offset its emissions generated elsewhere. See also para. 31 below.

¹⁸ The acronym “A6.4ERs” stands for Article 6, paragraph 4, emission reductions issued under the mechanism established by Article 6, paragraph 4 of the Paris Agreement.

para. 76 below). Moreover, some States have adopted regulations to oversee the development of VCMs in their jurisdiction (see para. 53 below). In addition, some of the legal issues that currently arise in the context of the cross-border trading of VCCs share similarities with those that may be encountered in the context of governmental mechanisms involving carbon credits. Thus, while the focus of this study is on VCCs, it also gives an overview of the complex ecosystem formed by carbon markets (in which VCCs evolve), as this background is relevant for discussing the aspects of international trade law related to VCCs.

18. In line with the request by the Commission, the scope of this study is also limited to mapping legal issues relating to VCCs that have, or could have, an impact on their international trade. In other words, in the context of this study, VCCs are only envisaged as objects of international trade that have been properly created (i.e., created according to the rules of the independent carbon standard setters that have issued them). The implication of this premise is that not all legal issues related to VCCs are discussed in this study. Legal issues that may arise from cases of non-compliance with the rules of the independent carbon standard setters or with domestic and local laws and regulations (e.g., land ownership, obtainment of free, prior, and informed consent) are not part of the analysis conducted here. Instead, the study focuses on the most salient legal issues or uncertainties that arise, or may arise, in the context of the cross-border trading of VCCs with a view to stimulating a discussion on possible ways to improve legal certainty in the trading of VCCs across borders.

D. Inputs considered for the preparation of the study

19. At its fifty-sixth session, the Commission requested the secretariat to consult with all Member States of the United Nations with a view to developing a more detailed study on the aspects of international trade law related to VCCs. It was suggested that this could include questionnaires to be sent out by the secretariat. The secretariat was also requested to invite all Member States of the United Nations to nominate experts to provide inputs to the work. Accordingly, on 6 October 2023, the secretariat circulated a questionnaire to all Member States of the United Nations, with a view to gathering information on their existing legislations on carbon trading, the state of VCMs in their jurisdictions, and on the legal nature of carbon credits (e.g., emission allowances, VCCs issued by public authorities, VCCs) under their domestic laws. The questionnaire further invited all Member States to nominate experts to provide input to the work of the secretariat in that area. As of March 2024, 32 responses to the questionnaire, originating from countries from Africa, Asia, Europe, Central America, North America, and South America, were transmitted to the secretariat and considered for the preparation of this study.¹⁹ In addition, the secretariat invited the comments from State-nominated experts on an earlier draft of the detailed study, with the comments received²⁰ having been taken into consideration for the preparation of this study.

20. Consideration was also given to the work carried out by UNIDROIT in relation to the legal nature of voluntary carbon credits. At its 81st session, in 2022, the General Assembly of UNIDROIT endorsed the recommendation of the UNIDROIT Governing Council to include in UNIDROIT's 2023–2025 Work Programme a project to analyse the legal nature and other private law aspects of voluntary carbon credits. Following receipt of this mandate, the UNIDROIT Secretariat organized in 2023 two exploratory consultative workshops, in collaboration with the World Bank Group (WBG) and the International Swaps and Derivatives Association (ISDA). In 2023, the UNIDROIT Governing Council confirmed the authorization to establish a Working Group on the Legal Nature of Voluntary Carbon Credits and encouraged further coordination in this

¹⁹ Argentina, Australia, Brazil, Brunei Darussalam, Burkina Faso, Canada, Côte d'Ivoire, Croatia, Dominican Republic, El Salvador, Guatemala, Guyana, Ireland, Israel, Japan, Kazakhstan, Malaysia, Mexico, Myanmar, Norway, Oman, Panama, Paraguay, Peru, Russian Federation, Singapore, Slovenia, Sri Lanka, Thailand, Türkiye, Turkmenistan, United States.

²⁰ Comments were received from the experts nominated by China and the United States.

area with other international organizations, such as UNCITRAL. The first meeting of this Working Group, which was composed of representatives of relevant organizations (e.g., the UNFCCC secretariat, WBG, HCCH, the UNCITRAL secretariat), academics and legal practitioners with an expertise in the field of VCCs, was held in October 2023. The issues paper prepared for this meeting,²¹ as well as the discussions held during this meeting, were considered for the preparation of this study.

21. An earlier version of this study was presented and discussed at a Joint Meeting of the UNCITRAL Expert Group and the UNIDROIT Working Group on the Legal nature of VCCs, organized by the secretariats of UNCITRAL and UNIDROIT in Vienna on 31 January and 1 February 2024. The comments made during this Joint Meeting, attended by representatives of relevant organizations (e.g., the UNFCCC secretariat, WBG, HCCH, International Emission Trading Association, ISDA and International Organization of Securities Commissions (IOSCO)) as well as academics and legal practitioners with an expertise in the field of VCCs, have been incorporated into the following version of the detailed study.

22. In addition, reports on the topic of VCCs prepared by relevant stakeholders, such as IOSCO, ISDA, the Organisation for Economic Co-operation and Development (OECD) and the WBG also served as inputs for this study. The content of the notes on the topic of climate change mitigation, adaptation and resilience that the secretariat submitted to the Commission at its fifty-fourth and fifty-fifth sessions were also part of the information considered for the preparation of this detailed study.

II. Carbon markets: an overview of the global landscape

23. The idea of trading carbon credits representing a certain amount of reduced GHG emissions or a certain amount of GHG removed from the atmosphere and allowing their use to demonstrate progress towards the achievement of mitigation goals was first introduced in the negotiations of the UNFCCC, which was adopted in 1992.

24. It was however only with the adoption of the Kyoto Protocol to the UNFCCC, in 1997, that a global carbon market emerged. This treaty created three market mechanisms: (i) an international ETS through which Parties listed in Annex I to the UNFCCC (“Annex I Parties”) could trade units of the emissions allowed under the targets that had been agreed in the Kyoto Protocol for the 2008–2012 commitment period, i.e., Assigned Amount Units (AAUs), each representing one ton of CO₂ equivalent; (ii) a mechanism known as “Joint Implementation” that allowed Annex I Parties to earn Emission Reduction Units (ERUs) from an emission reduction or emission removal project in another Annex I Party, each equivalent to one ton of CO₂ equivalent; and (iii) a mechanism known as “Clean Development Mechanism” (CDM) which allowed Annex I Parties to earn Certified Emission Reduction credits (CERs) by investing in GHG abatement projects in non-Annex I Parties, each equivalent to one ton of CO₂ equivalent.²² AAUs, ERUs and CERs were all tradable units that could be counted towards meeting Kyoto targets.²³

25. Since then, carbon markets have considerably expanded. Today, they form a complex and fragmented ecosystem in which different types of carbon credits – generated under different types of mechanisms – are being traded on different carbon markets.²⁴ These markets may operate at the international, regional, national, or sub-national level. The world of carbon markets is usually presented as comprising two categories of carbon markets: compliance carbon markets (CCMs) and VCMs.

²¹ UNIDROIT, *Issues Paper*, Study LXXXVI – W.G.1 – Doc. 2, October 2023.

²² Kyoto Protocol, arts. 17, 6 and 12, respectively.

²³ UNFCCC, “Emissions Trading”, available at <https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading>.

²⁴ IOSCO, *Compliance Carbon Markets. Final Report*, FR/09/23, July 2023, p. 4 (noting that “[t]he carbon markets ecosystem is a complex one given the existence of different types of markets and different mechanisms, within those markets”).

A. Compliance carbon markets

26. CCMs (or regulatory carbon markets) refer to carbon markets that are created by mechanisms that have in common two characteristics. These mechanisms: (i) are administered by public authorities; and (ii) involve the issuance of carbon credits or require, or permit, the use of carbon credits for compliance purposes. There are various mechanisms through which CCMs may be created. Most of the time, these mechanisms rely on the issuance of carbon credits that GHG emitters must, or may, use for compliance purposes. However, as explained below, this is not always the case.

27. The following paragraphs present the main mechanisms through which existing CCMs have been established, whether at the domestic or international level, and discuss the issue of the legal characterization of the carbon credits traded on CCMs.

1. Market infrastructure

(i) *At the domestic level*

28. CCMs may be created by a mechanism known as “cap-and-trade”. Under this mechanism, a regulator (e.g., a State, a regional organization, a group of States, or a sub-national entity), establishes a maximum level of emissions that can be emitted within a specified time period (this being the “cap”). On the basis of this cap, GHG emitters designated by the regulator receive, or are given the opportunity to purchase from the competent public authority, a certain number of emission allowances. These emission allowances can then be traded between participants (this being the “trade”). At the end of the period, these entities are obliged to surrender one allowance for each ton of CO₂ equivalent they have emitted during that period. As emission allowances can be traded between participants, entities that lower their emissions can sell their allowances to entities that are likely to emit more than the number of allowances they have received or have been able to purchase.²⁵

29. In their response to the questionnaire sent by the secretariat, several States indicated that they had one or several cap-and-trade systems in operation in their jurisdiction. This is notably the case of Canada (in the province of Québec), China, the member States of the European Union (EU),²⁶ Japan (in the city of Tokyo and in the Saitama Prefecture), Kazakhstan, Mexico, Norway (which takes part in the EU ETS on the same legal basis as EU member States), the Russian Federation (which is testing a cap-and-trade system in the Sakhalin region) and the United States of America (on a sub-national basis, in California and in north-eastern states under the Regional Greenhouse Gas Initiative).²⁷

30. Switzerland,²⁸ the United Kingdom of Great Britain and Northern Ireland,²⁹ and the Republic of Korea³⁰ are also countries in which cap-and-trade systems are in force. In addition, some countries are discussing the possibility to establish a cap-and-trade system in their jurisdictions. For instance, in its response to the questionnaire, Brazil indicated that a bill aiming at establishing a regulated system based on a GHG “emissions cap and the trading of assets representing GHG emissions, reductions or removals” was under discussion at the congress.³¹ Legislative actions to implement a mandatory cap-and-trade system are also underway in Türkiye.³² According to the

²⁵ A/CN.9/1120, para. 12.

²⁶ Croatia; Ireland; Slovenia (response to UNCITRAL questionnaire, 1a). It should be noted that the EU cap-and-trade system, known as the “EU ETS”, applies in all EU member States.

²⁷ Canada, Japan, Kazakhstan, Mexico, Norway, Russian Federation, United States (response to UNCITRAL questionnaire, 1a); Expert nominated by China, “Comments on the Draft UNCITRAL/UNIDROIT Study on the Legal Nature of Voluntary Carbon Credits”.

²⁸ Switzerland, Federal Act on the Reduction of CO₂ Emissions (23 December 2011).

²⁹ United Kingdom, The Greenhouse Gas Emissions Trading Scheme Order 2020.

³⁰ Republic of Korea, Act on the Allocation and Trading of Greenhouse-Gas Emission Permits, Act No. 11419 (14 May 2012).

³¹ Brazil (response to UNCITRAL questionnaire, 1a and 1b).

³² Türkiye (response to UNCITRAL questionnaire, 1a).

International Carbon Action Partnership, there are currently 28 cap-and-trade systems in operation worldwide, and such systems are under development in 8 jurisdictions and under consideration in 12 jurisdictions.³³

31. Baseline-and-credit mechanisms are another type of system that States can establish, leading to the creation of CCMs. Under this mechanism, a GHG emission or GHG removal baseline is defined, and emission reductions or removals achieved that outperform that baseline are rewarded with carbon credits that can, in principle, be traded. The way in which baseline-and-credit mechanisms operate may vary according to the type of baseline that is chosen (“business-as-usual scenario”, historical average, or performance standard or benchmark).

32. An example of baseline-and-credit mechanism based on a performance standard may be found in Canada (both at the federal and provincial level).³⁴ Under this mechanism, known as “output-based pricing system”, facilities, per regulations, must not exceed an annual predefined output-based emissions limit. Facilities that emit less than the annual limit receive carbon credits (called “surplus credits”) from the government for the portion of their emissions that are below the limit. These credits may be traded with facilities whose emissions are above the output-based emissions limit and these facilities may use those credits to cover the portion of their emissions that exceed the limit. A similar mechanism exists in Australia, where facilities whose emissions exceed a certain threshold are subjected to legislated net emissions limits, known as baselines. Tradable credits are issued to facilities with emissions below their baseline, and these credits may be purchased and surrendered by facilities that need to bring down their net emissions.³⁵

33. In baseline-and-credit mechanisms based on the assumption that operating practices and policies remain as they are at present (“business-as-usual scenario”), credits are usually issued for specific kinds of mitigation projects (often identified in laws and regulations) that generate emission reductions or removals, by following a predefined methodology, that would not have occurred had the project not been implemented. In many cases, laws and regulations require that an independent third party verifies that this condition, known as “additionality”, is met.³⁶ Thus, carbon credits issued under regulated baseline-and-credit mechanisms based on a business-as-usual scenario often take the form of VCCs issued by public authorities. In many jurisdictions, these VCCs issued by public authorities are qualified by laws and regulations as “offset credits” to indicate that they may be used by an entity to “offset” its emissions.

34. In the context of mechanisms involving carbon credits, “offsetting” GHG emissions refers to the action of “using” carbon credits for calculating the net level of GHG emitted by an entity during a given period. An entity is usually said to have “offset” its emissions when it subtracts from the amount of GHG it actually emitted an amount of GHG represented by carbon credits. Thus, offsetting may be viewed as an accounting operation for the elaboration of a net GHG emissions balance.

35. To evidence this accounting operation, and because carbon credits usually exist in electronic registries in a digital format, the holders of carbon credits that have used them for offsetting purposes may ask, or could be required to ask, the registry in which these credits are recorded to “retire” them. When carbon credits are “retired”, they are permanently transferred into a specific account which indicates that these credits

³³ International Carbon Action Partnership, “ETS Map”, available at <https://icapcarbonaction.com/en/ets>.

³⁴ Canada (response to UNCITRAL questionnaire, 1a).

³⁵ Australia (response to UNCITRAL questionnaire, 1a).

³⁶ Expert nominated by China, “Comments on the Draft UNCITRAL/UNIDROIT Study on the Legal Nature of Voluntary Carbon Credits”, laws and regulations often provide specific criteria that independent third parties (which can be private law entities) must meet to be deemed eligible by public authorities to perform this verification process. Furthermore, in some baseline-and-credit mechanisms, the result of the verification process carried out by an independent third party can be reassessed by public authorities. This is notably the case in China, with the process leading to the issuance of Chinese Certified Emission Reductions (CCERs)..

have been used for calculating a net GHG emissions balance and that they can therefore no longer be sold or used for offsetting purposes another time. Retirement of carbon credits enables entities that make an offsetting claim (i.e., that make a public statement about the level of their net emissions) to provide evidence for substantiating this claim.³⁷ The expression “retirement” is used in the context of both CCMs and VCMs.

36. In their response to the questionnaire sent by the secretariat, several States have indicated that they had a type of baseline-and-credit mechanism administered by a public authority in operation in their country. This is notably the case of Australia,³⁸ Canada,³⁹ China,⁴⁰ France,⁴¹ Japan,⁴² Kazakhstan,⁴³ Mexico,⁴⁴ the Russian Federation,⁴⁵ Thailand,⁴⁶ and the United States.⁴⁷ Other States also reported to be in the process of developing a baseline-and-credit mechanism (e.g., Brazil⁴⁸ and Panama⁴⁹). The EU is currently examining a proposal for a regulation on a certification for carbon removals, which would establish a voluntary EU-wide framework under which carbon removal units would be issued.⁵⁰

37. Baseline-and-credit mechanisms may function as autonomous programmes or they can be coupled with other market-based mechanisms. When used as an autonomous programme (e.g., France and Thailand), the carbon credits issued by public authorities may be used by private companies on a voluntary basis (i.e., without being required to do so by the law) to calculate and disclose a net GHG emissions balance. Individuals may also purchase those credits simply for the benefit of the environment. When baseline-and-credit mechanisms are coupled with market-based mechanisms – such as cap-and-trade systems (e.g., Mexico, Quebec, China and the States participating to the Regional Greenhouse Gas Initiative in the United States) – the credits issued can be used as compliance instruments (similarly as emission allowances).⁵¹ However, some baseline-and-credit mechanisms have a hybrid nature. For instance, in Canada, offset credits issued under the federal carbon offsetting programme may be used either for substantiating voluntary offsetting claims or as compliance instruments under the mandatory output-based pricing system.⁵² Likewise, in Australia, Australian Carbon Credits Units (which are credits issued by the government) may be used by private actors to voluntarily offset their emissions or

³⁷ While the word “offsetting” is widely used by the stakeholders of carbon markets, some experts noted during the consultations conducted for the preparation of this study that, in the context of VCMs, the word should not be used as its legal connotation appears to be at odds with the fact that no mandatory compliance requirements exist on VCMs.

