



**puro •  
earth**

**Puro Standard  
General Rules**

**Version D.4.0**



# Puro Standard General Rules

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## 1 PURPOSE AND GOVERNANCE

### 1.1 Puro Standard, Registry and System

- 1.1.1. The aspiration is to create a functioning market for Long-Term, durable CO<sub>2</sub> Removal, which is reliable, efficient and location independent. The aim is to generate an incentive for CO<sub>2</sub> Removal and to provide companies with a means to realize their societal value in reversing climate change.
- 1.1.2. The Puro Standard and the Puro Registry are a program and a platform for the issuing, transferring and retiring of CO<sub>2</sub> Removal Certificates (CORCs). In the System, Production Facilities capable of removing CO<sub>2</sub> are audited and certified. CORCs are Issued for verified volume of Long-Term Net Carbon Dioxide Removal realized over a time in these Production Facilities. These CORCs are then transferable to other Account Holders. The value of the CORC is realized by Retirement, thereby removing it from circulation and making the Beneficiary of the Retirement the sole owner of the CO<sub>2</sub> Removal Attributes.

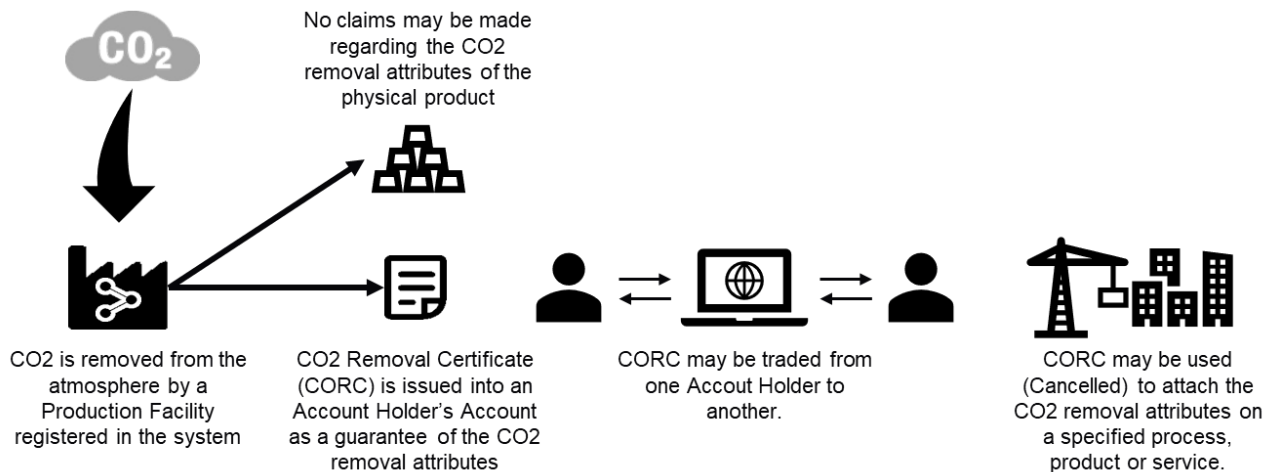


Figure 1. Lifecycle of carbon removal certificates

- 1.1.3. All processes aim to exclude the possibility of more than one CORC being Issued for the same volume of CO<sub>2</sub> Removal and that the CORC issued represents the sole proof of ownership of the associated CO<sub>2</sub> Removal Attributes.
- 1.1.4. All System participants need to be registered Account Holders of the System and need to have signed the Platform Agreement. The Issuing Body shall perform standard know your customer checks for each Account Holder.
- 1.1.5. The Registry stores information of the CORCs issued, transferred and retired.

### 1.2 PURPOSE OF THE GENERAL RULES

- 1.2.1 These rules define the roles and responsibilities of different actors in the System and facilitate assessment of contractual compliance. The aim of these rules is to protect the rights of Account Holders of the System and to guarantee equal treatment.

- 1.2.2 These rules and the Methodologies define the accepted CO<sub>2</sub> Removal Methods to provide procedures to verify the compliance of the CO<sub>2</sub> Removal activity for issuing of CORCs and conservative quantification of the CORCs.
- 1.2.3 These rules shall be interpreted and applied according to the Puro Standard requirements, which are normative documents approved and published by the Issuing Body to clarify and facilitate compliance with the rules by all System participants.

### 1.3 GOVERNANCE OF PURO STANDARD

- 1.3.1 These rules are governed by the Advisory Board. All changes to these rules are subject to the Advisory Board's approval.
- 1.3.2 The Advisory Board comprises at least three members and a maximum of seven all of whom are independent experts with a vantage point to the developments in the Voluntary Carbon Markets. The Advisory Board shall nominate new members as required and approve new members to the Advisory Board as defined in the Terms of Reference.
- 1.3.3 The Advisory Board may request revision to the Puro Standard and Methodologies as necessary. A review is requested when either an Advisory Board Member or Puro.earth management deems that significant changes have occurred in regulations, technologies, carbon accounting, or other provisions. Revision entails changes or discontinuation of a Methodology.
- 1.3.4 Should the review result in material revisions and/or new Methodologies, they shall be sent to public consultation before approval. Public consultation is announced on the Puro.earth website and to ecosystem members via a newsletter. Stakeholder comments are considered, and consultation results are published on the website.
- 1.3.5 Methodologies are normative documents specifying the rules and procedures that CO<sub>2</sub> Removal Suppliers need to follow and comply with to be issued CORCs. The methodology development process involves the creation of a scientific independent expert group that prepares the draft text to be sent for public consultation and then Advisory Board approval. The principles that guide methodology development are i) scientifically sound, conservative quantification of climate impact as well as ii) safety i.e., environmental and social safeguards for the "do no harm" principle.
- 1.3.6 External methodologies can be submitted for Advisory Board approval.

It is possible to submit methodologies developed by external parties for approval by the Advisory Board. Before proceeding with the submission, the methodology shall undergo public consultation. As part of this process, any public request for clarification and/or comments about the methodology shall be publicly addressed. Any resulting modifications to the methodology shall be included before submission to the Advisory Board for approval.

The methodology shall address the following components:

- Applicability or eligibility criteria.
- Determination of the accounting boundary.
- Determination of additionality and the baseline scenario.
- Quantification of GHG removals, emissions and leakage.
- Expected storage duration and risks of reversals.
- Environmental and Social Safeguards
- Monitoring practices.

When necessary, the Advisory Board can request assistance from external scientific experts in determining the viability of the methodology under assessment.

In the case the methodology is approved by the Advisory Body, the text of the methodology and any addenda resulting from this process shall be made available publicly on the Puro.earth website for future reference.

Approved external methodologies shall undergo the same review process as existing methodologies and may be subject to suspension and/or withdrawal where the Issuing Body determines, based on evidence, that GHG emission removals are being overestimated or that additionality might not be ensured.

## 1.4 OTHER GENERAL RULES

1.4.1. The Issuing Body is responsible for accreditation and oversight of Auditors according to the Validation and Verification Requirements. A list of Auditors accredited by the Issuing Body is available on the Puro.earth website.

1.4.2 The Issuing Body is responsible for the retention of all records for a minimum of 5 years in the past.

1.4.3. The Issuing Body shall have robust anti-money laundering processes in place and follow practices consistent with robust anti-bribery and anti-corruption guidance and regulation.

1.4.4. The Issuing Body has the right to perform ad-hoc audits concerning the Retirement and associated claims made by Account Holders to ensure that CORCs are used according to the principles set out in these rules.

1.4.5. The terms with a capitalized first letter which are used in these rules shall have the meanings respectively ascribed to them in the Definitions section.

## 1.5 DEFINITIONS

**Account** – account in the Registry in which CORCs held by Account Holders are stored.

**Account Holder** – Legal person who has signed a Platform Agreement and who thereby possesses an Account in the System and rights to execute specified Transactions (Retirement, Transfer).

**Advisory Board** – A governing body of these Puro Standard General Rules and the Methodologies.

**Attribute** – A characteristic of Net Carbon Dioxide removal, which is recorded in the CORC, such as where, when and by which Methodology the CO<sub>2</sub> Removal was achieved.

**Auditor** – An Independent 3<sup>rd</sup> party verifier appointed to perform Production Facility Audit or Output Audits

**Baseline** - The sequestration of greenhouse gases (natural or anthropogenic) that have occurred prior to the introduction of the activity accounted over a period. This historical data point acts as a counterfactual benchmark to evaluate the success of the activity to remove additional greenhouse gases and sequester them for the Long-Term.