³⁸ Australia (response to UNCITRAL questionnaire, 1a).

³⁹ Canada (response to UNCITRAL questionnaire, 1a).

⁴⁰ Expert nominated by China, “Comments on the Draft UNCITRAL/UNIDROIT Study on the Legal Nature of Voluntary Carbon Credits”. A baseline-and-credit mechanism, based on the issuance of CCERs, was launched in China in 2012. However, in 2017, due to low trading volumes and a lack of carbon audit standards, the system was temporarily suspended. After the issuance of new regulations in October 2023, this baseline-and-credit mechanism officially resumed in January 2024. It should be noted that CCERs are VCCs issued by public authorities.

⁴¹ France, Decree No. 2018-1043 of 28 November 2018 creating a “Low-Carbon”.

⁴² Japan (response to UNCITRAL questionnaire, 3a).

⁴³ Kazakhstan (response to UNCITRAL questionnaire, 2a).

⁴⁴ Mexico (response to UNCITRAL questionnaire, 2a).

⁴⁵ Russian Federation (response to UNCITRAL questionnaire, 3a).

⁴⁶ Thailand (response to UNCITRAL questionnaire, 3a).

⁴⁷ United States (response to UNCITRAL questionnaire, 1a).

⁴⁸ Brazil (response to UNCITRAL questionnaire, 1b).

⁴⁹ Panama (response to UNCITRAL questionnaire, 1a).

⁵⁰ European Commission, *Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals*, [2022] OJ C 2022/672.

⁵¹ Expert nominated by China, “Comments on the Draft UNCITRAL/UNIDROIT Study on the Legal Nature of Voluntary Carbon Credits”. For instance, in China, entities covered by a cap-and-trade system may surrender CCERs up to a limit of 5 per cent of their emissions instead of surrendering emission allowances.

⁵² Canada (response to UNCITRAL questionnaire, 1a).

meet compliance requirements under the Safeguard Mechanism (a baseline-and-credit mechanism based on a performance standard).⁵³

38. In their response to the questionnaire, several States have also reported to be developing, or considering the possibility to develop, an ETS in their jurisdiction, without further specifying the form that this system would or could take. For instance, Brunei Darussalam mentioned that it was exploring feasibility studies on carbon pricing instruments, including on ETS.⁵⁴ The Dominican Republic indicated to be working on a bill on climate change that will include aspects relating to carbon markets.⁵⁵ El Salvador stated that work was underway on a proposal for a framework law on climate change, addressing the issue of carbon markets.⁵⁶ Israel reported that initial discussions were being held between governmental bodies, relevant stakeholders and legal experts to examine the advisability of establishing an ETS.⁵⁷ Sri Lanka indicated to be in the process of developing a regulatory mechanism involving carbon trading.⁵⁸ Thailand noted that the Ministry of Natural Resources and Environment was currently drafting a bill which would include carbon pricing instruments.⁵⁹

(ii) *At the international level*

39. CCMs also exist at the international level. As mentioned above, the Kyoto Protocol led to the creation of an international carbon market. The units delivered under this treaty could be used by Annex I Parties to achieve their quantified emission limitation or reduction targets. With the end of the second commitment period of the Kyoto Protocol in 2020, the market-based mechanisms of this treaty have ceased to function or are no longer fully operational.⁶⁰ However, market mechanisms have remained an integral part of the United Nations climate change regime, with Article 6 of the Paris Agreement establishing two frameworks for engaging in market-based mechanisms: (i) a framework under which Parties may engage in cooperative approaches to exchange ITMOs;⁶¹ and (ii) a baseline-and-credit mechanism under which A6.4ERs may be issued by a Supervisory Body.⁶²

40. Unlike A6.4ERs (which are a type of VCC issued by a public authority), ITMOs are not, per se, a type of carbon credit. During the consultations conducted for the preparation of this study, experts noted that ITMOs could best be described as a status, or a label, that is applied to emission reductions and removals that are generated within the territory of a party to the Paris Agreement, when that party authorizes the use of these emission reductions and removals towards the achievement of the nationally determined contribution of another party, or for other international mitigation purposes.⁶³ ITMOs can therefore be a variety of “things” – whether the “thing” that is intended to be internationally transferred is measured in metric tons of CO₂ equivalent or in other non-GHG metrics determined by the parties⁶⁴ – including, but not limited to, emission allowances, VCCs issued by public authorities (including

⁵³ Australia (response to UNCITRAL questionnaire, 1a).

⁵⁴ Brunei Darussalam (response to UNCITRAL questionnaire, 2b).

⁵⁵ Dominican Republic (response to UNCITRAL questionnaire, 1a and 1b).

⁵⁶ El Salvador (response to UNCITRAL questionnaire 1b).

⁵⁷ Israel (response to UNCITRAL questionnaire, 1a).

⁵⁸ Sri Lanka (response to UNCITRAL questionnaire, 1a).

⁵⁹ Thailand (response to UNCITRAL questionnaire, 1b).

⁶⁰ For instance, in the case of the CDM, Parties to the Kyoto Protocol have agreed that there will be no issuance of CERs for emission reductions occurring on or after 1 January 2021. However, as of now, no decision specifies a deadline for requesting issuance of CERs for emission reductions that occurred prior to 1 January 2021 or indicates when such CER issuance should cease (Functioning and operation of the processes and institutions under the clean development mechanism in the future. Technical paper by the UNFCCC secretariat, [FCCC/TP/2023/3](#), para. 8).

⁶¹ Paris Agreement, art. 6.2.

⁶² Paris Agreement, art. 6.4.

⁶³ Decision 2/CMA.3, *Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement*, [FCCC/PA/CMA/2021/10/Add.1](#), Annex, para. 1.

⁶⁴ Such as hectares of land afforested or kilowatt hours of renewable electricity.

A6.4ERs⁶⁵), VCCs, or any other type of carbon credit. In their response to the questionnaire, some States (e.g., Côte d'Ivoire, El Salvador and Peru⁶⁶) have indicated to be developing domestic legal frameworks to participate in ITMOs trading.

41. Mechanisms administered by public authorities at the international level and involving the issuance of carbon credits can also be found outside the United Nations climate change regime. For instance, the WBG developed a carbon crediting standard – the Forest Carbon Partnership Facility (FCPF) Standard⁶⁷ – under which credits may be issued (after a third-party verification process) for emission reductions and removals generated in developing countries through jurisdictional-scale REDD+ programmes.⁶⁸ This mechanism is part of a broader initiative of the WBG (i.e., FCPF), which aims at supporting the implementation of such programmes. To that end, the Carbon Fund of the FCPF remunerates participant countries in accordance with negotiated contracts for verifiable emission reductions. Typically, the Carbon Fund negotiates an Emission Reduction Payment Agreement (ERPA) with a REDD+ participant country, or its authorized entity, for the acquisition of a predetermined amount of verified emission reductions. By virtue of the ERPA, once the country has fulfilled all its contract emission reductions, and the Carbon Fund has exhausted its call option or declined to exercise it, the emission reductions generated in excess to those provided for in the ERPA are available to the country, which fully owns these credits.

42. In some cases, CCMs are created under mechanisms that do not deliver carbon credits, but instead require or permit the use for compliance purposes of carbon credits that are generated by other mechanisms. At the international level, this is the case with CORSIA, the market-based mechanism developed by the United Nations International Civil Aviation Organization (ICAO) in relation to the aviation sector. CORSIA provides for a carbon offset and reduction scheme for international flights under which aeroplane operators have to compensate their emissions that are above a certain threshold.⁶⁹ To do so, CORSIA enables them to use, inter alia, VCCs issued by public authorities and VCCs that are deemed eligible by ICAO.

2. Legal nature of carbon credits traded on compliance carbon markets

43. Based on the responses received from the States to the questionnaire, it appears that the situation regarding the legal nature of carbon credits traded on CCMs varies widely across countries that have an ETS in operation in their jurisdiction or that participate in an international mechanism involving the issuance of carbon credits. It should be noted that in their responses, States provided indications on the legal nature of carbon credits by reference to private law, or property law, but also indications on other forms of legal characterization that are more relevant for public law issues, such as tax law or financial law. In both cases, however, the way in which carbon credits are legally characterized is far from consistent across jurisdictions.

(iii) *Legal characterization by reference to private law or property law*

44. Some States have expressly mentioned that the legal nature of the carbon credits issued in their jurisdictions is undetermined. For instance, Canada reported that the federal legislation did not define the legal nature of the carbon credits issued under

⁶⁵ When internationally transferred from one party to the Paris Agreement, A6.4ERs are considered as ITMOs. See also *supra* note 63, para. 1.

⁶⁶ Côte d'Ivoire, El Salvador, Peru (response to UNCITRAL questionnaire, 1(b)).

⁶⁷ Forest Carbon Partnership Facility, “FCPF Standard”, available at www.forestcarbonpartnership.org/fcpf-standard/.

⁶⁸ The acronym “REDD+” stands for reducing emissions from deforestation and forest degradation in developing countries. The sign + refers to conservation of forest carbon stock, sustainable management of forests, and enhancement of forest carbon stocks. Jurisdictional-scale REDD+ programmes are national or sub-national programmes, usually carried out by governments, that aim at implementing REDD+ activities.

⁶⁹ ICAO, “Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)”, available at www.icao.int/environmental-protection/CORSIA/Pages/default.aspx.

the federal baseline-and-credit mechanisms.⁷⁰ Likewise, the Russian Federation indicated that the nature of the carbon units issued under its pilot cap-and-trade system was not defined by legislation and that there exists no case law or established administrative interpretation addressing the legal nature of these units.⁷¹ Thailand also mentioned that there was no explicit specification of the legal nature of the VCCs issued by the government in its legislation.⁷² The absence of statutory provisions addressing the issue of the legal nature of carbon credits issued by government-run ETS may be encountered in other jurisdictions.⁷³

45. By contrast, there are several jurisdictions in which the legal nature of carbon credits traded on CCMs is specified by statutory provisions or has been clarified by judicial or administrative interpretation. In Australia, the law clearly indicates that an Australian Carbon Credit Unit is personal property that is transmissible by assignment, by will and by devolution by operation of law.⁷⁴ In Canada, at the provincial level, offset credits are sometimes considered as revocable licences.⁷⁵ In China, despite the absence of explicit legal specifications regarding the legal nature of CCERs in Chinese law, their economic value has led to their recognition as a form of property rights.⁷⁶ In Côte d'Ivoire, under the legal framework for REDD+ activities, emission reductions credits are defined by regulations as intangible property (movable incorporeal assets).⁷⁷ In the EU, the legal nature of emission allowances issued under the EU ETS is not specified by the EU legislation. Each member State has therefore discretion to define the legal nature of these allowances. Some of them have characterized the emission allowances as property rights,⁷⁸ intangible assets,⁷⁹ or movable assets.⁸⁰ In Mexico, emission allowances are qualified as administrative instruments.⁸¹ In the United States, the legal nature of emission allowances or carbon credits should be considered on a state-by-state basis. For instance, in Massachusetts, emission allowances are treated as intangible property. In California, they have been qualified by judicial determination as “valuable, tradable, private property rights”.⁸²

46. In several cases, States that are implementing (or considering implementing) an ETS in their jurisdiction, or that are modifying their domestic law to participate in an international market-based mechanism, indicated their intention to address the issue of the legal nature of the carbon credits in their to-be-adopted legislation. For instance, Burkina Faso reported that its proposed legal framework for REDD+ activities specifies that the carbon credits to be issued under this framework would be treated as intangible property (movable incorporeal assets) freely transferable and

⁷⁰ Canada (response to UNCITRAL questionnaire, 2a).

⁷¹ Russian Federation (response to UNCITRAL questionnaire, 2a).

⁷² Thailand (response to UNCITRAL questionnaire, 2a and 2b).

⁷³ For instance: Switzerland, Federal Act on the Reduction of CO₂ Emissions (23 December 2011), art. 2.3; Republic of Korea, Act on the Allocation and Trading of Greenhouse-Gas Emission Permits, Act No. 11419 (14 May 2012), art. 2.3.

⁷⁴ Australia (response to UNCITRAL questionnaire, 2a).

⁷⁵ Canada (response to UNCITRAL questionnaire, 2a). The legal nature of emission allowances under the Ontario Emissions Performance Standards programme was debated in a recent ICSID case (Case No. ARB/20/52 (Koch Industries, Inc. and Koch Supply & Trading, LP v. Government of Canada), in which Canada argued that emission allowances held by the claimants were not “property” under NAFTA Article 1139 (g). It was mentioned that what constituted “property” must be determined by reference to the relevant domestic law and in this case no Ontario court has confronted the question of whether emission allowances constitute property in Ontario. The final award is not yet publicly available. See Canada’s Rejoinder Memorial dated 30 September 2022, para. 122, available at https://icsidfiles.worldbank.org/icsid/ICSIDBLOBS/OnlineAwards/C9375/DS18454_En.pdf.

⁷⁶ Expert nominated by China, “Comments on the Draft UNCITRAL/UNIDROIT Study on the Legal Nature of Voluntary Carbon Credits”.

⁷⁷ Côte d'Ivoire (response to UNCITRAL questionnaire, 2b).

⁷⁸ Croatia (response to UNCITRAL questionnaire, 2a).

⁷⁹ Slovenia (response to UNCITRAL questionnaire, 2a).

⁸⁰ France, Environmental Code, art. L. 229-15.

⁸¹ Mexico (response to UNCITRAL questionnaire, 2a).

⁸² United States (response to UNCITRAL questionnaire, 2a and 2b).

assignable by their owners.⁸³ Brunei Darussalam mentioned that it would look into defining the legal nature of carbon credits with the relevant stakeholders after exploring feasibility studies on carbon pricing instruments.⁸⁴ El Salvador and Panama, both of which are currently developing a legal framework to establish a CCM in their territory, also indicated that clarifying the legal nature of the carbon credits to be traded in their jurisdiction was an aspect under consideration.⁸⁵ Peru, which is implementing a national registry for carbon credits resulting from mitigation activities carried out in its territory, mentioned that the carbon credits that will be recorded in this registry will be defined as intangible movable property.⁸⁶ In Paraguay, where such a registry has already been established, carbon credits are identified by statutory provisions as objects of property rights.⁸⁷

(iv) *Legal characterization by reference to public law issues*

47. Some States also provided information on the legal characterization of carbon credits traded on CCMs from the perspective of specific branches of their public law, such as tax law or financial law. For instance, Brazil reported that, while there is currently no consensus regarding the definition of the legal nature of carbon credits, the Federal Revenue Office has already expressed its understanding that carbon credits would constitute intangible assets of companies.⁸⁸ Canada indicated that, for tax purposes, emission allowances are generally subject to the Goods and Services Tax/Harmonized Sales Tax, Canada's value-added tax, as intangible personal (movable) property under the Excise Tax Act.⁸⁹ Thailand mentioned that, in its jurisdiction, carbon credits are considered for tax purposes as incorporeal objects, susceptible of having a value and of being appropriated.⁹⁰

48. Regarding the legal characterization of carbon credits by reference to financial law, Argentina declared that, by virtue of a 2012 regulation, CERs (i.e., the units issued under the CDM of the Kyoto Protocol) are comparable to securities under its domestic law.⁹¹ Australia reported that Australian Carbon Credit Units and Safeguard Mechanism Credits are considered as financial products under Australian law.⁹² EU member States indicated that emission allowances issued under the EU ETS are classified under the Markets in Financial Instruments Directive 2014 (MiFID II) as financial instruments.⁹³ Kazakhstan reported that its emission allowances and carbon offset units are considered as commodity.⁹⁴ Panama noted that, although the law does not define the legal nature of carbon credits, they are considered as commodity.⁹⁵ Paraguay mentioned that, in its country, carbon credits are characterized as tradable instruments, suggesting that they represent a financial asset.⁹⁶ The United States referred to a case in which the California Appeals Court reiterated a prior holding that emission allowances are a valuable commodity.⁹⁷

⁸³ Burkina Faso (response to UNCITRAL questionnaire, 2a).

⁸⁴ Brunei Darussalam (response to UNCITRAL questionnaire, 3a).

⁸⁵ El Salvador, Guatemala (response to UNCITRAL questionnaire, 2a).

⁸⁶ Peru (response to UNCITRAL questionnaire, 2a).

⁸⁷ Paraguay (response to UNCITRAL questionnaire, 1a).

⁸⁸ Brazil (response to UNCITRAL questionnaire, 2a and 2b).

⁸⁹ Canada (response to UNCITRAL questionnaire, 2a).

⁹⁰ Thailand (response to UNCITRAL questionnaire, 2a and 2b).

⁹¹ Argentina (response to UNCITRAL questionnaire, 2a).

⁹² Australia (response to UNCITRAL questionnaire, 2a: "As both ACCUs and SMCs are financial products, you must hold an Australian Financial Services licence (AFS licence) if you carry on a financial services business with, into or from Australia that provides any regulated emission units under the Corporations Act, unless an exemption applies. This also includes financial products associated with these emissions units such as derivatives over emissions units or managed investment schemes that aggregate carbon abatement activities").

⁹³ Croatia, Ireland, Slovenia (response to UNCITRAL questionnaire, 2a).

⁹⁴ Kazakhstan (response to UNCITRAL questionnaire, 2a).

⁹⁵ Panama (response to UNCITRAL questionnaire, 2a).

⁹⁶ Paraguay (response to UNCITRAL questionnaire, 2a).

⁹⁷ United States (response to UNCITRAL questionnaire, 2b).

B. Voluntary carbon markets

49. VCMs emerged in the 1990s as an effort led by non-State actors to certify GHG emission reductions and removals outside of United Nations compliance schemes.⁹⁸ In VCMs, VCCs are generated by diverse types of climate mitigation projects and issued by non-State organizations known as independent carbon standard setters. Examples of independent carbon standard setters include the Verified Carbon Standard (VCS/Verra),⁹⁹ the Gold Standard,¹⁰⁰ the American Carbon Registry (ACR),¹⁰¹ or Climate Action Reserve.¹⁰²

50. VCMs are often described as a “non-regulatory means of directing financial resources” to mitigation projects.¹⁰³ Where there are insufficient financial or legal incentives to implement projects that reduce GHG emissions or remove GHG from the atmosphere, the possibility of selling VCCs offers an opportunity to make such projects financially viable. Thus, it is generally considered that through their capacity to mobilize private finance for climate action, VCMs can play an important role in facilitating the transition towards a low carbon-economy.¹⁰⁴

1. Market infrastructure

51. As noted above, VCCs are units that represent the achievement of a reduction or removal of one ton of CO₂ equivalent, which has been verified by a third party.¹⁰⁵ VCCs buyers may purchase these instruments for different usages. For example, they may use VCCs to mitigate their carbon footprint (e.g., to enable them to calculate their net GHG emissions balance, or to enable them to report the purchase of mitigating VCCs when disclosing their gross emissions) and help meet their self-imposed net-zero goals; they may purchase VCCs as a form of investment to then sell on to other VCMs participants; they may simply hold on to the VCCs indefinitely for the sole benefit of the environment; or they may seek an adjustment to the VCCs in order to use them in a CCM.

52. In contrast to the CCMs, which are by definition regulated markets, VCMs do not generally involve government regulatory authorities. In their response to the questionnaire sent by the secretariat, several States have expressly indicated that they do not play any oversight role in the functioning of the VCMs in their jurisdiction (e.g., Argentina,¹⁰⁶ Burkina Faso,¹⁰⁷ Canada,¹⁰⁸ Norway¹⁰⁹ and Sri Lanka¹¹⁰).

53. However, other countries have introduced laws and regulations to monitor the mitigation projects whose outcomes are certified by independent carbon standard setters. This is notably the case in Guatemala, where the developers of projects which are certified by independent carbon standards setters are required to register their

⁹⁸ IOSCO, *Voluntary Carbon Markets. Consultation Report*, CR/06/23, December 2023, p. 9.

⁹⁹ Verra, available at <https://verra.org/programs/verified-carbon-standard/>.

¹⁰⁰ Gold Standard, available at www.goldstandard.org/.

¹⁰¹ American Carbon Registry, available at <https://americancarbonregistry.org/>.

¹⁰² Climate Action Reserve, available at www.climateactionreserve.org/.

¹⁰³ J. Sadikman, S. Duncanson, D. Saric et al., “The Evolution of Canada’s Carbon Markets and Their Role in Energy Transition”, *Alberta Law Review*, vol. 60, issue 2, 2022, p. 342.

¹⁰⁴ IOSCO, *Voluntary Carbon Markets. Consultation Report*, supra note 98, p. 9.

¹⁰⁵ UNIDROIT, *Issues Paper*, supra note 21, para. 39. Units known as ex ante credits are also traded on VCMs. Ex ante crediting has been defined as “[t]he issuance of carbon offsets in expectation of future emission reductions”. UN-REDD Programme, “Ex-ante crediting”, available at www.un-redd.org/glossary/ex-ante-crediting. Importantly, in the case of ex ante credits, the emission reduction or removal has not yet occurred. The credits are typically issued on an estimation of the expected mitigation outcomes in order to facilitate early-stage financing. While ex ante credits may be used in facilitating investment into VCMs, they are credits that have not yet been verified and thus cannot be retired.

¹⁰⁶ Argentina (response to UNCITRAL questionnaire, 3a).

¹⁰⁷ Burkina Faso (response to UNCITRAL questionnaire, 3a).

¹⁰⁸ Canada (response to UNCITRAL questionnaire, 3a).

¹⁰⁹ Norway (response to UNCITRAL questionnaire, 3 a).

¹¹⁰ Sri Lanka (response to UNCITRAL questionnaire, 3a).

project in a public registry.¹¹¹ A similar requirement exists in the Dominican Republic¹¹² and Paraguay.¹¹³ In Argentina, a national registry has been implemented to keep track of all the mitigation projects carried out in the country. The purpose of this registry is to systematize the information about these projects that appear in other registries (such as those operated by independent carbon standard setters). This means that projects are listed in this registry by public authorities only when they are listed in the registry of the correspondent carbon standard applied to its development.¹¹⁴ Peru is also implementing a national registry in which mitigation projects leading to the issuance of carbon credits will have to be recorded.¹¹⁵ In any case, legal requirements across jurisdictions are far from consistent.

54. The life cycle of a VCC starts with the development of a project aiming at mitigating GHG emissions. Such projects generally fall into two categories: (i) reduction projects that either reduce emissions from current sources, such as renewable energy projects, or prevent the release of GHG emissions into the atmosphere, such as by limiting the loss of natural resources that absorb carbon; or (ii) removal projects that remove GHG from the atmosphere. In turn, such climate mitigation projects may either be in the form of nature or technology-based solutions.

55. Nature-based solutions, such as reforestation projects,¹¹⁶ work to reduce emissions or remove GHG from the atmosphere by either enhancing the ability of ecosystems to sequester CO₂, or by reversing the degradation of an ecosystem so that it stores more carbon than it emits.¹¹⁷ Climate technologies that help reduce GHG emissions include renewable energies (such as wind energy, solar power and hydropower¹¹⁸) and Carbon Capture, Utilization and Storage (CCUS), a suite of technologies which involves the capture of CO₂, generally from large point sources like power generation or industrial facilities that use either fossil fuels or biomass as fuel and its storage in reservoirs (e.g., in underground geologic formations).¹¹⁹ Climate technologies such as Direct Air Capture (an industrial process by which CO₂ is extracted from the atmosphere) may also be used to remove CO₂ from the atmosphere.

56. The individual or organization that has “overall control and responsibility” for the climate mitigation project is generally known as the “project proponent”.¹²⁰ Project proponents usually research and conceive the projects. They are responsible for developing a project description, submitting the project for registration with the applicable independent carbon standard setter, and for monitoring the project’s activities.¹²¹ Project proponents may not necessarily be the same as the project developers, i.e., the entities responsible for the development and management of the climate mitigation project. Project proponents may also not be the owners of the land

¹¹¹ Guatemala (response to UNCITRAL questionnaire, 2a).

¹¹² Dominican Republic (response to UNCITRAL questionnaire, 3).

¹¹³ Paraguay (response to UNCITRAL questionnaire, 1a).

¹¹⁴ Argentina (response to UNCITRAL questionnaire, 3a).

¹¹⁵ Peru (response to UNCITRAL questionnaire, 1b)

¹¹⁶ UNIDROIT, *Issues Paper*, supra note , para. 44; IOSCO, *Voluntary Carbon Markets. Consultation Report*, supra note 98, p. 1698.

¹¹⁷ L. Mercer, “What are nature-based solutions to climate change?”, Grantham Research Institute on Climate Change and the Environment, 15 November 2022, available at www.lse.ac.uk/granthaminstitute/explainers/what-are-nature-based-solutions-to-climate-change/#:~:text=Nature%2Dbased%20solutions%20include%3A%20avoiding,singular%20species%3B%20improving%20management%20practices.

¹¹⁸ UNFCCC, *Technology and the UNFCCC: Building the foundation for sustainable development*, 2016, p. 2, available at https://unfccc.int/ttclear/misc/_/StaticFiles/gnwoerk_static/NAD_EBG/54b3b39e25b84f96aeada52180215ade/b8ce50e79b574690886602169f4f479b.pdf.

¹¹⁹ International Energy Agency, “Carbon Capture, Utilisation and Storage”, available at www.iea.org/energy-system/carbon-capture-utilisation-and-storage.

¹²⁰ For instance: Verra “Program Definitions”, 21 December 2021, v4.3, online: <https://verra.org/wp-content/uploads/2022/12/vcs-program-definitions-v4.3-final.pdf>.

¹²¹ For instance: Verra, “Develop a verified carbon standard (VCS) project”, available at <https://verra.org/programs/verified-carbon-standard/develop-a-vcs-project/>.

or other assets required to develop the projects, such as titles or permits, and must thus engage with local authorities, including regional and state governments, as well as local communities, local landowners, farmers, and other relevant constituents.

57. In order for VCCs to be issued in relation to a climate mitigation project, the project and its claimed emission reductions or removals must be certified by an independent carbon standard setter. As noted above, independent carbon standard setters are private entities, each of which has their own set of rules and regulations with which project proponents will need to comply, as well as approved methodologies to assess the climate impact of the projects they are asked to certify. As explained by Verra, “[m]ethodologies are essential to quantifying real and accurate greenhouse gas (GHG) benefits of a project” and they “provide requirements and procedures to determine project boundaries, identify the baseline, assess additionality, monitor the relevant parameters, and ultimately quantify the GHG emission reductions or removals”.¹²²

58. Thus, before certifying a particular project, the independent carbon standard setter will assess whether the project complies with its applicable methodology and its rules and regulations. This assessment process will involve both: (i) an ex ante validation to determine whether the project conforms with the carbon standard setter’s programme rules and to evaluate the reasonableness of assumptions, limitations, and methods that support a claim about the outcome of future activities; as well as (ii) an ex post verification of the project to confirm the reductions and removals actually achieved by the project.¹²³

59. Generally, the project proponent must demonstrate that the GHG reductions or removals are real, measurable, permanent, additional, independently verified, unique and traceable.¹²⁴ This is demonstrated through a process known as the measurement, reporting, and verification (MRV) process. As described by the WBG, the MRV process is “the multi-step process to measure the amount of GHG emissions reduced by a specific mitigation activity”.¹²⁵

60. The validation and verification of a project’s claimed climate impact is typically carried out by third parties known as “verification bodies” or “verifiers”. Verifiers are independent assessment bodies that develop quality assurance programmes to confirm that the activities of a climate mitigation project have resulted in the claimed emissions reductions or removals. Typically, verifiers will be accredited by the independent carbon standard setter and hired by the project proponent. The overall process from the start of a project to certification by an independent carbon standard setter may be lengthy, meaning that VCCs may be issued years after the emission reductions or removals occurred.¹²⁶

61. Once a project has been certified by an independent carbon standard setter, the project proponent can be issued tradable VCCs for each metric ton of CO₂ equivalent reduced or removed from the atmosphere. Once issued, VCCs are given a unique serial number and recorded on a VCC registry. Registries are recordkeeping systems for registered climate projects for which VCCs are issued. They are often, though not always, operated by the independent carbon standard setter that has issued the VCCs. Such registries store information and track the VCCs at every step of their life cycle (i.e., issuance, transfer, retirement and cancellation).

¹²² Verra, “Methodologies”, available at <https://verra.org/methodologies-main>.

¹²³ For instance: Verra, “Program overview”, available at <https://verra.org/programs/verified-carbon-standard/#how-it-works>; IOSCO, *Voluntary Carbon Markets. Consultation Report*, supra note 9898.

¹²⁴ IOSCO, *Voluntary Carbon Markets. Discussion Paper*, CR/06/22, November 2022, pp. 9–10 and pp. 13–15.

¹²⁵ WBG, “What You Need to Know About the Measurement, Reporting and Verification (MRV) of Carbon Credits”, 27 July 2022, available at [www.worldbank.org/en/news/feature/2022/07/27/what-you-need-to-know-about-the-measurement-reporting-and-verification-mrv-of-carbon-credits#:~:text=MRV%20seeks%20to%20prove%20that,of%20CO2%20equivalent%20\(tCO2eq](http://www.worldbank.org/en/news/feature/2022/07/27/what-you-need-to-know-about-the-measurement-reporting-and-verification-mrv-of-carbon-credits#:~:text=MRV%20seeks%20to%20prove%20that,of%20CO2%20equivalent%20(tCO2eq).

¹²⁶ IOSCO, *Voluntary Carbon Markets. Discussion Paper*, supra note 124124, p. 9.

62. Once certified, issued, and registered, the VCCs can be sold on the open market, either over the counter (OTC) or through an exchange market. VCCs may be sold directly or through intermediaries such as brokers (including but not limited to banks that typically charge a commission for their services¹²⁷) or exchanges. There are two types of VCCs markets: the primary and the secondary market. The primary market generally refers to the first purchase of the credit post-verification, often made directly from the project proponents who are first issued the VCCs by the independent carbon standard setter. The secondary market refers instead to the potential for the credit to then be sold along a chain. Sellers on the secondary market may include, for example, financial institutions, traders, non-governmental organizations, and corporate entities. As to VCC buyers, these often include corporate entities or non-governmental organizations that may choose to simply hold on to the VCC, to further trade it, to seek any applicable adjustments for use in the compliance market, or to retire the VCC.

63. If the VCC holder wishes to “claim the benefit” of a VCC, it has to retire it.¹²⁸ Claiming the benefit of the VCC can take various forms such as the use of a VCC as an offset in a compliance programme or making a statement, when reporting the VCC holder’s emission inventory, that it holds, and is retiring, a VCC. Once retired, a VCC is no longer tradable, and all that is left is a record of it. For example, according to Section 8.2 of the Verra Terms of Use, upon the retirement of a VCC, “(a) all legal and beneficial title and interests in such Instruments will be extinguished; and (b) neither Verra, the User, nor any other person with Legal or Beneficial Ownership Rights will have any further rights to take the benefit of such Instruments nor the underlying Environmental Benefits corresponding to such Instruments”. Section 8.5 of the Verra Terms of Use further provides, in part, that “no person has any further rights to take the benefit of the cancelled or retired Instruments or the underlying Environmental Benefits corresponding to such Instruments”. Section 9 of the Gold Standard Terms of Use includes similar provisions.¹²⁹

64. It should be noted that a VCC buyer could directly instruct the registry to retire the VCC, or it could contractually agree with the VCC seller that the seller will retire the credit on the buyer’s behalf. In such an instance, the seller would instruct the registry to retire the credit.

65. Other than being retired by or on behalf of a VCC holder, a VCC could also be subject to: (i) reversal; (ii) suspension; (iii) cancellation; or (iv) expiry. Reversal is the term used to describe the event in which the carbon that has already been verified as removed escapes back into the environment. An example would be a forest that has been planted and then burns down, or carbon that has been stored in a reservoir subsequently leaks. To anticipate and address such potential occurrences, nature-based

¹²⁷ IOSCO, *Voluntary Carbon Markets. Consultation Report*, supra note 9898, p. 22.

¹²⁸ VCC holders may also retire them without making any claim, simply as means to support the underlying mitigation action.

¹²⁹ Section 9 of the Gold Standard *Terms of Use* (available at <https://globalgoals.goldstandard.org/standards/T-Preview-V1.1-Registry-App-Terms-of-Use.pdf>) provides in relevant part that: (a) The Account Holder acknowledges and agrees that if the Account Holder retires Units in The Gold Standard Registry: (a) the Account Holder is retiring such Units permanently; (b) neither the Account Holder nor any third party has any further rights to take the benefit of such Units nor the underlying Environmental Benefits corresponding to such Units; and (c) the Account Holder will procure that all relevant third parties enter into such agreements as are necessary to ensure that neither the Account Holder nor any third parties have any further rights to take the benefit of such Units nor the underlying Environmental Benefits corresponding to such Units.