**Beneficiary** - A legal person who is named as the benefitting party of the CORC Retirement. The Beneficiary is the sole owner of the Attributes represented by the CORCs, which are Retired for its benefit. Examples of beneficiaries might include, but are not limited to, companies, public entities, private or public organizations.

**CO<sub>2</sub> Removal** –Carbon dioxide removal (CDR)<sup>1</sup> is an anthropogenic activity involving removal of CO<sub>2</sub> from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes anthropogenic enhancement of biological, geochemical or chemical CO<sub>2</sub> sinks, but excludes natural CO<sub>2</sub> uptake not directly caused by human activities.

**CO<sub>2</sub> Removal Supplier** - An Account Holder registering a Production Facility capable of CO<sub>2</sub> Removal according to the applicable Methodology.

**CO<sub>2</sub> Removal Certificate (CORC)** - CO<sub>2</sub> Removal Certificate is an electronic document, which records the Attributes of CO<sub>2</sub> Removal issued to certified Production Facilities. Each CORC represents a Net Carbon Dioxide Removal volume of one (1) metric ton of Long-Term CO<sub>2</sub> Removal.

**CORC100+, CORC1000+** - certificate labels used to communicate storage durability in years for different Methodologies. The label is for information only and does not express the exact duration that the carbon is retained in the storage.

**Country of Origin** – Host country. The country of location of the Production Facility generating Output for which the CORC was issued.

**Crediting Period** - The period in which verified CO<sub>2</sub> removal Output attributable to a certified Production Facility can result in the issuance of CO<sub>2</sub> Removal certificates (CORCs).

**Environmental and Social Safeguards** – Mechanisms to identify, mitigate and prevent adverse environmental and social impacts resulting from implementation of CO<sub>2</sub> removal.

**GWP<sub>100</sub>** – Global Warming Potential (GWP) is a metric used to compare the potential warming effect of different greenhouse gases emitted to the atmosphere over a given time horizon. GWPs are commonly given for 20-year, 100-year and 500-year time horizons <sup>2</sup>. In life cycle assessment, GWPs can be used to calculate the climate impact of a system expressed in carbon dioxide equivalent (CO<sub>2</sub>-eq). These values have been updated in different iterations of the IPCC assessment report and care must be taken in defining which version is being used.

**Issuance** – Transaction performed by the Issuing Body to create CORCs based on the Output from registered Production Facilities.

**Issuance Date** - The date of Issuance recorded in the CORC.

**Issuing Body** - The Body responsible for Issuing CORCs, operating the System and overseeing the reliability of the System. The Issuing Body of the System is Puro.earth Oy.

**Long-Term** - Long-Term refers to the duration of carbon storage and is defined as a minimum length of 100 years.

**Methodology** – Methodology provides eligibility requirements and procedures to verify the compliance of the CO<sub>2</sub> Removal activity. A Methodology provides robust CO<sub>2</sub> Removal quantification rules specific to each carbon removal pathway. It specifies the activity boundaries, detailed calculation formulas and the

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<sup>1</sup> IPCC AR6 WGIII [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_TechnicalSummary.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_TechnicalSummary.pdf)

<sup>2</sup> IPCC Sixth Assessment Report <https://www.ipcc.ch/assessment-report/ar6/>

proof needed for the activity performance. A Methodology may be revised. A List of the valid Methodologies is available on the Puro.earth website.

**Monitoring Period** – the time between the “start date” and “end date” of the Output Report, Monitoring Period is also called vintage or vintage year.

**Net Carbon Dioxide Removal (CDR)** – 1 metric ton of CO<sub>2</sub> removed from the atmosphere net of any life-cycle process emissions and intended to be stored for the Long-Term. Net CDR means that the total removal-emission balance of the CO<sub>2</sub> Removal activity is net negative.

**Output** – Volume of CO<sub>2</sub> Removal within a certain Monitoring Period which is eligible to receive CORCs. CORCs are always Issued for Net Carbon Dioxide Removal in the production process, which means that the total volume of Output is determined by subtracting the CO<sub>2</sub> emissions volume generated directly or indirectly due to the production process or materials used according to the applicable Methodology from the CO<sub>2</sub> Removal volume.

**Output Report** – The CO<sub>2</sub> Removal Supplier reports the Output of a Production Facility periodically to the Issuing Body by submitting an Output Report. An Output Report can be generated manually or automatically.

**Output Audit** – Verification performed by a 3<sup>rd</sup> party to determine the volume of CORC Issuance corresponds to the Output of CO<sub>2</sub> Removal of that Monitoring Period from a Production Facility according to Methodology.

**Output Audit Report** – A report generated by the Output Auditor based on the Output Audit.

**Output Audit Statement** – A statement published by the Issuing Body about the outcome of a Output Audit.

**Platform Agreement** – A contract made between the System and the Account Holder.

**Production Facility** – A facility capable of CO<sub>2</sub> Removal according to one or several Methodologies.

**Production Facility Audit** – Audit performed by a 3<sup>rd</sup> party to validate the details and eligibility of a Production Facility according to the relevant Methodology.

**Production Facility Audit Report** – A report generated by the Auditor based on the Production Facility Audit.

**Production Facility Audit Statement** – A statement published by the Issuing Body about the outcome of a Production Facility Audit.

**Puro Standard** – Standard defining the rules for the System, the eligibility requirements for CO<sub>2</sub> Removal Suppliers and quantification rules for the number of CORCs to be issued.

**Registry** – The electronic database of the System in which CORCs are deposited and transacted.

**Registry Operator** – Body responsible for the technical operation of the Registry. The Registry Operator of the System is Puro.earth Oy.

**Removal** – Method for a) absorbing CO<sub>2</sub> from or b) preventing its entrance to the atmosphere and keeping it stored for the Long-Term. Removal Methods include capture, conversion of CO<sub>2</sub> to a stable, durable format, with Long-Term storage.

**Retirement** – Retirement of a CORC from circulation by realizing its value and making the Beneficiary of the Retirement the sole owner of the CORC and its Attributes.



**Retirement Request** – A request to be filled out by an Account Holder for initiating a Retirement.

**Start Date** - The calendar date on which the mitigation activity proponent committed to implementing the mitigation activity (e.g., the date when contracts for the purchase or installation of equipment required for the mitigation activity were executed or the date when the first expenditures are incurred). In the case where a mitigation activity does not involve expenditure, it refers to the date when the first physical actions were taken to implement the mitigation activity (e.g., the discontinuation of the cultivation of land so that natural revegetation or succession may occur). (ICVCM CCP [Definitions](#))

**System** –certification scheme operating under the Puro Standard and in the Puro Registry. It is managed by the Issuing Body and the Registry Operator.

**Trade Value** – The total monetary value of a trade of CORCs between the seller and the buyer. Trade Value = trade volume \* trade price per CORC.

**Transaction** – Processing of CORCs in the Registry database. Transactions include Issuance, Transfer, Retirement, and Withdrawal.

**Transfer** – The transfer of CORC from one Account Holder to another

**Transfer Request** – A request made by an Account Holder to the Issuing Body to Transfer CORCs to another Account Holder.

## 2 CERTIFICATION PROCESS DESCRIPTION

This section provides an overview of the certification process under Puro Standard.