Subject to clause 17, any instruction by the Account Holder to The Gold Standard Registry to retire Units in accordance with this clause 9 is irrevocable, and the Account Holder acknowledges that any such instruction will not be reversed.

The Gold Standard acknowledges and agrees that, once the Account Holder has complied with this clause 9 and The Gold Standard has retired the Units, The Gold Standard will not take any action to exercise or purport to exercise any right or interest, or deal with or otherwise use, the retired Units or the underlying Environmental Benefits corresponding to such Units and considers that no person has any further rights to take the benefit of the retired Units or the underlying Environmental Benefits corresponding to such Units.

projects that could be subject to a reversal would generally have to divert some of the VCCs they generate to what is known as a “buffer pool”. In the event of a reversal, the carbon standard setter would then cancel the equivalent number of credits in that buffer pool, such that there would be no need to unwind the transactions that had already happened.¹³⁰ An issue could potentially arise if the buffer pool is exhausted, for example in the event that an entire forest is wiped out by wildfire. However, experts noted that such a scenario has not yet arisen.¹³¹

66. Suspension may refer to instances in which the host State suspends the underlying project and thus potentially delays the issuance of the related credits. For example, in 2021, Indonesia suspended the issuance of carbon credits as a result of regulatory concerns.¹³²

67. Suspension may also refer to instances where an independent carbon standard setter decides to suspend a VCC holder’s account and their ability to deal with their VCCs if, for example, the carbon standard setter believes that the VCC holder has failed to comply with the applicable Terms of Use, that any of the units the VCC holder holds were created fraudulently or listed illegally, or the certification of the units is withdrawn.¹³³ Such a suspension may result in the permanent cancellation of the VCCs, whereby “all legal and beneficial title and interests” in the credits will be “extinguished”.¹³⁴

2. Current state of the market

68. Over the last decade there have been over 500 million VCCs, issued through four of the main independent carbon standard setters, that have been retired.¹³⁵ Despite the market for VCCs slowing down over the past year, analysis from Trove Research, in cooperation with the International Emissions Trading Association (IETA), Sylvera, and Verra, found that finance flowing into VCMs has significantly increased in recent years.¹³⁶ The Taskforce on Scaling Voluntary Carbon Markets (TSVCM) estimated that demand for VCCs could increase by a factor of 15 or more by 2030 and by a factor of up to 100 by 2050. According to the TSVCM, the market for VCCs could be worth upwards of \$50 billion in 2030.¹³⁷

69. Nonetheless, a paper published by the World Economic Forum found that government policies and corresponding market standards have fallen short in providing sufficient strategic incentives to inspire and motivate boards and investors to invest in VCCs.¹³⁸ A further hinderance to the scaling of the VCMs is the lack of transparency in the climate mitigation strategies of non-State actors and their utilization of VCCs, as well as concerns surrounding the quality of the VCCs themselves.¹³⁹

¹³⁰ UNIDROIT, *Summary Report of the First Session (10–12 October 2023)*, Study LXXXVI – W.G.1 – Doc.3, para. 28.

¹³¹ Ibid.

¹³² V. Sebastian, “Carbon credit issuances from Indonesia on hold, developers await clarity”, *S&P Global*, 7 April 2022, available at www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/040722-carbon-credit-issuances-from-indonesia-on-hold-developers-await-clarity.

¹³³ For instance: Gold Standard *Terms of Use* (supra note 129129), Section 10.1.

¹³⁴ Verra, *Terms of Use. Verra Registry*, September 2021, Section 8.2, available at https://verra.org/wp-content/uploads/Verra-Registry-TOU-September-2021_FINAL-1.

¹³⁵ K. Sullivan, A. Diemert, C. Cordova et al., *Status and trends of compliance and voluntary carbon markets in Latin America*, ICAP, IETA, International Development Bank, 2021, p. 35, available at https://icapcarbonaction.com/system/files/document/201025_idb_compliancevoluntary_paper-rz.pdf.

¹³⁶ WBG, *State and Trends of Carbon Pricing. International Carbon Markets*, 2023, p. 14, available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/2eb25e8e-ca16-4649-b637-e5caf88fd625/content>.

¹³⁷ TSVCM, *Taskforce on Scaling Voluntary Carbon Markets. Final Report*, January 2021, p. 2, available at www.iif.com/Portals/1/Files/TSVCM_Report.pdf.

¹³⁸ World Economic Forum, *Scaling Voluntary Carbon Markets: A Playbook for Corporate Action*, September 2023, p. 2, available at www.weforum.org/publications/scaling-voluntary-carbon-markets-a-playbook-for-corporate-action/.

¹³⁹ R. Macquarie, “The Voluntary Carbon Market and Sustainable Development”, Grantham

3. Integrity concerns and recent international initiatives

70. Concerns around the quality and integrity of VCCs can arise from challenges present in both the supply side, primarily in relation to the third-party entities that verify and issue the VCCs, and the demand side of the VCMs, referring instead to the entities that purchase the VCCs and such entities' use of these credits. On the supply side, although rapidly expanding, VCMs currently remain fragmented and largely unregulated, with no standard methodologies applicable across the varying independent carbon standard setters.¹⁴⁰ The lack of uniformity across standards, the intangible nature of VCCs, as well as the complexity in measuring the claimed climate impact of a climate mitigation project may make it difficult for VCCs buyers to thoroughly assess the quality of the product they are purchasing. On the demand side, issues may arise in relation to how companies use the VCCs they purchase given a current general lack of guidance on the type of claims that can be made.¹⁴¹

71. Attempts have already been made or are being made by some governments and private parties to ameliorate these integrity concerns. For example, on the supply side:

- In December 2023, the United States Commodity Futures Trading Commission (CFTC) announced that it had approved a proposed guidance and request for public comment regarding the listing for trading of VCCs derivative contracts.¹⁴² The proposed guidance outlines factors that a CFTC-regulated exchange should consider when addressing requirements of the Commodity Exchange Act (CEA) and CFTC regulations that are relevant to the contract design and listing process.¹⁴³ On the consumer protection side, the United States Federal Trade Commission (FTC) addresses carbon offsets in its non-binding “Green Guides” on environmental marketing,¹⁴⁴ last updated in 2012.¹⁴⁵ Among other things, the Green Guides currently require sellers of carbon credits to “employ competent and reliable scientific and accounting methods to properly quantify claimed emission reductions”.¹⁴⁶
- The Climate Warehouse, a project within the World Bank’s Carbon Markets and Innovation unit, develops digital infrastructure to foster greater transparency, trust, and integrity in carbon markets.¹⁴⁷ Examples include the metadata global platform Climate Action Data Trust (CAD Trust).¹⁴⁸ The CAD Trust, a private-led initiative, has developed a decentralized and open-source metadata platform that links, aggregates, and harmonizes all major carbon credit registry data to enhance transparent accounting, in line with Article 6 of the Paris Agreement. The CAD Trust uses blockchain technology to create a decentralized record of carbon market activity, aiming to contain the risk of double counting, improve transparency, and increase trust in carbon credit data.
- The Integrity Council for Voluntary Carbon Markets (ICVCM), an independent governance body for the VCMs,¹⁴⁹ has established the Core Carbon Principles

Research Institute on Climate Change and the Environment, March 2023, p. 1, available at www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/03/The-voluntary-carbon-market-and-sustainable-development-policy-brief.pdf.

¹⁴⁰ UNIDROIT, *Issues Paper*, supra note 21, para. 86–87.

¹⁴¹ A. Dawes, “What’s Plaguing Voluntary Carbon Markets?”, Center for Strategic and International Studies, 2 February 2024, available at www.csis.org/analysis/whats-plaguing-voluntary-carbon-markets.

¹⁴² CFTC, “CFTC Issues Proposed Guidance Regarding the Listing of Voluntary Carbon Credits Derivatives Contracts”, 4 December 2023, available at www.cftc.gov/PressRoom/PressReleases/8829-23.

¹⁴³ Ibid.

¹⁴⁴ Federal Trade Commission, “Green Guides”, available at www.ftc.gov/news-events/topics/truth-advertising/green-guides.

¹⁴⁵ See United States, 7 16 C.F.R. § 260.5 (2012).

¹⁴⁶ Federal Trade Commission, “Green Guides”, supra note 144144.

¹⁴⁷ Climate Warehouse, website, available at www.theclimatewarehouse.org/.

¹⁴⁸ Climate Action Data Trust, available at <https://climateactiondata.org/>.

¹⁴⁹ Integrity Council for Voluntary Carbon Markets, available at <https://icvcm.org>.

(CCPs) which set out key principles for high-integrity carbon credits, as well as an Assessment Framework which includes the detailed criteria the ICVCM employs to assess whether carbon standard setters and categories of carbon credits meet the CCPs.¹⁵⁰ Carbon standard setters assessed as CCP-eligible will be able to use the CCP label on carbon credits from approved categories.

- Six of the main independent carbon standard setters issued a joint statement at COP28 noting that they “are embarking on a collaboration to promote integrity throughout 2024 to create the next step-change in the dependability of carbon markets”.¹⁵¹ In particular, the carbon standard setters undertook to, among other things: (i) learn from each other’s best practices; (ii) support the independent assurance of programmes by the ICVCM; (iii) seek to align standards to common principles for the quantification and accounting of removals and reductions; (iv) work to extend the durability of carbon sinks, including by insuring against reversals; (v) create indicators to promote community benefits of projects on the ground, to underline sustainable development achievements and to safeguard against negative harm; (vi) improve the transparency around the use of carbon credits; and (vii) work to improve and enhance the flow of finance to developing countries to help them achieve and go beyond their nationally determined contributions.¹⁵²

72. It should also be noted that independent carbon standard setters may face potential civil liability, including private law civil liability, in relation to their role in certifying climate mitigation projects and issuing VCCs. The extent to which an independent carbon standard setter may be liable in contract or tort, for example, is likely to depend on the applicable law in the relevant jurisdictions, as well as the specific Terms of Use and any other contractual arrangements that the independent carbon standard setter provides to its users. For example, the Verra system requires both project proponents and verifiers to provide Verra and all the constituents who participate in the process, by way of a deed, a warranty and a representation about the nature of what they offer. Among other things, project proponents represent and warrant that all of the information they provide is true and complete, all project documentation is true and accurate, and that they hold full and exclusive legal and equitable title and rights to all reductions and removals generated by the projects.¹⁵³ In turn, the validation and verification body specifically represents and warrants, *inter alia*, that it has independently validated the project’s compliance with the VCS Program requirements as set out in the VCS Program Rules (which is managed by Verra), it has independently verified the reductions or removals generated by the project in accordance with the VCS Program Rules, and that all factual information provided in relation to the deed or verification report are true, accurate and complete in all material respects.¹⁵⁴ Such representations are made to: (i) Verra; (ii) each person who is an account holder holding VCU (Verified Carbon Units, *i.e.*, the name given to VCCs issued by Verra) relating to the project at any given time; (iii) each person on whose behalf VCUs relating to the project were retired by an account holder; and (iv) each of the successors and assigns of those persons.¹⁵⁵ Deeds containing similar representations and warranties are used in relation to the issuance and validation of

¹⁵⁰ Integrity Council for Voluntary Carbon Markets, “The Core Carbon Principles”, available at <https://icvcm.org/the-core-carbon-principles/>.

¹⁵¹ ACR, ART, Climate Action Reserve, Global Carbon Council, Gold Standard, Verra, Promoting scale and integrity in carbon markets to help operationalize Article 6 and Nationally Determined Contributions under the Paris Agreement, joint statement, 4 December 2023, available at www.climateactionreserve.org/blog/2023/12/04/cop28-icp/.

¹⁵² *Ibid.*

¹⁵³ Verra, “Registration Representation v4.3” (Deed of representation issued in respect of the project), section 2.2, available at <https://verra.org/programs/verified-carbon-standard/vcs-program-details/> under subsection “Templates and Forms”.

¹⁵⁴ Verra, “Validation Representation v4.2” (Deed of representation issued in respect of validation), *ibid.*, section 2.2; Verra “Verification Representation v4.2” (Deed of representation issued in respect of verification), *ibid.*, section 2.2.

¹⁵⁵ *Ibid.*, section 2.3.

VCUs under the Verra system.¹⁵⁶ However, this approach is not uniform across independent carbon standard setters. Indeed, it is not the case with respect to the Gold Standard, for example.¹⁵⁷

73. On the demand side of the VCMs, several programmes aim to provide net zero corporate guidance, including in relation to the use of VCCs. These include, for example:

- The Corporate Net-Zero Standard developed by the Science Based Targets initiative (SBTi) – a partnership between the Carbon Disclosure Project (CDP), the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) – to provide guidance, criteria, and recommendations for companies to set science-based net-zero targets.¹⁵⁸
- The Carbon Market Platform launched in 2015 by the OECD to strengthen international cooperation in developing effective carbon pricing approaches.¹⁵⁹
- The United Nations High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities established by the United Nations Secretary-General in March 2022 to develop standards for net-zero emissions pledges by non-State entities, including businesses, investors, cities, and regions.¹⁶⁰
- The Voluntary Carbon Markets Integrity Initiative (VCMI),¹⁶¹ an international non-profit organization consisting of a multi-stakeholder project bringing together representatives of civil society, businesses, local communities, and governments to establish guidance on how VCCs can be used and claimed as part of credible net-zero decarbonization strategies. In November 2023, the VCMI released the second version of its Claims Code of Practice (first published in June 2023). The VCMI Claims Code of Practice addresses integrity issues on the demand side of the VCM by offering guidance to companies and other non-State actors on how they can credibly make use of VCCs as part of their voluntary climate commitments and on how they communicate their use of those credits.¹⁶²

74. The above is a merely illustrative list of recent initiatives in this rapidly evolving space.

C. Relationship between compliance and voluntary carbon markets

75. Participation in CCMs and VCMs is not mutually exclusive, and many participants are active in both markets. Furthermore, experts of carbon markets consulted during the preparation of this study were generally of the view that there is an increased convergence between CCMs and VCMs.

76. The fact that, in some jurisdictions, a VCC may be used in furtherance of a compliance obligation if the relevant CCM allows the VCC to be qualified for such purposes provides an illustration of this convergence. For instance, in Singapore, the

¹⁵⁶ Verra, “VCS Program details”, available at <https://verra.org/programs/verified-carbon-standard/vcs-program-details/> under subsection “Templates and Forms – VCS Representations”.

¹⁵⁷ Gold Standard, *Terms of Use* (supra note 129129).

¹⁵⁸ Science Based Targets, *SBTi Corporate Net-Zero Standard. Version 1.1*, April 2023, available at <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>.

¹⁵⁹ OECD, “Carbon Market Platform”, website page, available at www.oecd.org/environment/cc/carbon-market-platform/#:~:text=The%20Carbon%20Market%20Platform%2C%20launched,and%20ambitious%20carbon%20pricing%20approaches.

¹⁶⁰ United Nations’ High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities, *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*, 2022, available at www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf.

¹⁶¹ The Voluntary Carbon Markets Integrity Initiative, website, available at <https://vcmintegrity.org/>.

¹⁶² VCMI, *Claims Code of Practice*, November 2023, v.2, available at <https://vcmintegrity.org/wp-content/uploads/2023/11/VCMI-Claims-Code-of-Practice-November-2023.pdf>.

Carbon Pricing Act allows companies to purchase VCCs to pay a part of their carbon tax liability.¹⁶³ Likewise, in Colombia, VCCs that are issued as the result of climate mitigation projects conducted in the country are accepted as alternative means of complying with the State’s carbon tax requirements.¹⁶⁴ In South Africa, VCCs may be used to offset the liability of an entity that is eligible for the South African carbon tax.¹⁶⁵ In Australia, VCCs may be used by businesses which seek to obtain a state-issued carbon neutral certification of their operations, events, products and services, or buildings.¹⁶⁶ In Brazil, under the proposed bill establishing a cap-and-trade system, VCCs can be admitted as compliance instruments.¹⁶⁷

77. Another sign of the convergence between CCMs and VCMs is the fact that, in some countries, the same legal framework applies to climate mitigation projects regardless of whether these projects have been certified by independent carbon standard setters or public authorities. This is notably the case with the legal frameworks establishing registries aiming at keeping track of the climate mitigation projects conducted in the territory of a State and the VCCs resulting from those projects, which can contain provisions that apply to both VCCs and VCCs issued by public authorities (e.g., Dominican Republic,¹⁶⁸ Panama¹⁶⁹ and Paraguay¹⁷⁰).