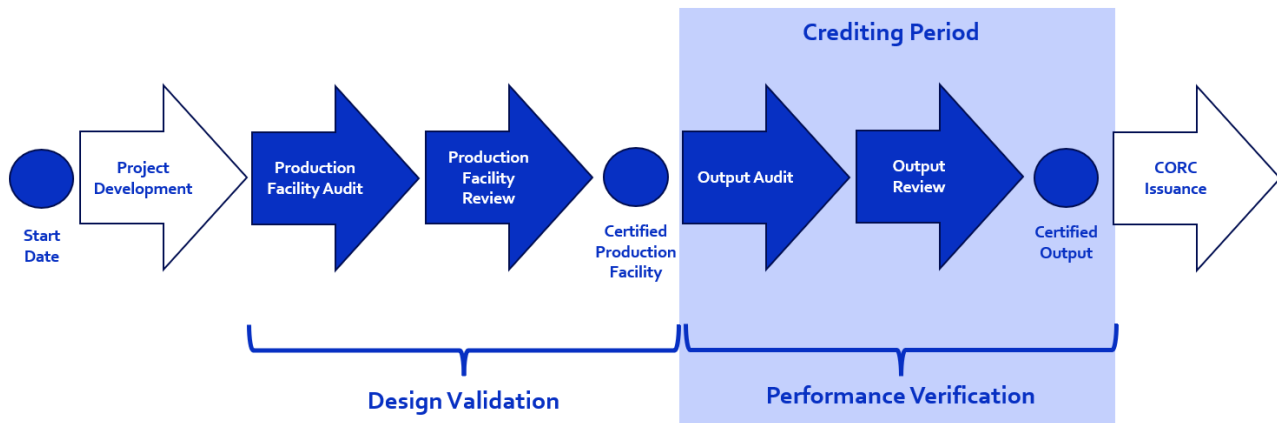


Figure 2: Overview of certification process

### 2.1 PROJECT DEVELOPMENT

A CO<sub>2</sub> Removal activity is developed with the purpose to sequester and store carbon durably. Certification is considered to generate revenues to operate the CO<sub>2</sub> Removal activity.

A Start Date of a CO<sub>2</sub> Removal activity is the calendar date on which the mitigation activity proponent committed to implementing the mitigation activity (e.g., the date when contracts for the purchase or installation of equipment required for the mitigation activity were executed or the date when the first expenditures are incurred). In the case where a mitigation activity does not involve expenditure, it refers to the date when the first physical actions were taken to implement the mitigation activity (e.g., the discontinuation of the cultivation of land so that natural revegetation or succession may occur)

### 2.2 DESIGN VALIDATION

Design validation involves Production Facility Audit by an independent 3<sup>rd</sup> party auditor, followed by Production Facility Review by the Issuing Body

All CO<sub>2</sub> Removal Suppliers shall submit their data for design validation.

The design validation shall be completed within three (3) years of the Start Date.

#### 2.2.1 Production Facility Audit

Production Facility Audit may start when the CO<sub>2</sub> Removal Supplier has:

- a) Signed the Platform Agreement.
- b) Submitted the Production Facility registration.
- c) Submitted complete Production Facility Audit package as defined for the applicable Methodology.

The minimum Production Facility Audit package includes the following documentation:

- i. Life-Cycle Assessment (LCA) Report and CORC calculation.

- ii. Demonstrated conformity to other requirements in the applicable Methodology.
- iii. Monitoring and Reporting Plan.
- iv. Additionality Assessment Report.
- v. Stakeholder Consultation.
- vi. Environmental and Social safeguards.
- vii. Positive SDG impacts description.

The CO<sub>2</sub> Removal Supplier shall attest to the accuracy of the information provided by its signature. The signatory shall be an individual with legal signing authority within the CO<sub>2</sub> Removal Supplier.

The Production Facility Audit is conducted by an independent 3<sup>rd</sup> party auditor. The Issuing Body will appoint one auditor from the list of accredited auditors.

The Auditor validates the Production Facility Audit package and evidence to demonstrate conformity to all Puro Standard and Methodology requirements. The Auditor submits his evaluation in Production Facility Audit Report and Statement.

### 2.2.2 Production Facility Review

Production Facility Review is conducted by the Issuing Body. It involves a review of the Production Facility Audit Report and the documentation submitted by the CO<sub>2</sub> Removal Supplier for the Production Facility Audit.

The Production Facility Review may result in

- a) A successful review with status certified Production Facility.
- b) An unsuccessful review with one or more non-conformity issues identified.

With a successful Production Facility Review outcome, the CO<sub>2</sub> Removal Supplier can move to prepare for Output Audit.

## 2.3 PERFORMANCE VERIFICATION

Performance verification involves Output Audit by an independent 3<sup>rd</sup> party auditor, followed by Output Review by the Issuing Body.

### 2.3.1 Output Audit

Output Audit may start when the CO<sub>2</sub> Removal Supplier has submitted an Output Report for a Production Facility for a given Monitoring Period.

Output Audit is conducted by an independent 3<sup>rd</sup> party auditor. The Issuing Body will appoint one Auditor from the list of accredited auditors. The same auditor may conduct the Production Facility Audit and Output Audit.

Output Audit includes a desk study and a site visit by the auditor to verify the performance of the Production Facility for the given Monitoring Period. The site visit may be conducted as a remote site visit. Verification is performed to determine that the reported volume of CO<sub>2</sub> Removal has taken place, and the Production Facility conforms with the requirements of the Puro Standard and applicable Methodology.

Output Auditor verifies that the reported Output corresponds to the actual Output during the Monitoring Period according to the Methodology. Output Auditor submits his evaluation on the performance of the CO<sub>2</sub> Removal activity in Output Audit Report and Statement.

### 2.3.2 Output Review

Output Review is conducted by the Issuing Body. It involves reviewing the Output Audit Report and the documentation submitted by the CO<sub>2</sub> Removal Supplier for the Output Audit.

The Output Review of a Production Facility may result in

- a) A successful Output Review.
- b) An unsuccessful Output Review.

With a successful Output Review outcome

- a) CO<sub>2</sub> Removal Supplier can move to CORC Issuance.
- b) Output Audit Report is made public in the Puro Registry.
- c) Production Facility documentation is made public in the Puro Registry; this includes:
  - I. Location.
  - II. CO<sub>2</sub> Removal Supplier.
  - III. Methodology.
  - IV. Baseline and Additionality Assessment Report.
  - V. Stakeholder Consultation Report.
  - VI. Environmental and Social safeguards assessment.
  - VII. Positive SDG impacts description.
  - VIII. Verified Output quantification for the Monitoring Period

### 2.3.3 Combining Production Facility Audit and Output Audit

The Issuing Body may choose to combine design validation and performance verification. The CO<sub>2</sub> Removal Supplier will in their first submission include all documents required for Production Facility Audit and Output Audit. The Auditor may consider the validation and verification concurrently and submit the Auditor's evaluation on the conformity and performance in a combined Production Facility and Output Audit Report.

The Issuing Body will conduct a combined Production Facility and Output Review covering both processes as described above.

## 2.4 TIMESCALES AND FREQUENCY

The first date of the first Monitoring Period marks the beginning of a five-year Crediting Period. The Crediting Period lasts 5 years unless otherwise stated in the applicable Methodology. The Crediting Period can be renewed by successfully undergoing a new Production Facility Audit. The Crediting Period shall not overlap with another Crediting Period.

An Output Report shall be submitted to each Production Facility once every 12 months throughout the Crediting Period. An Output Report may consider Production Facility performance for up to 18 months.

A delay in submitting the Output Report at least once in 12 months shall result in the Production Facility being suspended. Delay in submitting the Output Report beyond 18 months shall result in the Production Facility being deregistered.

Specific time schedules may apply in periods or areas where a pandemic, natural disaster or other conflicts restrict access to the Production Facility site or data.

The Issuing Body has the right to appoint an Auditor to perform an ad-hoc Production Facility Audit and/or Output Audit. The CO<sub>2</sub> Removal Supplier is in such a case responsible for providing the Auditor with documentation and access rights necessary to perform the Audit.

### 3 REGISTRY TRANSACTIONS

CORCs (CO<sub>2</sub> Removal Certificates) are uniquely identified in the Registry and each CORC's chain of custody is transparently tracked from when the CORC is issued through to its Transfer or Retirement. All Transactions are subject to Service Fees as defined in the Platform Agreement.

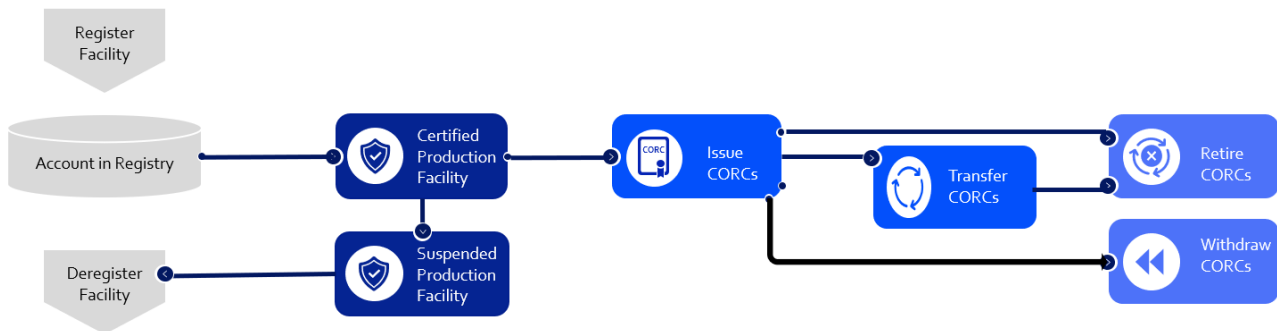


Figure 3: Overview of registry transactions

#### 3.1 PRODUCTION FACILITY REGISTRATION AND DEREGISTRATION

3.1.1 Production Facility registration is initiated by the CO<sub>2</sub> Removal Supplier by submitting the Production Facility details. The CO<sub>2</sub> Removal Supplier must also include information proving its right to represent the Production Facility and to be the entity that receives the CORCs. The Production Facility details include:

- CO<sub>2</sub> Removal Supplier registering the Production Facility.
- Registry Account associated with the Production Facility.
- Name.
- Location.
- Host country and sector of the Production Facility.
- Methodology.
- Specific information as may be specified in the applicable Methodology.
- proof of ownership of the Production Facility, and legal rights to the CORCs

3.1.2. A CO<sub>2</sub> Removal Supplier is responsible for informing the Issuing Body without any delay on changes in the Production Facility, which might impact the Attributes of issued CORCs or compromise Environmental and Social Safeguards. The Issuing Body may suspend the Production Facility. due to the information changes and a new Production Facility Audit may need to be performed.

3.1.3 The Issuing Body has the right at its discretion to suspend the Transactions related to a Production Facility and the associated CORCs. Delay or failure to provide reports may lead to suspension until the failure has been remedied.

3.1.4. Where a CO<sub>2</sub> Removal Supplier seeks to deregister a Production Facility from the System it may do so by notifying the Issuing Body. The deregistration is activated within a month of the receipt of this information by the Issuing Body. The CO<sub>2</sub> Removal Supplier shall receive a document of deregistration from the Puro Registry stating from which date the CO<sub>2</sub> Removal activity is no longer certified under the Puro Standard. In such a case, the CO<sub>2</sub> Removal Supplier is responsible for any fees still due.

## 3.2 CORC ISSUANCE

3.2.1. CORCs are only issued to a certified Production Facility associated to a Registry Account held by an approved Account Holder.

3.2.2 CORCs are always issued based on an Output Report for a specified Monitoring Period for a certified Production Facility

3.2.3. CORCs are issued for certified Production Facilities that have been verified to meet the requirements set in Chapter 7 and in the applicable Methodology for

- Durable storages, which prevent CO<sub>2</sub> from being released to the atmosphere for Long-Term,
- Additionality,
- Environmental and Social Safeguards, and
- Sustainable Development Goals (SDGs).

3.2.4. CORCs are issued for Net Carbon Dioxide Removal (CDR) Output achieved by the certified Production Facility. The Net CDR volume is determined by subtracting any greenhouse gas emissions generated directly or indirectly by the Production Facility from the gross CO<sub>2</sub> Removal volume.

3.2.5. A CORC represents a volume of 1 (one) metric ton of Net Carbon Dioxide Removal stored Long-Term. Each CORC shall specify the following Attributes:

- Unique identifier.
- Issuance Date.
- Removal Methodology.
- CORC<sub>100+</sub> or CORC<sub>1000+</sub> label to communicate the storage durability of the Methodology.
- Facility Identity, Name and Location of the Production Facility.
- Host country and sector of the Production Facility.
- Monitoring Period start and end dates (vintage).
- Specific information as may be specified in the corresponding Methodology.
- Other Attributes as required.

3.2.6. To initiate the Issuance process, a CO<sub>2</sub> Removal Supplier with a certified Production Facility sends an Output Report to the Issuing Body based on the agreed reporting cadence (i.e., annually, quarterly, or monthly).

3.2.7 The Issuing Body decides on the issuance method from the two options below:

**Method 1 Annual Issuance** – This method is applicable for all certified Production Facilities. The Production Facility has successfully completed performance verification for the Monitoring Period as specified in Chapter 2.3. The Issuing Body issues the amount of CORCs corresponding to the verified CO<sub>2</sub> Removal volume in the Output Report to the CO<sub>2</sub> Removal Supplier's Registry Account associated with the Production Facility.

**Method 2 Ongoing Issuance** – This method is applicable for certified Production Facilities that have demonstrated regular industrial operation and monitoring. Method 2 may be applied to a certified Production Facility that has successfully completed performance verification for the previous Monitoring Period as specified in Chapter 2.3. The procedures for Ongoing Issuance are described in Appendix B of this document.

3.2.8. CORCs are issued as integer digits. Any leftover, representing a volume less than 1 metric ton, is recorded, and added into the Issuance volume of the following Issuance.

### 3.3 CORC RETIREMENT

3.3.1. Retirement is used to prove that the amount of CO<sub>2</sub> corresponding to the volume of retired CORCs has been removed and that the Retirement entitles for exclusive ownership of the quantity and other Attributes of the CO<sub>2</sub> Removal.

3.3.2. Account Holders may retire CORCs for their own or another Beneficiary's benefit.

3.3.3. Account Holder, a party authorized by the Account Holder, or a party represented by the Account Holder initiates the Retirement by filling in a Retirement Request and submitting it to the Issuing Body. The Retirement Request shall specify the specific set(s) of CORCs to be Retired along with the following Retirement information:

- Beneficiary name
- Beneficiary Country.
- Use purpose
- Use period.

3.3.4. The Issuing Body may approve or reject the Retirement Request.

- In case the Retirement Request is approved, the CORCs are Retired by the Issuing Body and removed from circulation. The transaction information is made available publicly through the Puro Registry and communicated to other relevant authorities (e.g., Host Country, UNFCCC, ICAO, etc.)
- In case the Retirement Request is rejected, the Issuing Body informs the Account Holder of the reasons thereof.

### 3.4 CORC WITHDRAWAL

3.4.1. To maintaining the accuracy and veracity of the System, the Issuing Body has the right to withdraw CORCs from an Account Holder's Account in case:

- An error has occurred in the Issuing, transferring or other processing of the CORC.
- Due to a Material Breach of the Puro Standard.
- To balance the accounts in case of CO<sub>2</sub> Removal reversals.

3.4.2. The Issuing Body is entitled to alter the details of CORCs to rectify any errors that have occurred in the Issuance or Transfer process provided that the Account Holder who currently possesses the corresponding CORCs in its Account has agreed to the alteration and that the alteration doesn't result in any unjust enrichment.

### 3.5 PREVENTING DOUBLE COUNTING

The aim of using the Puro Registry to track CO<sub>2</sub> Removal activity and CORCs (CO<sub>2</sub> Removal Certificates) is to prevent the possibility of double counting. All processes aim to exclude the possibility of more than one CORC being issued for the same volume of CO<sub>2</sub> Removal and that the CORC issued represents the sole proof of ownership of the CORC and associated CORC Attributes. The procedures in place prevent:



- Double registration within the Puro Registry.
- Double registration outside of the Puro Registry for CO<sub>2</sub> Removal activities.
- Double issuance of CORCs where another program has issued credits for the same project activity during the same period.
- Double retirement and use by two beneficiaries and being counted towards achieving two mitigation targets.
- Double use within the supply chain.
- Double counting in the context of Article 6 of the Paris Agreement.

#### 3.5.1 Preventing double registration within the Puro Registry.

The Issuing Body shall control that the same Account Holder shall not register the same CO<sub>2</sub> Removal Activity twice and that two Account Holders shall not register the same CO<sub>2</sub> Removal activity in the same location. The Puro Registry records proof of ownership of the Production Facility to be certified, and legal rights to the CORCs resulting from the activity of all parties in the supply chain. All Account Holders need to be registered, need to have signed the Platform Agreement and are obliged to follow the procedures as defined in the Platform Agreement.

#### 3.5.2 Preventing double registration outside of the Puro Registry.

The Issuing Body shall control that the same Account Holder has not registered the same CO<sub>2</sub> Removal activity for the same period with another carbon-crediting program. The same CO<sub>2</sub> Removal activity can register with another carbon crediting program for a different period.