78. It should be noted that instead of certifying specific climate mitigation projects, some independent carbon standard setters offer to issue VCCs for emission reductions or removals generated by mitigation policies developed and implemented by public authorities at a large scale. This is the case of the Architecture for REDD+ Transactions (ART), which is a “standalone, independent program that develops and administers standardized procedures for crediting emission reductions and removals from national and large sub-national REDD+ programs”.¹⁷¹ Under TREES (i.e., the standard developed by ART), countries and eligible sub-national jurisdictions can, as sovereign programme developer, generate VCCs which are recorded in a registry operated by ART. In its response to the questionnaire, Guyana indicated its participation in the ART-TREES standard.¹⁷² In December 2022, it became the first country to be issued jurisdictional REDD+ ART-TREES credits.

79. During the consultations conducted for the preparation of the study, experts noted that there are currently some uncertainties regarding the way in which market-based mechanisms of Article 6 of the Paris Agreement could impact the VCMs. Those uncertainties are mainly due to the fact that Parties to the Paris Agreement engaged in ITMO trading are required, by virtue of Article 6.2 guidance, to apply “corresponding adjustments” for all ITMOs.

80. “Corresponding adjustments” can be described as a correspondence of actions to be carried out by: (i) the party that first transfers ITMOs (which must remove the mitigation outcomes achieved in its territory and transferred abroad as ITMOs from its books of account); and (ii) the party that uses the ITMOs towards its nationally determined contribution (which must add the mitigation outcomes that the ITMOs purchased represent to the mitigation outcomes achieved domestically). A party that authorizes the use of mitigation outcomes for another use than achievement of a nationally determined contribution (e.g., for CORISA, for the achievement of a voluntary climate target) is still required to apply “corresponding adjustments”.

¹⁶³ Singapore (response to UNCITRAL questionnaire, 1a).

¹⁶⁴ UNIDROIT, *Issues Paper*, supra note 21, para. 41.

¹⁶⁵ South Africa, “Carbon Offset Administration System”, available at [https://carbon.energy.gov.za/Home.aspx#:~:text=The%20South%20African%20Carbon%20Tax,the%20Gold%20Standard%20\(GS\)](https://carbon.energy.gov.za/Home.aspx#:~:text=The%20South%20African%20Carbon%20Tax,the%20Gold%20Standard%20(GS).).

¹⁶⁶ Australia (response to UNCITRAL questionnaire, 3a).

¹⁶⁷ Brazil (response to UNCITRAL questionnaire, 1b, noting that “voluntary credits can be admitted as Certificates of Verified Reductions or Removals of Emissions and can be used for the purposes of periodic reconciliations of obligations”).

¹⁶⁸ Dominican Republic (response to UNCITRAL questionnaire, 3).

¹⁶⁹ Panama (response to UNCITRAL questionnaire, 1a).

¹⁷⁰ Paraguay (response to UNCITRAL questionnaire, 1a).

¹⁷¹ Architecture for REDD+ Transactions, “About Us”, available at www.artredd.org/about-us.

¹⁷² Guyana (response to UNCITRAL questionnaire, 3a).

81. Applying “corresponding adjustments” is crucial to ensure that each mitigation outcome is not counted twice—by the party where the mitigation outcome was achieved and the party or entity that has purchased the ITMOs generated by that mitigation outcome. By contrast, international transfers of VCCs do not require such adjustments. Thus, because applying “corresponding adjustments” ensures that the same reduction or removal of amount of CO₂ equivalent has not been counted twice, i.e., for the calculation of two different GHG net emissions balances, buyers could express a preference for carbon credits that have been adjusted.

82. VCCs may be authorized as ITMOs and become adjusted carbon credits under Article 6.2 of the Paris Agreement. However, it is for each country to decide whether VCCs issued as the result of climate mitigation projects conducted in its territory should be authorized as ITMOs. Therefore, an increased demand for adjusted VCCs could lead States to regulate VCMs activities unfolding in their jurisdictions. However, experts acknowledge that it remains difficult at this stage to anticipate how exactly Article 6 of the Paris Agreement will impact the functioning of the VCMs in practice.

III. Current legal issues related to the trading of verified carbon credits issued by independent carbon standard setters

83. As explained above, VCMs have emerged gradually without the intervention of public authorities and, as of now, most VCCs are delivered and traded outside any specific domestic or international legal framework. Therefore, even though VCCs have been “objects” of international trade for decades, many actors involved in VCMs are of the view that key legal aspects related to the cross-border trading of VCCs currently lack clarity or are not sufficiently harmonized among jurisdictions.

84. This situation is usually perceived as unsatisfactory as it tends to create an unpredictable business environment, make trading of VCCs unnecessarily complex, prevent further investments in VCMs and, thus, hinder their capacity to channel more finance towards mitigation projects.

85. As a result, there has been a growing expectation among the actors involved in VCMs for a more predictable and harmonized legal environment for the trading of VCCs to be developed. This expectation was expressed in recent studies, in which experts have emphasized that “[i]nvestment and transactions concerning complex assets such as VCCs *require* legal certainty”,¹⁷³ that trade in VCCs “*require* appropriate legal underpinnings”,¹⁷⁴ or that “[a] robust voluntary carbon market *must* be grounded in a strong legal foundation”.¹⁷⁵

86. Echoing these concerns, the following sub-sections of the detailed study identify and present, in an analytical manner, the most salient legal issues that currently arise in the context of the cross-border trading of VCCs issued by independent carbon standard setters. The issues discussed below concern the following topics:

- (a) Legal nature of verified carbon credits under private law;
- (b) Ownership of verified carbon credits;
- (c) Secured transactions and collateralization;
- (d) Transfer of verified carbon credits;
- (e) Treatment in case of insolvency;

¹⁷³ UNIDROIT, *Issues Paper*, supra note 21, para. 52 (emphasis added).

¹⁷⁴ TSVCM, *Taskforce on Scaling Voluntary Carbon Markets. Final Report*, supra note 137137, p. 103 (emphasis added).

¹⁷⁵ ISDA, *Legal Implications of Voluntary Carbon Credits*, December 2021, p. 10 (emphasis added), available at www.isda.org/a/38ngE/Legal-Implications-of-Voluntary-Carbon-Credits.pdf.

- (f) Dispute settlement;
- (g) Issues of applicable law.

87. For clarity purposes, the study addresses these topics in different sub-sections. However, many of the issues discussed in these sub-sections are closely connected. For instance, the question of whether VCCs may be used as securities in a given jurisdiction (Sub-section C), or which rules apply to their transfer between a seller and a buyer (Sub-section D), may depend on how VCCs are legally characterized in this jurisdiction (Sub-section A). Likewise, the way in which VCCs will be treated in case their owner becomes insolvent will depend on the law that will be applicable to this insolvency proceeding (Sub-section E).

A. Legal nature of verified carbon credits under private law

88. Any given market needs certainty regarding the characterization under private law of the thing that is being traded. Indeed, such legal characterization is key to answering a range of legal questions that are crucial for market participants, such as how this thing may be acquired and sold, what rights its owner may assert over it, how it will be treated upon insolvency of any market participant, whether it may be used as securities, or what tax and accounting rules will apply to it.

89. If private actors are unable to know with certainty how a thing will be treated under private law, it then becomes difficult for them to assess and quantify their risk exposure in those or any other unanticipated situations. This, in turn, may refrain them from purchasing this thing, or investing in it, because of the perceived uncertainties and legal risks surrounding the trading environment. Since the emergence of carbon markets, the importance of clarifying the legal nature of the carbon credits traded in CCMs has been widely highlighted in the legal literature.¹⁷⁶

90. With regard to VCMs, the issue at the moment is that the precise legal nature of VCCs under private law often remains “elusive”.¹⁷⁷ It should be noted that, in some jurisdictions, the law does provide some indications in that regard. For instance, in Paraguay, the law states that the VCCs that are to be registered in the national carbon credits’ registry are objects of property and that their ownership may be transferred.¹⁷⁸

91. However, in their response to the questionnaire, many countries have indicated that in their jurisdiction the legal nature of VCCs under private law is currently not specified by statutory law, judicial determination, or other forms of authoritative statement. This is notably the case in Argentina, Australia, Brazil, Brunei Darussalam, Burkina Faso, Canada, Côte d’Ivoire, Croatia, Dominican Republic, El Salvador, Guatemala, Guyana, Ireland, Japan, Kazakhstan, Malaysia, Mexico, Myanmar, Norway, Oman, Panama, Peru, Russian Federation, Singapore, Slovenia, Sri Lanka, Thailand, Türkiye and Turkmenistan.¹⁷⁹ Furthermore, as things currently stand, international law provides no guidance that would indicate what States collectively, consider that the legal nature of VCCs should be in domestic law, as no global standards have been developed on this precise issue yet.

92. What makes this situation problematic is that because of their peculiarities, VCCs could potentially receive different legal characterizations in most jurisdictions, depending on how one envisages them. Thus, it is currently often difficult for the actors involved in VCMs to anticipate with an adequate level of certainty how VCCs will be treated under domestic law (although this level of uncertainty may vary across jurisdictions).¹⁸⁰

¹⁷⁶ A/CN.9/1120, paras. 15–16.

¹⁷⁷ Ben McQuhae & Co, “The Legal Nature of Carbon Credits”, 15 March 2023, p. 1, available at <https://bmcquhae.com/en/2023/03/15/the-legal-nature-of-carbon-credits>.

¹⁷⁸ Paraguay, Law No. 7190 on Carbon Credits (12 October 2023), arts. 3 and 10.

¹⁷⁹ Response of these States to UNCITRAL questionnaire, 3b.

¹⁸⁰ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, p. 9.

93. In any case, legal experts insist on the importance of a precise understanding of the legal nature of VCCs under private law. As one study notes, “[t]he legal nature of VCCs is not a purely academic question. The legal nature determines how ownership rights in VCCs can be created and transferred [...]. It also affects what type of security may be taken and enforced and how that can be achieved, as well as how VCCs would be treated following an insolvency”.¹⁸¹

94. In their response to the questionnaire, some States also indicated how VCCs are treated, or are expected to be treated, for the purposes of regulatory law in their jurisdiction (i.e., whether VCCs represent a commodity, a financial instrument or something else). For instance, the United States mentioned that the CFTC (i.e., the entity responsible for regulating derivatives contracts) recently issued guidance regarding the listing of derivatives contracts traded in CFTC-regulated exchanges, where the underlying commodity is a VCC.¹⁸² In this guidance, the CFTC referred to VCCs as an “intangible commodity underlying a *derivative contract*”, suggesting that VCCs are not financial instruments.¹⁸³ Canada noted that the Canadian Securities Administrators (CSA), which is the umbrella organization of Canada’s provincial and territorial securities regulators, declared “certain intangible commodities, such as carbon credits and emissions allowances, to be commodities for purposes of securities legislation”.¹⁸⁴ Conversely, Brazil indicated that it is expected that the VCCs that will be admitted as Certificates of Verified Reductions or Removals of Emissions and used for compliance purposes under the proposed ETS will have the legal nature of securities when traded in the financial markets.¹⁸⁵ It has also been reported that in Egypt, VCCs are recognized as tradable financial instruments and that under the regulations of the Abu Dhabi Global Market (an international financial centre and free zone), VCCs are regulated as “environmental instruments”, which are a class of financial instruments.¹⁸⁶

95. The way in which VCCs are characterized under regulatory law is an element that may affect their tradability. Furthermore, this characterization may also be relevant for a private law analysis, as it can provide some indications on how one could reasonably expect VCCs to be treated under private law. However, the two issues remain distinct, as determining the legal treatment reserved to VCCs under regulatory law does not necessarily answer the question of their legal nature under private law.

96. A wide consensus exists among legal experts on the importance for legal systems to recognize VCCs as being capable of being the subject of “proprietary rights”.¹⁸⁷ If the law does not allow private actors to acquire “proprietary rights” in relation to VCCs, then the functioning of VCMs could be problematic. However, there is also an agreement on the fact that: (i) the issues surrounding the legal characterization of VCCs depend on the context of each legal system and may

¹⁸¹ ISDA, *The Legal Nature of Voluntary Carbon Credits: France, Japan and Singapore*, November 2022, p. 14, available at www.isda.org/a/PlcgE/Legal-Nature-of-Voluntary-Carbon-Credits-France-Japan-and-Singapore.pdf.

¹⁸² United States (response to UNCITRAL questionnaire, 3b).

¹⁸³ CFTC, “Commission Guidance Regarding the Listing of Voluntary Carbon Credit Derivative Contracts; Request for Comment”, Federal Register, vol. 88, No. 247, 27 December 2023, p. 89412.

¹⁸⁴ CSA, CSA Notice of Amendments to Multilateral Instruments 25-102 and Changes to Companion Policy 25-102, 29 June 2023, available at www.asc.ca/-/media/ASC-Documents-part-1/Regulatory-Instruments/2023/06/6103549-Amendments-to-MI-25-102-and-Changes-to-CP.ashx; Canada (response to UNCITRAL questionnaire, 2b).

¹⁸⁵ Brazil (response to UNCITRAL questionnaire, 1b).

¹⁸⁶ IOSCO, *Voluntary Carbon Markets. Consultation Report*, supra note 9898, p. 12.

¹⁸⁷ UNIDROIT, *Issues Paper*, supra note 21, para. 66. In line with the approach adopted in the UNIDROIT’s Principles on Digital Assets and Private Law, the expression “proprietary rights” is in this context “used in a broad sense to include both proprietary interests and rights with proprietary effects”, and intended to “express that persons [could] have rights or interests in [VCCs], which rights or interests can be asserted against third parties, *i.e.*, against persons that are not necessarily contractual parties”. UNIDROIT’s Principles on Digital Assets and Private Law, para. 3.4.

therefore vary across jurisdictions; and (ii) in most jurisdictions, there may be different approaches to recognize that VCCs can be the subject of “proprietary rights”.¹⁸⁸

97. The following paragraphs expose various alternatives for the characterization of VCCs under private law, which all have legal implications for the tradability of VCCs.

1. VCCs as a bundle of contractual rights

98. A first possible approach would be to characterize VCCs as a bundle of contractual rights. Under this approach, VCCs would be seen as the result of the performance of contractual obligations by one or more identified parties (like a service). This possible qualification stems from the fact that VCCs exist only through, and because of, the performance of a set of contractual obligations. In order for VCCs to be issued and traded, a series of contracts is to be executed. These contracts include, inter alia: a contract between the project proponent and the independent carbon standard setter; a contract between the project proponent and a verification and validation body; a contract between the project proponent and the registry; a contract between the registry and another person who requests the issuance of VCCs in a new account in its name.

99. It has been noted, however, that most of these contracts may not be relevant in this context, given that the issuance of VCCs is precisely the result of the execution of these contracts. Thus, once VCCs are issued, there could be (although this may depend on the terms of the contracts) no “remaining contractual obligations and no remaining rights”.¹⁸⁹ While this might be the case with the contracts between the project proponent and the independent carbon standard setter, or the project proponent and the verification and validation body, it seems that if VCCs appear in a registry, it is because: (i) a person has concluded a contract with the registry to have an account in this registry in which those VCCs are recorded; and (ii) this contract is still in force.

100. In that sense, the holder of VCCs would own a bundle of contractual rights against the registry. What this bundle of rights could encompass would vary according to the Terms of Use of each registry. But it would be likely to include the right to see the inscription of the VCCs in the registry maintained, the right to see the VCCs transferred to another account whenever the owner of the account requests it, as well as the right to retire the VCCs. Thus, VCCs could be envisaged as the result of the continuous execution by the registry of a contractual obligation.

2. VCCs as intangible property

101. A second approach would be to consider VCCs as “intangible property”.¹⁹⁰ The precise meaning of this approach would vary from jurisdiction to jurisdiction, but functionally the approach means that VCCs could be the object of rights which are effective against third parties, despite not being tangible. This approach could apply to a VCC which does not comprise of any contractual rights, as well as a VCC which does. A VCC could thus be seen as a finite resource which is capable of being the object of such rights. The finite resource, on this analysis, would be the certification that one ton of CO₂ equivalent has been removed from the atmosphere, or not emitted in the atmosphere, by an identified and specific climate mitigation project.¹⁹¹ A potential problem with this analysis is that the certification (in the absence of contractual rights or any relevant legislation) is merely information, which is not

¹⁸⁸ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, pp. 9–10; Ben McQuhae & Co, “The Legal Nature of Carbon Credits”, supra note 177177, p. 1.

¹⁸⁹ UNIDROIT, *Issues Paper*, supra note 21, para. 71.

¹⁹⁰ In a recent report, the United Kingdom Law Commission noted that “the prevailing view in most jurisdictions (including under the law of England and Wales) is that VCCs are ‘a form of intangible property’ – they are capable at law of being things to which personal property rights can relate”. Law Commission, *Digital assets: Final report*, Law Com No 412, 2023, para. 4.68 (United Kingdom), available at www.lawcom.gov.uk/project/digital-assets/.