The Puro Registry requires disclosure of prior registrations of the same CO<sub>2</sub> Removal activity with other - crediting programs. The CO<sub>2</sub> Removal Supplier registering a CO<sub>2</sub> Removal activity shall clearly state if the same activity has been registered with another carbon-crediting program for another period. The CO<sub>2</sub> Removal Supplier shall also state if it has applied to be registered with another carbon-crediting program but has been rejected and the reason for rejection.

In the case of a CO<sub>2</sub> Removal activity transferring from another crediting program to the Puro Registry, the period shall not overlap. The CO<sub>2</sub> Removal Supplier shall provide the document of deregistration from the other carbon-crediting program stating from which date the CO<sub>2</sub> Removal activity is no longer credited in that other program. The carbon removal Output produced after the date of registration in the Puro Registry shall be credited under the Puro Standard.

When the CO<sub>2</sub> Removal activity is deregistered from the Puro Registry, and transferring to another crediting program, the CO<sub>2</sub> Removal Supplier shall receive a document of deregistration from the Puro Registry stating from which date the CO<sub>2</sub> Removal activity is no longer certified under the Puro Standard.

The Puro Registry does not allow the transfer of CORCs outside of the Puro Registry.

The Puro Registry does allow simultaneous registration with other crediting programs that are crediting activities other than CO<sub>2</sub> Removals or reductions, such as biodiversity credits, or renewable energy credits. In such cases, the Puro Registry requires disclosure of simultaneous registrations.

#### 3.5.3 Preventing double issuance.

Double issuance of CORCs where another program has issued credits for the same project activity and the same period is prevented by as described above in section b).

#### 3.5.4 Preventing double retirement and use.

The CORCs are issued in the Puro Registry, where the full lifecycle is tracked from issuance to retirement, ensuring avoidance of double retirement and use. Each CORC is uniquely identified with a serial number, and the retirements are published with beneficiary and purpose data in the Puro Registry. Retirements are immutable and the CORC cannot be retired more than once in the Puro Registry.

### 3.5.5 Preventing double use within the supply chain.

The CO<sub>2</sub> Removal Supplier is responsible for ensuring that double use or double reporting of the CO<sub>2</sub> Removal within the supply chain is prevented by contracts, statements, or other measures. Where a physical product or material is stored that removes CO<sub>2</sub> from or prevents its re-emission to the atmosphere, it shall not be associated with any claims of CO<sub>2</sub> Removal nor other Attributes represented by the CORC.

### 3.5.6 Preventing double counting in the context of Paris Agreement Article 6.

Article 6 of the Paris Agreement enables international cooperation between Parties and signatory countries, to the Paris Agreement so the world can achieve the goal of Article 4 of the Paris Agreement - net-zero emissions by the second half of this century. CORCs used in the context of the Article 6 mechanism and other international frameworks such as the Carbon Offsetting Scheme for International Aviation (CORSIA) shall meet requirements relating to double counting and corresponding adjustments.

Further details on the requirements and process to prevent double counting in the context of the Paris Agreement Article 6 are described in Appendix A of this document.

## 4 CERTIFICATE TRADING AND TRANSFER OF OWNERSHIP

4.1. The Account Holder may trade CORCs in any venue provided that the Account Holder reports all such sales immediately to the Registry Operator and pays the associated service fee for the Transfer of ownership.

4.2 The trading of CORCS shall be circumscribed to the authorized uses under Article 6 of the Paris Agreement for the purpose of NDC, international mitigation (CORSIA), and/or other purposes. For more information, please refer to Appendix A in this document.

4.3 To initiate the Transfer of ownership, an Account Holder, a party authorized by the Account Holder, or a party represented by the Account Holder submits a trade report. A trade report includes the following information:

- Account number to transfer the CORCs from.
- Account number to transfer the CORCs to.
- Number of CORCs or Certificate Unique Identifiers of the CORCs to be transferred.
- Trade Value
- Other information may be specified by the parties.

4.4 When the Registry Operator receives a trade report from the selling Account Holder, the Registry Operator executes the Transfer of CORCs between the accounts as defined in the trade report.

## 5 REPORTS FROM THE REGISTRY

5.1. Reports published by the Issuing Body:

- Audit Statements, Audit Reports, registration and Project Descriptions are publicly available from the Registry. The CO<sub>2</sub> Removal Supplier may request to redact commercially confidential information subject to Issuing Body approval.
- Searchable database of issuances and retirements with details about the Beneficiary, the Monitoring Period of the CORC (also called vintage) and the Production Facility of the CO<sub>2</sub> Removal Supplier. The data is updated daily. The Beneficiary can request a reasonable time delay, no longer than 12 months, in publishing Beneficiary details.

5.2. Reports available at request from the Registry Operator:

- Account Statement of the Account(s) owned by the requesting Account Holder
- Retirement Statement, which includes the details of the Retirement Transaction as well as the CORCs included.

## 6 OTHER PROVISIONS

6.1. The Account Holder is subject to these rules once the Platform Agreement has been signed and until the Platform Agreement is terminated.

6.2 Unless otherwise instructed, CORCs are always selected for Transfer starting from the CORC with the earliest Issuance Date.

## 7 REQUIREMENTS FOR CO<sub>2</sub> REMOVAL SUPPLIERS

### 7.1 QUANTIFICATION OF CARBON REMOVAL

The CO<sub>2</sub> Removal Supplier shall determine the Net CO<sub>2</sub> Removal volume as specified in the applicable Methodology. In general, the Net CO<sub>2</sub> Removal volume is determined by subtracting from the gross CO<sub>2</sub> Removal volume any greenhouse gas emissions generated directly or indirectly by the Production Facility following the rules specified in the applicable Methodology and in the Life Cycle Assessment Guidance. The CO<sub>2</sub> Removal Supplier shall calculate the climate impact using GWP<sub>100</sub> factors according to the latest IPCC Assessment Report<sup>3</sup>, unless otherwise specified in the applicable Methodology.

### 7.2 LEAKAGE

The CO<sub>2</sub> Removal Supplier must evaluate leakage following the requirements defined in the applicable Methodology.

Leakage is defined as an indirect effect associated to a removal activity and dependent on the selected baseline, that may lead to an increase or decrease in greenhouse gas emissions or removals, outside of the system boundaries of the activity, if not avoided or mitigated.

Methodologies in the Puro Standard shall first identify and present the potential sources of leakage that are relevant to consider for the removal pathways included in the scope of the Methodology.

Methodologies in the Puro Standard shall then have requirements designed to avoid, minimize, or mitigate the effects of leakage.

Methodologies in the Puro Standard shall finally have requirements to quantify any remaining leakage that was not possible to avoid, minimize or mitigate. The quantification of the remaining leakage shall be robust and conservative.

Methodologies in the Puro Standard shall consider different categories of leakage, namely i) ecological leakage, ii) market leakage, iii) activity-shifting leakage, and iv) upstream/downstream emissions, as defined in the Core Carbon Principles<sup>4</sup>. In most situations, leakage related to upstream/downstream emissions shall not be considered leakage but instead be included as part of the direct emissions of the activity via the use of adequate life-cycle emission factors that include upstream and downstream emissions.

Methodologies in the Puro Standard shall distinguish between positive and negative leakage effects, which refer respectively to a situation where leakage leads to a reduction in climate change impact (positive leakage) or an increase in climate change impact (negative leakage). Only negative leakage shall be included in the quantification of CORCs, i.e. leading to a reduction in the amount of CORCs that can be claimed. Positive leakage effects are dismissed from the quantification of CORCs but may be presented as co-benefits.

Methodologies in the Puro Standard shall consider net leakage effects which may occur in the situation where, for a single leakage effect (e.g. electricity-related leakage), the leakage effect is associated with both an increase and decrease in emissions. In that case, and if specified in the applicable methodology, the net effect shall be considered and result in either positive or negative leakage.

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<sup>3</sup> IPCC Sixth Assessment Report <https://www.ipcc.ch/assessment-report/ar6/>

<sup>4</sup> CCP Definitions <https://icvcm.org/wp-content/uploads/2023/07/CCP-Section-5-R2-FINAL-26Jul23.pdf>

### 7.3 UNCERTAINTY AND CONSERVATIVENESS

7.3.1 The CO<sub>2</sub> Removal Supplier must use conservative assumptions, values, and procedures to ensure that the CO<sub>2</sub> Removal issued as CORCs is not overstated.

7.3.2 The CO<sub>2</sub> Removal Supplier shall estimate the uncertainty in the reported CO<sub>2</sub> Removal Output volume.

7.3.3 The CO<sub>2</sub> Removal Supplier shall prepare a separate uncertainty estimation detailing the effect of all material sources of uncertainty on the Output volume. For these rules, a material source of uncertainty is defined as any factor, whose associated uncertainty affects (or can be assumed to affect) the Output volume by at least 1%. However, the total combined effect of all non-material sources of uncertainty may not exceed 10% of the Output volume.

The uncertainty estimation shall consider the effect of all material sources of uncertainty arising from:

- Assumptions (e.g., baseline scenario).
- Estimation equations or models.
- Parameters (e.g., representativeness of default values).
- Measurements (e.g., the accuracy of measurement methods).
- Any additional factors mentioned in the applicable Methodology.
- Any other factors which may have a material effect on the CO<sub>2</sub> Removal quantification.

The estimation must include the overall uncertainty in the Output, which shall be assessed as the combined uncertainty from individual sources. Furthermore, the estimation shall separately detail the uncertainty associated with every material source of uncertainty.

The uncertainty estimation shall be quantitative, and the overall uncertainty estimation shall be given in percentage of the Output volume.

The uncertainty estimation must be scientifically justifiable, and detail the methods utilized to assess and mitigate uncertainty. Specifically, the estimation must include a description of the methods used to calculate the individual uncertainty values, as well as references to any literature values used.

Where the direct quantification of error by the CO<sub>2</sub> Removal Supplier (via e.g., statistical methods) is not feasible (such as might be the case for equations or parameters sourced from scientific literature or local regulations), the CO<sub>2</sub> Removal Supplier may utilize error estimations from external sources, such as peer-reviewed scientific literature or local regulations and guidelines. The utilization of e.g., Monte Carlo simulations or conservative estimation input parameters is also possible.

7.3.4 The CO<sub>2</sub> Removal Supplier shall conservatively consider the estimated uncertainty in the quantified CO<sub>2</sub> Removal Output volume.

### 7.4 ENVIRONMENTAL AND SOCIAL SAFEGUARDS

7.4.1 A CO<sub>2</sub> Removal Supplier shall be able to demonstrate Environmental and Social Safeguards and that the Production Facility activities<sup>5</sup> do no net harm to the surrounding natural environment or local communities and adhere to the following aspects as described by the Integrity Council for the Voluntary Carbon Market (IC-VCM):

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<sup>5</sup> It shall be noted that the responsibility of the Production Facility operator extends to the imminent environmental and human health related impacts of the use of manufactured product as far as concerned in the Environmental Impact Assessment or environmental permit.

- I. Abide by national and local laws, objectives, programs and regulations and, where relevant, international conventions and agreements.
- II. Respect for human rights and avoiding discrimination; abiding by the International Bill of Human Rights and universal instruments ratified by the host country.
- III. Recognize, respect and promote the protection of the rights of IPs & LCs (indigenous peoples and local communities) in line with applicable international human rights law, and the United Nations Declaration on the Rights of Indigenous Peoples and International Labor Organization (ILO) Convention 169 on Indigenous and Tribal Peoples.
- IV. Labor rights and working conditions, including prohibiting forced labor, child labor or trafficked persons whether in own operations or employed by third parties, fair treatment of employees, and safe and healthy working conditions.
- V. Providing for equal opportunities in the context of gender; providing equal pay for equal work and protecting against and appropriately responding to violence against women and girls.
- VI. Pollution prevention, including pollutant emissions to air, water and soil as well as noise and vibration, and generation of waste and release of hazardous materials, chemical pesticides and fertilizers.
- VII. Avoiding or minimizing adverse impacts to community health and safety.
- VIII. Biodiversity conservation and sustainable management of natural resources, including avoiding or minimizing negative impacts on terrestrial and marine biodiversity and ecosystems; protecting the habitats of rare, threatened, and endangered species, including areas needed for habitat connectivity; minimizing soil degradation and soil erosion and minimizing water consumption and stress. The CO<sub>2</sub> Removal Supplier shall not convert natural forests or high conservation value habitats.
- IX. Preserves and protects cultural heritage and cultural and religious sites.
- X. Avoiding forced physical and or economic displacement. If avoidance is not feasible CO<sub>2</sub> Removal Suppliers shall minimize physical and/or economic displacement. This applies also to any access restrictions to lands, territories, or resources, and any customary rights of local right holders.

7.4.2 When the activity directly or indirectly impacts indigenous peoples or their livelihoods, ancestral knowledge or cultural heritage, the CO<sub>2</sub> Removal supplier shall develop the Production Facility with free, prior, informed consent (FPIC). FPIC is a good practice for local communities.

7.4.3 The CO<sub>2</sub> Removal Supplier shall provide documentation, that shall robustly address all material environmental and social impacts, including aspects listed in 7.3.1, that could potentially materialize both within and outside the activity boundary and include information on mitigation measures commensurate with the identified risks to minimize and address any negative environmental and/or social impacts. This shall be done through one or several of the following:

- Environmental Impact Assessment (EIA).
- Environmental permit.
- Other documentation, including methodology-specific documentation, approved by the Issuing Body on the analysis and management of the environmental and social impacts.

7.4.4 The CO<sub>2</sub> Removal Supplier may use screening tools and guidelines approved by the Issuing Body to demonstrate that the level of risk for negative impacts in the activity is low.

7.4.5 The CO<sub>2</sub> Removal Supplier shall conduct a Stakeholder Consultation according to regulation by local authorities and following the Puro.earth Stakeholder Engagement Requirements. The CO<sub>2</sub> Removal Supplier shall have a policy in place to allow stakeholders to submit continuous feedback throughout the operation of the Production Facility.

## 7.5 ADDITIONALITY

7.5.1 A CO<sub>2</sub> Removal Supplier must demonstrate that the project is not required by existing laws, regulations, or other binding obligations.

7.5.2 A CO<sub>2</sub> Removal Supplier shall demonstrate carbon additionality to the baseline, meaning that it is resulting in higher volumes of carbon removals than the likely baseline alternatives. The baseline shall be project-specific, conservative and periodically updated.

7.5.3 A CO<sub>2</sub> Removal Supplier shall demonstrate financial additionality, meaning that the project must convincingly show that the CO<sub>2</sub> removals are a result of carbon finance.

7.5.4 To demonstrate additionality, a CO<sub>2</sub> removal Supplier shall follow Puro.earth Additionality Assessment Requirements.

7.5.5 The Puro Standard may develop standardized approaches to facilitate the determination of a baseline. The standardized approach must follow the process of developing Standardized approaches as defined in the Core Carbon Principles<sup>6</sup> Production Facilities meeting the criteria of the standardized approach is allowed to use it to demonstrate additionality.

## 7.6 POSITIVE SDG IMPACTS

7.6.1 A CO<sub>2</sub> Removal Supplier shall provide qualitative descriptions of expected positive impacts on Sustainable Development Goals (SDG) before the Production Facility Audit.

7.6.2 A CO<sub>2</sub> Removal Supplier shall provide qualitative and quantitative evidence of positive impacts on SDGs for the Output Audit based on SDG Assessment Requirements provided by the Issuing Body.

7.6.3 A CO<sub>2</sub> Removal Supplier shall also provide information on how the mitigation activity is consistent with the SDG objectives of the host country, where the SDG objectives are relevant, and such is feasible.

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<sup>6</sup> CCP Criterion 8.8 <https://icvcm.org/wp-content/uploads/2023/07/CCP-Section-4-R2-FINAL-26Jul23.pdf>

## 7.7 PERMANENCE AND RISK OF REVERSAL

The categories of Carbon Dioxide Removal (CDR) that are certified under the Puro Standard sequester carbon to highly durable storages. Once carbon is removed to a certified storage and quantified according to the Methodology, the risk of re-emission is very low.<sup>7</sup>

However, the CO<sub>2</sub> Removal Supplier shall assess the risk of reversals associated with the CO<sub>2</sub> Removal activity and undertake appropriate measures to avoid and manage any material risks of reversals.