¹⁹¹ UNIDROIT, *Issues Paper*, supra note 21, para 73.

capable of being the subject of proprietary rights in many jurisdictions.¹⁹² Against this, it can be argued that a VCC is not merely information, because of the way in which it is issued, registered, transferred and retired. Instead, each VCC is an identified unit, which is, and which is treated as, an item separate from the information it contains.

102. Reference could, therefore, be made to the general features of “intangible property” (widely construed, as explained in the previous paragraph) accepted by most legal systems. For example, in some countries, for a thing to be considered as property it must be established that it is “definable, identifiable by third parties, capable in its nature of assumption by third parties and [having] some degree of permanence or stability”, while in other countries “the criteria traditionally used to define property tend to revolve around the questions of whether a thing has an economic value, whether it can be transferable, and whether a person can use it without interference by third parties”.¹⁹³ A VCC, because of its specific characteristics as described above, would appear to satisfy these criteria.

3. VCCs as digital assets

103. A further issue that deserves consideration is that since VCCs primarily exist in an electronic format with a unique serial number, they may be viewed as a form of “digital asset”. The term “digital assets” is one that can be interpreted widely, and only a subset of “digital assets” are likely to be capable of being the subject of proprietary rights.

104. Yet, as digital assets are increasingly important in modern society – and because of their peculiarities from the perspective of property law – a question that currently elicits considerable interest in the legal community is whether digital assets should be recognized as a new legal category in domestic law. Thus, the fact that countries could eventually develop new bespoke legal categories for digital assets could add another layer of uncertainty as to how VCCs could be characterized under property law. In that regard, it is worth mentioning that in a recent report on digital assets, the United Kingdom Law Commission considered that some digital assets were neither things in possession nor things in action, but part of a third category of things to which personal property rights can relate, and that VCCs, depending on how they were structured, were an example of things likely to fall within this third category, either because they were structured as digital assets or as “intangible property” more generally.¹⁹⁴

105. UNIDROIT’s Principles on Digital Assets and Private Law (the “DAPL Principles”) provide that a certain subset of digital assets can be the subject of proprietary rights; namely, those electronic records that are capable of being subject to control.¹⁹⁵ Control in this context is understood as factual rather than legal control and is defined as having: (i) the exclusive ability to prevent others from obtaining substantially all of the benefit from the digital asset; (ii) the ability to obtain substantially all of the benefit from the digital asset; and (iii) the exclusive ability to transfer those abilities to another person.¹⁹⁶ Thus, under the DAPL Principles, the person who controls the digital assets does so as a matter of fact; because of the way digital assets are set up there is a technical system that prevents anyone else from controlling the asset. In the context of VCCs, however, the holder of the VCC is unlikely to have this degree of factual control. As matters currently stand, registries do not currently operate like blockchains and do not provide the degree of control to holders that blockchains provide.

¹⁹² Ibid.

¹⁹³ A/CN.9/1120, para. 21.

¹⁹⁴ Law Commission, *Digital Assets: Final report*, supra note 190190, para. 4.74.

¹⁹⁵ DAPL Principle 2(2).

¹⁹⁶ DAPL Principle 6(1).

4. Legal implications of the choice of a characterization

106. The choice of legal characterization for VCCs under private law is not a purely theoretical question. This choice may have concrete implications with regards to the conditions under which VCCs are traded, for the legal security of the commercial transactions of VCCs and, thus, for the well-functioning of VCMs.

107. For instance, under the intangible property approach, VCCs could be seen as representing intangible things whose existence is distinct from the registry (the function of the registry being primarily to record the VCCs).¹⁹⁷ By contrast, under the contractual approach, VCCs derive from the contractual relationship between the holder and the registry. In case of insolvency of the entity operating the registry or issues concerning the identification of the moment when VCCs begin to exist as objects of law, the choice of one characterization or the other may lead to different outcomes.

108. More importantly, in case of a sale of VCCs, what are transferred from the seller to the buyer under the intangible property approach are rights over an intangible thing; under the contractual approach, what are transferred are contractual claims. Yet, in many jurisdictions, the rules governing the transfer of contractual claims are more complex and stringent than those governing the transfer of rights over things. Thus, the dominant view among the legal experts consulted for the preparation of this study seemed to be that qualifying VCCs as contractual claims would likely lead to an undesirable outcome.

109. Characterizing VCCs as a bundle of contractual rights or intangible property may also have other legal implications, such as in case of succession. It should also be noted that treating VCCs as a bundle of contractual rights may raise issues regarding the applicability of the extinctive prescription rules. As can be seen, the choice of a legal characterization might have profound consequences regarding how VCCs can be bought and sold, and this choice could therefore facilitate or hinder their trading.

5. Possible legal characterization in some jurisdictions

110. The following paragraphs give an overview of how legal experts consider that VCCs could potentially be, or would likely be, legally characterized under private law in some jurisdictions under the current state of the law.

111. Under English law, the existing literature suggests that although VCCs could be considered as a bundle of contractual rights, they would be more likely to be treated as intangible property.¹⁹⁸ An important point in that case is that, at the time the United Kingdom was a member State of the EU, EU emission allowances were recognized in the jurisprudence as a form of intangible property under English law.¹⁹⁹ Some authors have even been more specific by asserting that, “[a]s things currently stand, a properly issued carbon credit is likely to be a documentary intangible (i.e.[,] a personal property right) under English law”.²⁰⁰

¹⁹⁷ When VCCs are considered as intangible property, it should be noted that a person who has concluded a contract with a registry remains the holder of contractual rights against the registry. In such a case, however, the right to see the VCCs appear in the registry is not constitutive of the existence of those VCCs, which exist as intangible objects independently of their appearance in the registry.

¹⁹⁸ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, p. 10 and p. 13.

¹⁹⁹ *Armstrong DLW GmbH v. Winnington Networks Ltd* [2012] EWHC 10 (United Kingdom), para. 52 (ruling that “an EU allowance is ‘intangible’ property”).

²⁰⁰ Ben McQuhae & Co, “The Legal Nature of Carbon Credits”, supra note 177177, p. 3. In English law, a documentary intangible is a document that entitles its holder to demand something (money, goods) and which allows it to transfer this right to another by delivery of the document followed by any necessary indorsement. It should be noted that since an actual documentary intangible must be tangible, the possibility to legally characterize VCCs as such remains contested given that VCCs usually exist only in an electronic format.

112. However, some observers contend that it is not enough just to state that VCCs are intangible property, as this statement must be substantiated by legal principle. It has been argued that, in the absence of a specific right or claim represented by (or embodied in) the VCC, VCCs – or to be more precise, what VCCs are in their substance – can be envisioned as simple certificates attesting that one ton of CO₂ equivalent has been reduced or removed from the atmosphere. Yet, as noted by one participant to the first session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits, this could be problematic as a certificate is merely information and information is not capable of being the subject of proprietary rights under English law. Therefore, in addition to focusing on the substance of VCCs, it has been suggested that VCCs could be legally characterized by reference to their form. For example, a VCC issued in paper form would be a tangible,²⁰¹ and a VCC issued in the form of a digital asset could be the subject of proprietary rights because of that form.²⁰²

113. In Europe, EU legislation does not specify how VCCs should be treated under private law in the member States. As such, there is no unified definition of VCCs that applies across the EU and “each member state treats VCCs at its own discretion”.²⁰³ However, the EU is proposing an EU-wide voluntary certification framework for carbon removals, and it has been noted that the work carried out in this context could eventually lead the EU to provide indications on the legal nature of those carbon removal units. If that were the case, the legal nature conferred to those units could then be a relevant indication for determining the legal nature of VCCs in EU member States.

114. Absent a specific statutory definition, in civil law legal systems, it is often considered that VCCs could qualify as intangible movable property.²⁰⁴ For instance, in France, although the question of the legal nature of VCCs has not been specified yet by statutory law or judicial determination, authors are of the view that VCCs should be considered as intangible movable property.²⁰⁵ A key aspect in this case is that EU emissions allowances are already recognized as intangible movable property by French law.²⁰⁶ In Japan, which also has a civil law system and where the legal nature of VCCs has not been specified, it appears that VCCs should be able to be interpreted as being a form of intangible property.²⁰⁷ However, experts note that “without legislative action, the legal nature under Japanese law remains unclear”.²⁰⁸ Similar conclusions have been reached regarding other jurisdictions such as Singapore²⁰⁹ and Germany.²¹⁰

²⁰¹ UNIDROIT, *Issues Paper*, supra note 2121, para. 79.

²⁰² *Ibid.*, para. 83; Law Commission, *Digital Assets: Final report*, supra note 190190, para. 4.74.

²⁰³ M. Burzec, K.K. Lewis, “Voluntary Carbon Market: Challenges and Promises of the Green Transition Tool”, Ernst & Young, 20 August 2021, available at www.ey.com/en_pl/law/voluntary-carbon-market.

²⁰⁴ R. Bhadoria, D. Banjoko, “Carbon Credits and Climate Change”, Trinity International LLP, 14 March 2023, available at www.trinityllp.com/carbon-credits-and-climate-change.

²⁰⁵ P. Larroque, A-E. Rubio, “Neutralité carbone : quel cadre juridique pour la compensation volontaire?”, CMS Francis Lefebvre Avocats, 24 June 2021, available at <https://cms.law/fr/fra/news-information/neutralite-carbone>; ISDA, *The Legal Nature of Voluntary Carbon Credits: France, Japan and Singapore*, supra note 181181, p. 7.

²⁰⁶ France, Environmental Code, art. L. 229-11.

²⁰⁷ ISDA, *The Legal Nature of Voluntary Carbon Credits: France, Japan and Singapore*, supra note 181181, p. 10.

²⁰⁸ *Ibid.*, p. 11.

²⁰⁹ *Ibid.*, pp. 11 and 14 (noting that “despite the flexibility of Singapore courts in recognizing property rights in intangible assets where the market treats those assets as property, it remains the case that, pending an authoritative statement, there is currently a degree of perceived or residual uncertainty over the characterization of VCCs under Singapore law”).

²¹⁰ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, p. 15 (noting that “[s]imilar to other jurisdictions, a German analysis would need to consider whether VCCs qualify or are deemed to qualify as property [...] or as contractual rights”).

B. Ownership of verified carbon credits

115. Several issues may arise in relation to “ownership”²¹¹ of VCCs. A first area of uncertainty concerns the precise moment where VCCs begin to exist in the realm of law, i.e., as objects of legal rights and duties. It seems that there is currently no consensus among legal experts on whether VCCs start to exist from the moment the independent carbon standard setter certifies that the reduction or removal of GHGs has occurred (which implies that VCCs exist before their appearance in a registry) or if VCCs only begin their existence upon their appearance in a registry. The answer to this question is of importance as it will enable to determine when ownership over VCCs is established. To illustrate, if an entity that operates a registry does not issue VCCs in its database (because of a technical matter or any other reason), issues of ownership may be relevant for determining whether the project proponent may still sell those VCCs as their legitimate owner.

116. If it is deemed that VCCs start their existence upon their appearance in a registry, a subsequent question remains: should it be considered that VCCs have an autonomous existence as a thing distinct from the registry or do VCCs exist only through their inscription in the registry? In other words, are the VCCs that are being recorded and the registry in which those VCCs are recorded distinguishable, or is the inscription of the VCCs in the registry what constitutes their existence? The answer to the question seems closely related to the fundamental issue of the legal nature of VCCs.

117. Once VCCs appear in the registry, another set of questions arises. One concerns the legal value of the registry and whether the fact that a person holds an account in which VCCs are recorded should be considered as proof (or perhaps a presumption) of ownership of these VCCs. Some legal experts contend that, to the extent that VCCs are things that exist apart from the registry, the function of the registry is only to show evidence of who holds which VCCs, for the holder of VCCs may not always be their proper owner. A VCC holder may indeed act as a custodian.²¹² In fact, most registries currently make it clear in their terms of use that they are not acting as registries of title.²¹³ Therefore, some argue that a VCC registry should not be treated like a form of registry of deeds and that an inscription in a VCC registry should not be viewed as a proof of ownership (although it could still serve to establish a presumption of ownership). If that is the case, this situation could increase the complexity of trading in VCCs, as it could become more difficult for potential VCCs purchasers to be certain that the person from whom they buy VCCs is their legitimate owner.

118. A second question on which clarification may be desirable is whether co-ownership of VCCs is possible. It is well-established that there should always “be a single holder of a VCC at any given moment”,²¹⁴ and that VCCs should only be capable of being claimed one time and by one entity.²¹⁵ The extent to which co-ownership of VCCs (for instance, by parties to a joint venture) may be possible may depend on how VCCs are legally characterized in a jurisdiction. If, for instance, VCCs are recognized not as intangible things but as contractual rights, it has been

²¹¹ The notion of “ownership” is used in this context in a broad sense, to refer to the bundle of exclusive rights and interests that a person may have in or over a VCC and that can be asserted against third parties, according to the law of a specific jurisdiction.

²¹² The notion of custodian is defined in the DAPL Principles as “a person who provides services to a client pursuant to a custody agreement [...] and is acting in that capacity” (Principle 10); UNIDROIT, *Issues Paper*, supra note 21, para. 125 (noting that “custody, broadly speaking, is where a legal person maintains a digital asset on behalf of and for the benefit of another – [i.e.,] a client – in a manner that gives the client special protection in the event of unauthorized dispositions of the asset and the insolvency of the custodian who maintains the digital asset”).

²¹³ For instance: Verra, *Terms of Use. Verra Registry*, supra note 134134, Section 9.1 (stating that “the User acknowledges and agrees that Verra does not in any way guarantee legal title to the Instruments and the User relies on any content obtained through the Verra Registry at its own risk”).

²¹⁴ UNIDROIT, *Issues Paper*, supra note 21, para. 93.

²¹⁵ A/CN.9/1120, para. 21.

argued that the idea of co-ownership may not be accepted under certain legal systems in which “contractual obligations can only be owed to one person at the time”.²¹⁶

119. A third question relates to the criteria (or criterion) upon which the identification of the owner of VCCs should be based. Ownership is usually conceived as encompassing the right to possess and to exercise exclusive control over an object of property. Yet, as mentioned above, VCMs form a complex ecosystem with many actors and intermediaries. Thus, identifying the owner of VCCs could raise difficulties.

120. A first aspect is that, as entities operating registries always retain a certain level of control over VCCs (e.g., they may, at any time, suspend the access of a holder of VCCs to its account, which would make any transfer impossible²¹⁷), it seems difficult to define ownership in the context of VCCs by referring to the idea of exclusive control over a thing, or at least to understand this criteria in the same way as it may be interpreted in other contexts.

121. Another important element to consider is that holders of VCCs (i.e., those who have an account in a registry in which VCCs are recorded) may act as custodians. A holder can indeed conclude a contract with a client by virtue of which this client acquires the right to instruct the holder of the VCCs to either retire them on its behalf or to sell them to a third party. In such situations, the person entitled to control the VCCs and the person with effective control over these VCCs (i.e., the holder of the account which has the credentials to request the registries to transfer or retire VCCs) would not be the same.

122. Additional issues relating to ownership of VCCs may arise when VCCs are generated by climate mitigation projects that involve the sequestration of GHG in reservoirs (e.g., trees, peatland, underground geologic formations). Uncertainties could indeed appear regarding whether the owner of the reservoirs in which the carbon has been sequestered (which may be a private or public entity) is entitled to assert ownership rights over the VCCs generated by the sequestration project. A distinct but related potential issue is whether the subsequent owners of VCCs that have been generated by a sequestration project could be regarded as being the owner of an interest in the land in which the carbon that has led to the issuance of those VCCs has been stored.

123. For the well-functioning of VCMs, legal experts consider crucial to provide clarity on: (i) who is the initial owner of VCCs in all possible scenarios; and (ii) the fact that owing VCCs does not confer any interest in real property. In that regard, it should be noted that legal frameworks governing the issuance of carbon credits resulting from jurisdictional REDD+ activities usually contain specific requirements on those aspects. For instance, under the FCPF Standard, the Programme Entity (which can be a sub-national entity or a State) must “demonstrate its ability to transfer title to emissions reductions (ERs), free of any interest, Encumbrance of claim of a Third Party, prior to any ERs Transfer”.²¹⁸ Likewise, under TREES (the standard operated by ART), the rules state that participants “must explain how, under existing constitutional or legal framework, carbon rights and/or related intangible property interests, are established and addressed” and that only carbon credits for which “clear ownership or rights” have been demonstrated will be issued.²¹⁹

²¹⁶ UNIDROIT, *Issues Paper*, supra note 2121, para. 93.