For the purposes of these rules, the following definitions are used:

**Reversal** – Any event which cancels, entirely or in part, the effects of Long-Term CO<sub>2</sub> Removal. In other words, any event resulting in a situation where at least a part of the removed, quantified and certified carbon is either released back into the atmosphere (re-emission) or can no longer be considered safely and durably stored for a Long-Term (unmitigated material risks of reversal).

**Inherent Reversal** – expected Reversal associated with Material Risks of particularly high likelihood, resulting from the inherent nature of a particular CO<sub>2</sub> Removal technology. For example, decay of biochar in soil over time, or precipitation of mineral carbonates in rivers in the context of enhanced rock weathering. Inherent Reversal is separately quantified and accounted for in each Methodology.

**Unexpected Reversal** – any Reversal besides Inherent Reversal resulting from the realization of a Material Risk. For example, the destruction of stored biomass through fire.

**Material Risk** – Any risk of Reversal, whose Risk Effect on the stored Output volume is 1% or higher. However, the total combined non-material Risk Effects are collectively considered as Material Risk if the sum exceeds 10% of the Output volume.

**Risk Impact** – The potential consequence or damage that a risk can cause (particularly to the CO<sub>2</sub> Removal) if the risk is realized. The Risk Impact is assessed as a percentage of the total cumulative Output volume over the Long-Term storage period.

**Risk Likelihood** – The probability or frequency that a risk will be realized, given the current conditions and assumptions. The Risk Likelihood is assessed as a percentage (0–100%) depicting how likely it is for a particular risk to be realized during the Long-Term storage period.

**Risk Effect** – The realistic expected consequence or damage resulting from a particular risk based on an overall assessment of its Risk Impact and Risk Likelihood. For a particular risk, the Risk Effect is calculated by multiplying the Risk Impact by the Risk Likelihood (Risk Effect = Risk Impact \* Risk Likelihood). The Risk Effect is assessed as a percentage of the total cumulative Output volume over the Long-Term storage period.

**Overall Risk Effect** – The sum of Risk Effects for all Material Risks of Unexpected Reversal. The Overall Risk Effect is assessed as a percentage of the total cumulative Output volume over the Long-Term storage period.

7.7.1 The CO<sub>2</sub> Removal Supplier shall prepare a separate reversal risk estimation document detailing the impact, likelihood, and effect of all risks of Unexpected Reversal.

The risk estimation shall include all Unexpected Risks arising from:

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<sup>7</sup> IPCC special report on CCS [https://www.ipcc.ch/site/assets/uploads/2018/03/srccs\\_chapter5-1.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_chapter5-1.pdf)



- Nature-induced risks (e.g., flora, fauna, or climate conditions)
- Human-induced risks (e.g., design and construction faults, operational risks)
- Geopolitical risks (e.g., potential effects of the legal and political environment)
- Any additional factors mentioned in the applicable Methodology besides the Inherent Risks that have already been explicitly quantified and accounted for in the Methodology.
- Any other factors which may lead to a Material Risk of reversal of the CO<sub>2</sub> Removal.

The risk estimation shall include a calculation of the Overall Risk Effect. Furthermore, the estimation shall separately detail the Risk Effect of every Material Risk.

The risk estimation shall be quantitative, and the Overall Risk Effect shall be given in percentage of the Output volume.

The risk estimation must be comprehensive and specific to the CO<sub>2</sub> Removal Supplier's activity. The methods utilized for risk assessment must be scientifically justifiable and detailed in the risk estimation document. Specifically, the estimation must include a description of the methods used to estimate or calculate individual Risk Impacts, Likelihoods, and Effects, as well as references to any literature values used.

Where the direct quantification of reversal risk by the CO<sub>2</sub> Removal Supplier (via e.g. statistical methods) is not feasible, the CO<sub>2</sub> Removal Supplier may utilize risk estimations from external sources, such as peer-reviewed scientific literature or local regulations and guidelines.

7.7.2 The CO<sub>2</sub> Removal Supplier shall conservatively consider the estimated risk in the quantified CO<sub>2</sub> Removal Output volume and multiply the Output volume by the Overall Risk Effect.

7.7.3 The CO<sub>2</sub> Removal Supplier shall undertake preemptive risk mitigation, management, and reporting practices in accordance with the applicable Methodology. The CO<sub>2</sub> Removal Supplier shall ensure through on-site monitoring in accordance with the applicable Methodology that any CO<sub>2</sub> removed during project operations remains firmly and durably stored for a Long-Term.

7.7.4 Where material risks are identified, the CO<sub>2</sub> Removal Supplier shall commit to monitoring, reporting, and compensating for avoidable reversals for a period of no less than 40 years from the start date of the CO<sub>2</sub> Removal activity, unless otherwise required by the competent authority or the applicable Methodology.

7.7.5 In the event that an Unexpected Reversal of CO<sub>2</sub> Removal is observed or suspected, the CO<sub>2</sub> Removal Supplier shall without delay act to:

- Prevent further reversal from occurring.
- Notify the Issuing Body of any occurred or suspected reversal.
- Determine and quantify (in tCO<sub>2</sub>e) the volume occurred Unexpected Reversal.

7.7.6 The CO<sub>2</sub> Removal Supplier is, from the outset, liable for any Unexpected Reversal of CO<sub>2</sub> Removal occurring during the Long-Term storage period. However, the CO<sub>2</sub> Removal Supplier may, under certain

circumstances and when permitted by local legislation, be able to transfer its liability to a 3<sup>rd</sup> party (e.g. the local government or other competent authority or organization).

7.7.7 The CO<sub>2</sub> Removal Supplier shall be responsible for compensation for any Unexpected Reversal of CO<sub>2</sub> Removal during the Long-Term storage period unless the liability for reversals has been assumed by a 3<sup>rd</sup> party.

7.7.8 The compensation for Unexpected Reversals shall first and foremost occur through one or several of the following compensation mechanisms, at the Issuing Body's discretion:

- The occurred Unexpected Reversals are subtracted from the Output volume for the Monitoring Period where the Unexpected Reversals occurred, or the subsequent Monitoring Period.
- The Issuing Body withdraws CORCs from the Account of the CO<sub>2</sub> Removal Supplier equal to the volume of the occurred Unexpected Reversals.
- The CO<sub>2</sub> Removal Supplier purchases CORCs of the same type or, if unavailable, of comparable permanence. The Issuing Body withdraws CORCs from the Account of the CO<sub>2</sub> Removal Supplier equal to the volume of the occurred Unexpected Reversals.
- If present in the applicable Methodology, a particular compensation mechanism or contractual framework to secure the CO<sub>2</sub> Removal against reversals is employed.

## APPENDICES

### APPENDIX A – ARTICLE 6 PROCEDURES FOR USE OF CORCS FOR NATIONALLY DETERMINED CONTRIBUTIONS (NDCS), INTERNATIONAL MITIGATION (CORSIA), OR OTHER PURPOSES

#### A.1 Purpose of this Addendum

Describe the requirements and procedures set in place by the Puro Standard to support the transparent tracking of the mitigation outcomes or carbon removal credits (CORCs) generated by the standard and registered in the Puro Registry. This will facilitate the cooperation between stakeholders and avoid double claiming of CORCs between the Paris Agreement Nationally Determined Contributions (NDCs) and other international mitigation purposes.

To this end, countries with NDCs must authorize the use of carbon credits or mitigation outcomes for international trading. In addition, the countries shall report to the UNFCCC the authorized use of carbon credits within their jurisdiction and provide the necessary corresponding accounting adjustments to their National GHG Inventory.

#### A.2 Definitions

- **Host Country:** Country under whose jurisdiction the CDR project operates and issues mitigation outcomes (i.e., CORCs). Also referred to as host party or transferring party.
- **Using Country:** Country that uses mitigation outcomes (i.e., CORCs) to meet their NDC.
- **Participating Country:** country that is involved in a cooperation approach under article 6 of the Paris Agreement.

#### A.3 Additional Requirements for CDR Projects under Article 6 of the Paris Agreement

##### A.3.1 Definition of Authorized Uses

A.3.1.1 Under Article 6 of the Paris Agreement, a host country can choose to authorize the use of mitigation outcomes generated within its jurisdiction for international cooperation approaches. The purpose of this authorization is to allow cooperation between participating countries to achieve efficient mitigation outcomes in their Nationally Determined Contributions (NDCs). This requires accounting the mitigation outcomes in the National Inventory of the using country and preventing double claiming from other participating countries.