²¹⁷ For instance: Verra, *Terms of Use. Verra Registry*, supra note 134134, Section 14.6 (stating that “Verra may suspend the User’s access to the Verra Registry and the User’s Verra Registry account [...] at any time with or without cause and without prior notice to the User”).

²¹⁸ FCPF, Emission Reductions Payment Agreement (ERPA) Template, November 2014, Schedule 1, available at www.forestcarbonpartnership.org/system/files/documents/fcpf_erpa_commercial_terms_template_november_1_2014_english.pdf.

²¹⁹ ART, The REDD+ Environmental Excellence Standard (TREES), August 2021, p. 81, available at www.artredd.org/wp-content/uploads/2021/12/TREES-2.0-August-2021-Clean.pdf.

C. Secured transactions and collateralization

124. As assets that have an economic value, an important question in relation to VCCs is whether their owners are allowed to use them as collateral to secure loans or other contractual obligations in the context of their business activities. During the first session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits, some actors involved in VCMs highlighted that taking security over VCCs has been common practice for many years now. Nevertheless, legal experts are generally of the view that, under the present circumstances, this practice often remains surrounded by legal uncertainties.

125. The first kind of uncertainty that may arise is whether the law of a given jurisdiction allows security rights to be created over VCCs and, if so, whether existing domestic frameworks for security rights can be applicable to VCCs.²²⁰ During the consultations conducted for the preparation of this study, legal experts agreed that the question of the applicability of existing legal frameworks could pose challenges. As an illustration of that, divergent views were expressed on whether the UNCITRAL Model Law on Secured Transactions would apply to VCCs.

126. In many cases, the answer to such query will be “linked to the fundamental question of the legal nature of VCCs [...] and whether a VCC can be the subject of proprietary rights”.²²¹ In most legal systems, a security right can only be created if the grantor has rights in the assets to be encumbered or the power to encumber it (a security right is a proprietary right and if a VCC could not be the subject of a proprietary right, it could not be the subject of a security right).²²² Thus, as long as the exact legal nature of VCCs under private law remains unsettled in a jurisdiction, a lack of clarity may persist as to whether security arrangements will be treated as valid and enforceable under the law of this jurisdiction.

127. The importance of clarifying this point is highlighted in the literature, which emphasizes that the possibility of using VCCs as collateral is “[a] key concern for VCM participants”.²²³ Furthermore, in the context of cap-and-trade systems, it has been suggested that “the commercial value of emission allowances tends to increase when the law clearly provides that emission allowances are capable of supporting the existence of security interests”.²²⁴ A similar reasoning would seem to apply to VCCs.

128. Clarifying the legal nature of VCCs may not, however, suffice to dispel all legal uncertainties relating to the use of VCCs as collateral. For instance, issues could arise regarding whether a security right can be created over VCCs that will be issued in the future or whether VCCs can be treated as eligible collateral in the context of financial prudential requirements across jurisdictions. Other uncertainties may appear concerning the applicable rules on third-party effectiveness. Legal experts agree that since VCCs registries are not the prescribed secured transactions registry, they do not represent a mechanism to render a security right effective against third parties. Whether any form of registration in such a registry amounted to the requisite degree of legal control for third party effectiveness would vary very considerably from jurisdiction to jurisdiction. Questions could also arise as to the conditions under which control over an encumbered VCC would be considered established, and, in many cases, specific and new legislation would be required for this to be the case. Thus, for their security rights to be effective against third party, VCMs participants may wonder whether a formal registration in a secured transactions registry is necessary. Because

²²⁰ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, p. 5.

²²¹ UNIDROIT, *Issues Paper*, supra note 21, para. 113.

²²² For instance: UNCITRAL Model Law on Secured Transactions, art. 6.1 (“A security right is created by a security agreement, provided that the grantor has rights in the asset to be encumbered or the power to encumber it”).

²²³ UNIDROIT, *Issues Paper*, supra note 21, para. 112.

²²⁴ European Court of Auditors, *The integrity and implementation of the EU ETS*, European Union, 2015, p. 25, available at https://www.eca.europa.eu/Lists/ECADocuments/SR15_06/SR15_06_EN.pdf.

of these uncertainties, it has been argued that the rules for determining priority of security rights in VCCs may not provide predictability.²²⁵

129. Furthermore, as each jurisdiction has its own legal regime governing collateral and securitization, and the creation, validity, perfection and enforcement of security rights, discrepancies could appear among jurisdictions regarding how domestic laws regulate security rights over VCCs. Considering that VCCs are an object of international trade, the need for coordination – for instance among registries that record the security right over VCCs – was highlighted during the consultation conducted for the preparation of this study.

D. Transfer of verified carbon credits

130. VCCs are currently traded OTC, through private bilateral contracts, or on exchange-traded markets.²²⁶ In their responses to the UNCITRAL questionnaire, two States provided information on the trading environment of VCCs in their country. Canada mentioned the existence in its territory of a stock exchange specializing in the trading of VCCs.²²⁷ The United States indicated that VCCs are primarily transacted OTC in their country, but that some credit aggregators and retailers are increasingly using exchange platforms to purchase credits – via spot or futures contracts – in bulk and at lower prices than may be secured OTC.²²⁸

131. According to VCMs analysts, there is currently a need for greater standardization in VCMs, including with regards to the contracts through which VCCs are transferred.²²⁹ Observers note, however, that “[s]ome exchanges have been developing more standardized products, notably in the derivatives market”, such as the trading platform Xpansiv which “developed the Global Emission Offset [...] contract, which is a product whereby a seller must physically deliver a credit underpinned by specific project characteristics”.²³⁰ It is also mentioned that the work of ISDA, which “published industry documentation for the trading of [VCCs], setting out transactions definitions and related template confirmations for spot, forward and option contracts [...] could further support standardization”.²³¹

132. Whether in OTC or exchange traded markets, there seems to be a wide agreement among legal experts on the fact that the predictability of the legal framework for VCCs transfers could be enhanced. At present, it seems that there are situations in which parties to commercial transactions of VCCs lack authoritative guidance to ascertain the possible answer to some of the legal questions that could arise in the context of these transactions.

133. This is notably the case regarding the applicability of the force majeure clause to situations of non-delivery of VCCs caused by regulatory changes, a potentially higher risk in connection with VCCs as compared to other tradeable assets in view of the evolving public policy environment. A project proponent could find itself unable to deliver the VCCs it promised to transfer to a buyer, by virtue of a validly concluded sales contract, because of regulatory changes in the country in which the mitigation project is carried out (making this project economically non-viable or simply impossible). Depending on the legal characterization of VCCs (e.g., whether property or contractual rights) and the time of their existence, it may be unclear whether

²²⁵ UNIDROIT, *Issues Paper*, supra note 21, para. 117.

²²⁶ During the consultations conducted for the preparation of this study, some experts noted that the development of emerging technologies, such as distributed ledger technology, could lead to evolutions in the ways in which VCCs are transferred and that any legal analysis on VCC transfers should be mindful of such potential evolutions.

²²⁷ Canada (response to UNCITRAL questionnaire, 3a).

²²⁸ United States (response to UNCITRAL questionnaire, 3a).

²²⁹ TSVCM, *Taskforce on Scaling Voluntary Carbon Markets. Final Report*, supra note 137137, p. 103.

²³⁰ IOSCO, *Voluntary Carbon Markets. Consultation Report*, supra note 9898, p. 40.

²³¹ *Ibid.*

non-delivery of VCCs in such circumstances could be adequately dealt with by an application of the force majeure clause.

134. Legal uncertainties may also arise regarding the conditions under which a transfer of VCCs should be deemed completed and the exact moment at which ownership passes from the seller to the buyer. Sale contracts of VCCs are often concluded before VCCs are transferred from the seller's account to the buyer's account. A question arises as to whether transfer of ownership occurs upon the transfer of the VCCs from one account to another in the registry, or when the sales contract is concluded. The answer to this question would likely depend on the applicable law and it could also be clarified between the seller and the buyer on an ad hoc basis by express contractual provisions. Nevertheless, it would be desirable that national law is clear on this point and common guidance regarding the relationship between delivery of VCCs and title transfer could contribute to a more predictable VCCs trading environment.

135. An additional factor to consider is that the holder of an account in which VCCs are registered may act as a custodian. According to the Terms of Use of some registries (such as Verra), if the custodian transfers the VCCs on behalf of a third party, it must provide advance written notice to the registry that it will engage in such activities.²³² Whether non-compliance with this formality could impact the transfer of ownership between the seller of the VCCs, which has instructed the custodian to transfer them, and the buyer of VCCs, and to what extent, remains to be determined. How this issue would be addressed would likely depend on the applicable law and the provisions of the sales contract. For instance, a contract could specify that transfer of ownership is dependent on the fulfilment of a specified condition.

136. Another area of uncertainty concerns the rights and duties of the sellers and buyers of VCCs. A key issue in VCMs remains that VCCs may not all possess the same quality (e.g., they may not all possess the same level of environmental integrity, they may not all represent GHG removals that have the same risk of reversal²³³). Furthermore, their existence as tradable assets might be compromised by external events, even retroactively after having been sold multiple times in the secondary market. As the CFTC explains, "VCCs issued for a project or activity may have to be recalled or cancelled due to carbon removed by the project or activity being released back into the atmosphere, or due to a re-evaluation of the amount of carbon reduced or removed from the atmosphere by the project or activity".²³⁴

137. This context may give rise to various situations for which clear legal answers do not seem to exist at the moment. For instance, it has been noted that "it is unclear whether a VCC seller has an obligation to guarantee the quality (or the existence) of the underlying [c]arbon [p]roject and which party bears the risk of the continued validity of the VCC" and that "it remains to be determined whether the VCC seller could be held liable for the shortfall in carbon offsets or others issues affecting the VCC".²³⁵

138. According to market participants, VCMs currently operate "largely on a 'buyer beware' model, where VCC buyers are expected to carry out proper diligence on, for example, the [c]arbon [p]roject [d]eveloper and its track record", even if the "lack of complete information may hinder a VCC buyer's ability to properly carry out such diligence".²³⁶ Nevertheless, should a buyer find that the VCCs it purchased are subsequently cancelled, or if this buyer faces legal actions due to the lack of environmental integrity of the VCCs used to substantiate a mitigation claim, questions could arise regarding the legal remedies available to this buyer against the seller.

²³² Verra, *Terms of Use. Verra Registry*, supra note 134134, Section 1.5.

²³³ For instance, GHG removed from the atmosphere through forestry-based projects have a greater risk of reversal because of exposure to wildfires.

²³⁴ CFTC, "Commission Guidance Regarding the Listing of Voluntary Carbon Credit Derivative Contracts; Request for Comment", supra note 183183, p. 89417.

²³⁵ UNIDROIT, *Issues Paper*, supra note 21, para. 102.

²³⁶ *Ibid.*, para. 104.

Thus, uncertainties persist at the moment regarding the extent to which a purchaser would be legally protected.

139. A transfer of VCCs may correspond to the sale of VCCs between a seller and a buyer, but it may also correspond to the transfer of VCCs between two different registries. While most of the registries are currently not interconnected, these kinds of transfers could be achieved by the cancellation of VCCs in one registry and the reissuance of the same amount of VCCs in another registry. In such cases, legal experts consulted for the preparation of this study raised the query of whether the legal nature of VCCs would change upon their transfer from one registry to another.

140. A last aspect related to the transfer of VCCs which deserves consideration is whether VCCs can be considered fully interchangeable, i.e., fungible. Whether two things may be deemed fungible (i.e., when one considers that they can substitute for each other to fulfil the same function) depends on the context in which they are assessed. They may be deemed fungible for a specific purpose and not for another.²³⁷ In the case of VCMs, there are different dimensions of the life of VCCs in which fungibility may be assessed.

141. For instance, fungibility could be assessed from the perspective of contractual practice. In that case, VCCs could be deemed fungible if the same terms of contract are used by VCMs participants for the trading of any type of VCC, regardless of the identity of the independent carbon standard setter that issued it. Fungibility could also be assessed from the perspective of the interoperability between VCMs. If an account holder is requested by an independent carbon standard setter to surrender VCCs to address a situation of reversal, in many cases the account holder will only be allowed to surrender VCCs issued by this carbon standard setter. In that context, whether VCCs are fungible is intrinsically linked to market segmentation and the interoperability of the registries.

142. Another perspective from which fungibility could be assessed is that of what VCCs are ultimately made for, i.e., substantiating a mitigation claim in a (public) statement. The fact there “already exists a degree of uniformity in the way VCCs are measured”²³⁸ (each VCC corresponds to one ton of GHG reduced or removed from the atmosphere) could be viewed as an indication that VCCs may be considered fungible in this context. However, VCCs are generated by different projects and different independent carbon standard setters, and the level of environmental integrity of each VCC might not necessarily be identical, or at least be perceived as such by market participants. Moreover, some VCCs are deemed eligible to be used for compliance purposes under programmes such as CORSIA, while others are not. In the world of VCMs, it is usually said that all VCCs are not created equal and that – just like with diamonds (and unlike gold) – the value of VCCs is judged on a variety of metrics.

143. It has been argued that “ensuring broad fungibility of VCCs is key to driving deep, liquid markets” and “that VCCs should, as far as possible, be interchangeable for the purposes of satisfying obligations between market participants to transfer VCCs”.²³⁹ To that end, legal experts have suggested that it would be key “to determine the minimum parameters required for VCCs to be considered equivalent for the purposes of discharging an obligation to transfer a VCC (for example, under relevant trading documentation)”.²⁴⁰ Thus, despite their variances, VCCs could be considered fungible for trading purposes, provided that they meet certain quality thresholds.²⁴¹

²³⁷ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, p. 16 (noting that: “[b]anknotes, for example, are fungible to satisfy monetary obligations, but can be regarded as specific items of property (each note is serialized) for other purposes, such as tracing”).

²³⁸ UNDIROIT, *Issues Paper*, supra note 21, para. 108.

²³⁹ ISDA, *Legal Implications of Voluntary Carbon Credits*, supra note 175175, p. 16.

²⁴⁰ Ibid.

²⁴¹ Ibid. However, some analysts note that the market has now moved away from fungibility, with “pools of liquidity” emerging. This shift is attributed to buyers becoming increasingly discerning about the underlying project and the details of particular VCCs that they are purchasing.

E. Treatment in case of insolvency

144. A predictable legal environment for the trading of VCCs also implies the ability of market participants to understand how VCCs will be treated in cases of insolvency. Yet, at the moment, legal experts are of the view that situations of insolvencies could pose various legal challenges.

145. This would be the case, for instance, with the insolvency of a private actor operating a registry in which VCCs are recorded. The insolvency of a VCC registry could potentially “lead to the ‘perishing’ of the digital carbon credit”, depending on how the VCC’s legal nature is characterized.²⁴² However, if, under property law, VCCs are qualified as an intangible property, and if it is considered that the function of VCCs registries is only to evidence the existence of the VCCs (i.e., that they are not constitutive of VCCs existence), it would then be conceivable from a legal standpoint to conclude that VCCs have not ceased to exist.²⁴³

146. The insolvency of a project proponent, whose project has already generated VCCs that are transacted on the secondary market, could also raise legal questions, especially if these VCCs are the result of GHG removals. For instance, one could wonder whether the disappearance of the legal entity which was responsible for ensuring that the carbon remains stored in the reservoirs (e.g., trees, soils, subsurface) would affect the validity of the VCCs that have been generated by this project and which are traded on the secondary market.

147. In addition, issues could appear concerning the fate of VCCs owned by a person who entered into an insolvency proceeding. To give an example, if the creditor and the insolvent person both have accounts in the same registry, could the VCCs still be transferred from one account to the other if the insolvent person refuses to instruct the registry to execute this transfer?

148. In any case, the literature suggests that the way in which VCCs will be treated in situations of insolvency will likely depend on the legal characterization they receive under property law. It is also contended that the UNCITRAL Model Law on Cross-Border Insolvency and related instruments could provide some guidance to assist States in addressing situations of insolvency involving VCCs.²⁴⁴

F. Dispute settlement

149. VCMs form a complex ecosystem that relies on a web of legal relationships between various actors. In addition, climate mitigation projects that lead to the issuance of VCCs are always carried out under the jurisdiction of a State, and in a territory that has its own economic, social, and cultural realities. It follows that the legal disputes that may arise in connection with VCCs may take different forms and involve different kinds of parties.

150. At a first level, disputes can arise between the actors that are directly involved in VCMs and that play a role in the issuance and the trading of VCCs. Such disputes may oppose, inter alia: a project proponent and a validation or verification body; a project proponent and an independent carbon standard setter; an independent carbon standard setter and a validation or verification body; a project proponent and an investor; a project proponent and a VCCs purchaser; a VCCs buyer or seller and an independent carbon standard setter; a VCCs buyer or seller and a validation or verification body; a buyer and a seller of VCCs; two independent carbon standard setters or two registries.

²⁴² UNDIROIT, *Issues Paper*, supra note 21, para. 123.

²⁴³ At the first session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits, one person argued that these “orphan” VCCs could be rescued by another registry, which would harbour them.

²⁴⁴ UNDIROIT, *Issues Paper*, supra note 21, para. 121.

151. How each of these forms of disputes would be settled would likely depend on the provisions included in the contracts that underpin the activities of VCMs participants, and the law that applies to these contracts. In that regard, it should be noted that the documentation of the independent carbon standard setters often contains provisions that limits their liability.²⁴⁵ However, given the specificities of VCMs, a question for consideration is whether specific common principles, rules, or practices should be developed to achieve a certain level of consistency and predictability in the way in which these disputes are settled.

152. At a second level, disputes could arise between the actors that are directly involved in VCMs and public authorities. For instance, regulatory changes in the country where a climate mitigation project is conducted could affect its economic viability, thus opening the door to possible claims under investment law.²⁴⁶ Public authorities could also initiate legal actions against project proponents and project developers, but also entities that trade VCCs, for failure to comply with domestic legislation.

153. A third level of disputes involves VCMs participants and the public, or the civil society. For instance, local communities may initiate legal proceedings to prevent a climate mitigation project from being carried out, alleging that such project would cause harm to the local environment or human rights violations. As explained above, civil society could also sue companies which have retired VCCs to substantiate a mitigation claim, on the ground that the retired VCCs lack environmental integrity and do not correspond to genuine emission reductions or removals of GHG.

154. It is also important to stress that independent carbon standard setters have developed in-house complaints and appeals procedures through which the decisions that they take may be objected, even by the civil society. Some verification and validation bodies also have procedures of this kind in place. However, questions may arise regarding how complaints submitted through these procedures are addressed, as well as concerns as to whether they offer equivalent procedural safeguards and guarantees as those, for instance, that exist in the judicial system or in some regulatory dispute settlement systems (notably in terms of transparency).

G. Issues of applicable law²⁴⁷

155. The operation of voluntary carbon markets often includes a range of actions and participants located in or across different jurisdictions.²⁴⁸ The connections of the relevant carbon projects with a specific jurisdiction in the first step in the lifecycle of verified carbon credits may be different from the situs where the verifying body accredited by a carbon standard setter operates. From these first stages, contractual arrangements between project developers and carbon standard setters pose questions on the applicable law, and the jurisdiction to settle eventual disputes, arising from the verification process. Throughout the lifecycle of the verified carbon credit, the number of cross-border actions and transactions that take place add complexity to the question of the applicable law and jurisdiction, since the different stages of the

²⁴⁵ Verra, *Terms of Use. Verra Registry*, supra note 134134, Section 13 (Section 13.1 states that “neither Verra nor the Verra Registry Software Provider warrants that the information in the Verra Registry is correct, complete, current, or accurate, or that the software programs used in the Verra Registry will be error or bug-free, secure or free from service disruption”; Section 13.3 states that “Verra and the Verra Registry Software Provider hereby disclaim any such warranties, including but not limited to warranties of merchantability, non-infringement or fitness for a particular purpose, and any implied warranties arising from any course of dealing, usage, or trade practice”).

²⁴⁶ Similarly to claims that are brought against governments following the winding down of cap and trade emissions (for example, ICSID Case No. ARB/20/52 (Koch Industries, Inc. and Koch Supply & Trading, LP v. Government of Canada)) (see above, footnote 76).

²⁴⁷ This section contains inputs provided by the Permanent Bureau of the Hague Conference on Private International Law.

²⁴⁸ See ISDA, *Legal Implications of Voluntary Carbon Markets*, December 2021, available at www.isda.org/a/38ngE/Legal-Implications-of-Voluntary-Carbon-Credits.pdf.

commercialization and circulation of verified carbon credits and their participants are multi-sited. The following example illustrates the complexity: a project that led to the creation of the verified carbon credit can be located in one country different from the place of business of the company which carried out this project and has acquired ownership over the verified carbon credit; the carbon standard setter that has issued the verified carbon credit can operate in a third country; and the entity that runs the verified carbon credit registry can be located in yet another country.

156. Some of the private international law questions that arise in the operation of voluntary carbon markets may initially seem to be the same questions traditionally arising from international commercial contracts. It may therefore appear that existing instruments in the field of international commercial contracts could potentially answer these questions. However, there are several challenges in applying traditional connecting factors to determine, for example, the applicable law to transactions in the carbon market. The lifecycle of verified carbon credits is built on a web of multi-sited legal agreements and transactions, and challenges arise in attempting to use a single predominant connecting factor, such as one party's location (depending on the point in the transaction or unit lifecycle at which the relevant issues arise).²⁴⁹ The nature of contractual arrangements between market participants, particularly in the voluntary carbon markets, may also differ considerably.

157. Further complexity is added by the fact that some verified carbon credits have not only been digitally certified but that other steps in the transaction, such as the tokenization of units and their registration in distributed storage mechanisms such as those based on distributed ledger technologies, have taken place in the secondary market.²⁵⁰ These other steps give rise to other possible connecting factors, creating more questions as to how the applicable law and jurisdiction may be determined. Significant fragmentation in the domestic approaches taken in this regard remains, in particular in relation to the digitization of different stages of the process, including the type of technology used and the contractual relationships behind these stages (including where these stages have been outsourced to third-party providers). Other private international law questions concerning the applicable law and jurisdiction linked to the voluntary market transactions arise where verified carbon credits have been brought to the commercial market by intermediaries or brokers, including where such exchanges are performed on digital platforms between participants who may have no legal connection with the standard setters. Other questions that arise against this background are the extent to which verified carbon units are potentially subject to cross-border securities laws, and the corresponding implications for private international law rules in such cases.

158. Moreover, overriding mandatory rules and public policy may limit the usual default to party autonomy rules in the traditional choice of law agreements in international commercial contracts involving verified carbon credits. Questions arise, for example, concerning the mandatory application of the law of the forum or another State with a substantial connection with the subject of the agreement. In some jurisdictions, specific requirements may also need to be met for an offsetting claim to be deemed lawful, which are prescribed in the domestic law of the State in which it is incorporated and which may differ from the law applicable to the activities of the carbon standards that issued the verified carbon credit.

159. The circulation of verified carbon credits also raises questions about possible connecting factors and potential substantial links between project proponents, verified carbon credit holders or owners, and the place where the mitigation project is carried out (for example, in the case of nature-based projects) with implications on the applicable law. Questions on how to locate the primary connection between a

²⁴⁹ See para. 13 of “Proposal for Exploratory Work: Private International Law Issues related to Carbon Markets”, Preliminary Document No 7 REV REV of March 2024 available at www.hcch.net under “Governance”, then “Council on General Affairs and Policy” (hereinafter, “Prel. Doc. No 7 REV REV”).

²⁵⁰ See para. 21 of Prel. Doc. No 7 REV REV.

carbon credit and related transactions, in particular when considering the overlapping regulatory frameworks applicable to the offsetting claims, must be answered in the applicable law analysis before the legal treatment of the carbon credit can be identified.

160. Different jurisdictions have attached different legal treatments to carbon credits leading to a highly fragmented market and a lack of consistency around the legal characterization of the tradeable credits. This lack of consistency extends to treatment of registries, certification mechanisms, third party assignments and transfers of verified carbon credits.²⁵¹ Identifying the relevant objective connecting factors that could point to the applicable law for the various transactions occurring in the lifecycle of verified carbon credits would contribute to greater clarity and certainty in the voluntary carbon markets and reduce the risk of exploitation, legal and regulatory loopholes, and greenwashing.²⁵² As the voluntary carbon market scales up, numerous other questions relating to private international law will be identified with the increase in the use cases and the participants in these transactions.²⁵³ Further work in this area may provide answers to these private international law questions, including those relating to the role of party autonomy, applicable law and jurisdiction in the case of disputes arising from the creation and cross-border circulation of verified carbon credits.

²⁵¹ See para. 17 of Prel. Doc. No 7 REV REV.

²⁵² See para. 18 of Prel. Doc. No 7 REV REV.

²⁵³ The HCCH has started to monitor the private international law aspects of voluntary carbon markets as mandated by its governing body during its meeting in March 2024. See C&D Nos 18 and 19 of the 2024 CGAP meeting.

Annex I

Glossary

Baseline-and-credit mechanism	Type of <i>emissions trading scheme (ETS)</i> under which: (i) a GHG emission or GHG removal baseline is defined (according to a business-as-usual scenario, historical average, or performance standard or benchmark); and (ii) emission reductions or removals achieved that outperform that baseline are rewarded with <i>carbon credits</i> that can, in principle, be traded and used by another entity to offset its emissions generated elsewhere.
Cap-and-trade system	Type of <i>emissions trading scheme (ETS)</i> under which: (i) an upper limit on GHG emissions is fixed, and <i>emission allowances</i> are issued on the basis of this limit; (ii) entities that are covered by this system receive, or must purchase, tradable <i>emission allowances</i> ; and (iii) at the end of a compliance period, covered entities are required to surrender as many allowances as the amount of CO ₂ equivalent they have emitted.
Carbon credit	Generic term that refers to any of the different types of units that are traded on <i>carbon markets</i> .
Carbon market	Market on which <i>carbon credits</i> are traded.
Compliance carbon market	Type of <i>carbon market</i> created by a mechanism that: (i) is administered by a public authority; and (ii) involves the issuance of <i>carbon credits</i> or require, or permit, the use of <i>carbon credits</i> for compliance purposes. Also known as regulatory <i>carbon market</i> .
Corresponding adjustments	Correspondence of actions that must be carried out, by virtue of the Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement, by: (i) a party to the Paris Agreement that first transfers <i>ITMOs</i> (which must remove the mitigation outcomes achieved in its territory and transferred abroad as ITMOs from its books of account); and (ii) another party that uses the <i>ITMOs</i> towards its nationally determined contribution (which must add the mitigation outcomes that the ITMOs purchased represent to the mitigation outcomes achieved domestically).
Emission allowance	Type of <i>carbon credit</i> delivered by a regulator under a cap-and-trade system which entitles its holder to emit a certain amount of CO ₂ equivalent (usually one ton).
Emissions trading scheme (ETS)	Any type of schemes that involves the issuance of <i>carbon credits</i> or requires or permits the use of <i>carbon credits</i> . Cap-and-trade systems and baseline-and-credit systems are specific kinds of ETS.
Independent carbon standard setter	Private law entity that certifies that climate mitigation projects have generated reductions in GHG emissions or removals of GHG from the atmosphere. Upon specific conditions, an independent carbon standard setter offers to issue <i>verified carbon credits</i> when GHG reductions and removals, that have been verified according to its own standards, have occurred. Examples of independent carbon standard setters include the Verified Carbon Standard

	(VCS/Verra), the Gold Standard, the American Carbon Registry, and Climate Action Reserve.
Internationally transferred mitigation outcomes (ITMOs)	Status applied to emission reductions and removals that are generated within the territory of a party to the Paris Agreement, when that party authorizes the use of these emission reductions and removals towards the achievement of the nationally determined contribution of another party, or for other international mitigation purposes, as provided for in Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement.
Offsetting	Action of using <i>carbon credits</i> for calculating the net level of GHG emitted by an entity during a given period. An entity is usually said to have “offset” its emissions when it subtracts from the amount of GHG it actually emitted an amount of GHG represented by <i>carbon credits</i> . Offsetting may be viewed as an accounting operation for the elaboration of a net GHG emissions balance.
Retirement of carbon credits	Action of transferring <i>carbon credits</i> from an account, which permits their transfer to any other account, to a specific account on which these credits will remain permanently registered and which no longer permits their transfer to any other account. <i>Carbon credits</i> are usually retired to indicate that these credits have been used for calculating a net GHG emissions balance and that they can therefore no longer be sold or used for <i>offsetting</i> purposes another time. Retirement of <i>carbon credits</i> enables entities that make an offsetting claim (i.e., that make a public statement about the level of their net emissions) to provide evidence for substantiating this claim.
Verified carbon credit	Type of <i>carbon credit</i> representing the achievement of a reduction or removal of one ton of CO ₂ equivalent, which has been verified by a third party. Verified carbon credits may be issued by public authorities or <i>independent carbon standard setters</i> .
Voluntary carbon market	Market on which the verified carbon credits issued by a specific public authority or a specific <i>independent carbon standard setter</i> are traded.

Annex II

List of acronyms

A6.4ERs	Article 6, paragraph 4, emission reductions issued under the mechanism established by Article 6, paragraph 4, of the Paris Agreement
ART	Architecture for REDD+ Transactions
AAUs	Assigned Amount Units
CSA	Canadian Securities Administrators (Canada)
CCUS	Carbon Capture, Utilization and Storage
CDP	Carbon Disclosure Project
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CERs	Certified Emission Reduction credits
CCERs	Chinese Certified Emission Reductions (China)
CDM	Clean Development Mechanism
CAD Trust	Climate Action Data Trust
CFTC	Commodities Futures Trading Commission (United States)
CEA	Commodity Exchange Act (United States)
CCMs	Compliance Carbon Markets
CCPs	Core Carbon Principles
EU	European Union
ERs	Emissions Reductions
ERPA	Emission Reduction Payment Agreement
ERUs	Emission Reduction Units
ETS	Emissions Trading Schemes
FTC	Federal Trade Commission (United States)
FCPF	Forest Carbon Partnership Facility
GHG	Greenhouse Gas
HCCH	Hague Conference on Private International Law
ICVCM	Integrity Council for Voluntary Carbon Markets
IPCC	Intergovernmental Panel on Climate Change
ICAO	International Civil Aviation Organization
IETA	International Emissions Trading Association
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association
ITMOs	Internationally Transferred Mitigation Outcomes
MRV	Measurement, reporting, and verification
OECD	Organisation for Economic Co-operation and Development

OTC	Over the Counter
REDD+	Reducing Emissions from Deforestation and forest Degradation in developing countries, conservation of forest carbon stock, sustainable management of forests, and enhancement of forest carbon stocks
SBTi	Science Based Targets initiative
TSVCM	Taskforce on Scaling Voluntary Carbon Markets
DAPL Principles	UNIDROIT's Principles on Digital Assets and Private Law
UNFCCC	United Nations Framework Convention on Climate Change
VCCs	Verified Carbon Credits
VCS/Verra	Verified Carbon Standard (Verra)
VCUs	Verified Carbon Units (Verra)
VCMs	Voluntary Carbon Markets
VCMI	Voluntary Carbon Markets Integrity Initiative
WBG	World Bank Group
WRI	World Resources Institute
WWF	World Wide Fund for Nature

ANNEXE IV**LIST OF ACRONYMS**

Acronym	Definition
ADB	Asia Development Bank
APFF	Asia-Pacific Financial Forum
CAD Trust	Climate Action Data Trust
CCPs	Core Carbon Principles developed by the ICVCM
CDP	Carbon Disclosure Project
CEA	Commodity Exchange Act
CFTC	United States Commodities Futures Trading Commission
COP28	2023 United Nations Climate Change Conference
DAPL Principles	UNIDROIT Principles on Digital Assets and Private Law
EDF	Environmental Defense Fund
ELI	European Law Institute
ERPA	Emission Reductions Purchase Agreements
GHG	Greenhouse Gases
GSC	UNIDROIT Geneva Securities Convention
HCCH	Hague Conference on Private International Law
IADB	Inter-American Development Bank
ICC	International Chamber of Commerce
ICCP	Independent Carbon Crediting Program
ICVCM	Integrity Council for Voluntary Carbon Markets
IETA	International Emissions Trading Association
ILI	International Law Institute
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association
MRV	Measurement, Reporting, and Verification
OECD	Organisation for Economic Cooperation and Development
OTC	Over the Counter
PDD	Project Design Document
PIL	Private International Law
SBTi	Science Based Targets Initiative
SCALE	Scaling Climate Action by Lowering Emissions
UNCITRAL	United Nations Commission on International Trade Law

Acronym	Definition
UNCITRAL LGIL	2004 UNCITRAL Legislative Guide on Insolvency Law
UNFCCC	United Nations Framework Convention on Climate Change
UN SDGs	United Nations Sustainable Development Goals
UNIDROIT	International Institute for the Unification of Private Law
VCC	Verified Carbon Credit
VCM	Voluntary Carbon Market
VCMI	Voluntary Carbon Markets Integrity Initiative
VCS	Verified Carbon Standard
WBG	World Bank Group
WRI	World Resources Institute