A.3.1.2 Authorized uses of mitigation outcomes are referred to as “internationally transferred mitigation outcomes” (ITMOs). These uses have a unique attribute tag or label in the Puro Registry in compliance with IC-VCM<sup>8</sup>. The Article 6 authorized uses and their labels are:

- NDC use:
  1. To be used in trade between countries to meet their NDC.
  2. Puro Registry Label: ITMO-NDC
- International mitigation purposes
  1. To be used to meet other international mitigation purposes like Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). This use also requires the mitigation outcome to comply with relevant eligibility criteria. Other equivalent uses

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<sup>8</sup> Core Carbon Principles Attribute 1: Host country authorization pursuant to Article 6 of the Paris Agreement.

may be established in the future; for example, allowing CORCS to be used in compliance with the International Maritime Organization (IMO).

2. Puro Registry Label: ITMO-IMP
- Other
  1. To be used by private stakeholders seeking to meet their net-zero targets or other compliance requirements. This corresponds to the use of Voluntary Carbon Market by corporate or private stakeholders.
  2. Puro Registry Label: ITMO-OTH

A.3.1.3 The Puro Standard allows for the application and authorization of all possible uses to their CORCs. Therefore, CORCs may have more than one authorized use assigned to them.

A.3.1.4 A host country may provide a limit to the volume of CORCs and/or time for this authorization. In addition, the host country reserves the “right” to revoke the authorization. This process and its consequences need further development and will be part of a future General Rules update.

A.3.1.5 When a country does not authorize the use of mitigation outcomes generated within their jurisdiction, those mitigation outcomes can only be used in the host country’s National Inventory reporting<sup>9</sup>.

### **A.3.2 Process of authorizing the use of CORCs under Article 6 of the Paris Agreement.**

#### **A.3.2.1 Meeting Eligibility Criteria.**

CORCs are eligible for authorized uses under Article 6 if they represent carbon dioxide removals with Vintages accepted by CORSIA and Article 6.

In the case of applying for the authorization of CORCs for other international mitigation purposes like CORSIA, evidence must be provided that the CORCs are CORSIA eligible or equivalent. This information shall be properly labeled in the Puro Registry.

The host country must provide a Letter of Authorization for the requested use following the process described in the subsequent sections of this document.

#### **A.3.2.2 Letter of Authorization (LoA)**

The Carbon Removal supplier must request the Letter of Authorization (LoA) from the designated authority of the host country.

The Letter of Authorization (LoA) must include the following information:

1. Date of authorization.
2. Competent authority: The authority designated by the host country to issue authorizations under Article 6 of the Paris Agreement.
3. Authority representative and its contact information: Name and title of the person executing the LOA and signing on behalf of the Authority, and his/her mailing address; phone number; email address.
4. Issuing program: Puro Standard, as the crediting program under which the production facility is listed or registered, or under which issuance is expected to occur.
5. Project identification: Production Facility Name and ID number as shown on the Puro Registry.

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<sup>9</sup> Perspectives Climate Group. 2023. p31.

6. Project Country: host country or host party.
7. Authorized use(s): The host Party authorizes the mitigation outcomes, in the form of CORCs, for use towards:
  - a. NDC use tagged ITMO-NDC.
  - b. International mitigation outcomes (e.g., CORSIA) tagged ITMO-INT.
  - c. Other uses tagged ITMO-OTH.
8. Specify volume of CORCs and/or time related limits to this authorization.
9. Define first transfer condition for Corresponding Adjustment (see Section A.3.3 and Table 1):
  - a. For multiple uses including NDC use: 'First international transfer'.
  - b. For 'international mitigation purposes' and 'other purposes': 'Authorization', 'issuance', or 'use'.
10. Declare commitment to corresponding adjustments by the host country.

The information included in the Letter of Authorization will be part of the Puro Registry and made publicly available.

#### A.3.2.3 Description of the Authorization Process

The following diagram describes the process by which the Carbon Removal Supplier requests a Letter of Authorization from a Host Country, CORCs retirements with accounting adjustments, and responsibilities of all parties involved in the process.

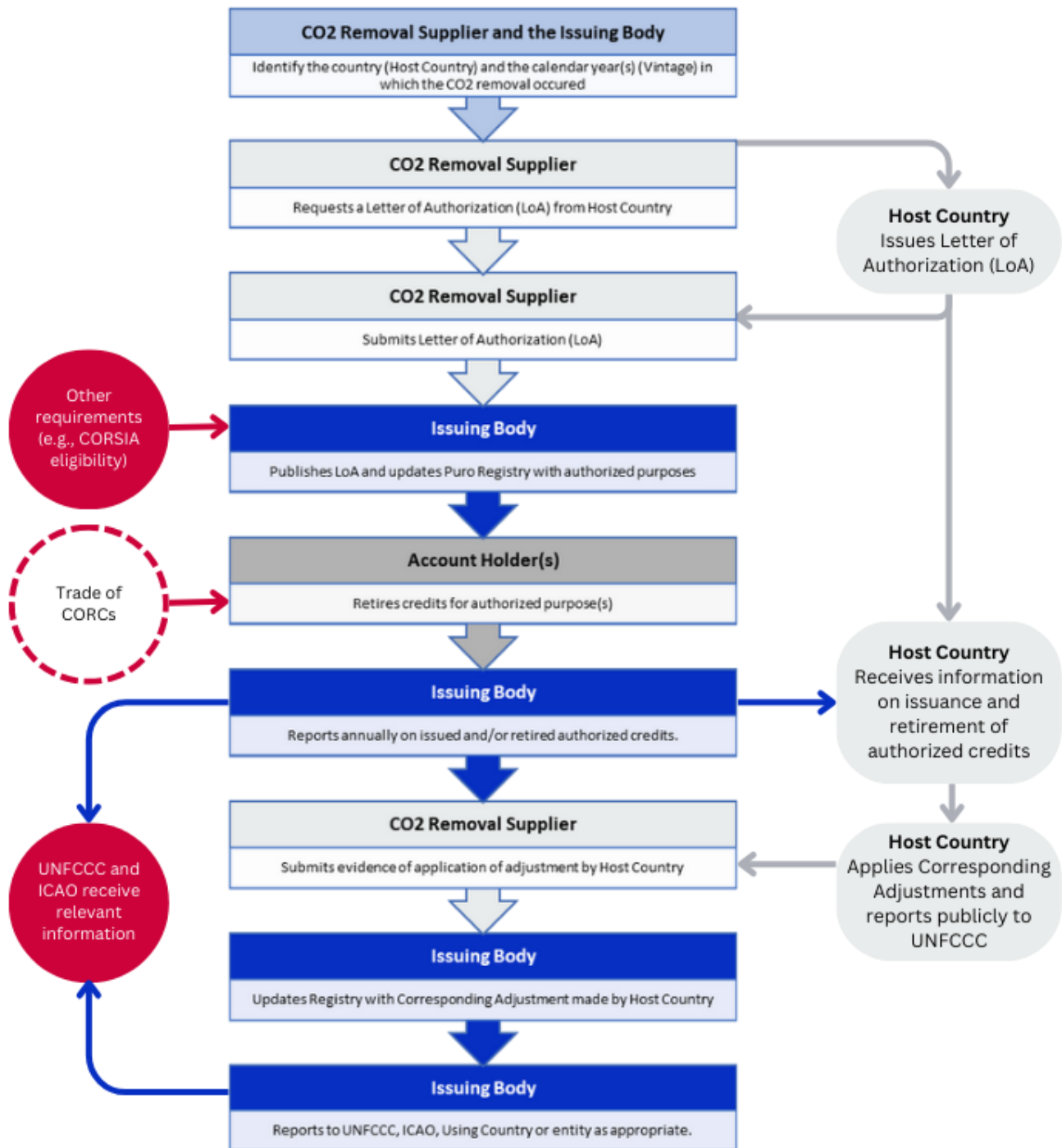


Figure A.1. Steps in the use of CORCs under Article 6 and the responsibilities of the respective parties.

1. The CO<sub>2</sub> Removal Supplier and the Issuing Body shall define the volume of CORCs and their vintage for the application of authorization of use.
2. Once the Puro Standard achieves CORSIA eligibility, all CORCs could be authorized to participate in this international mitigation program. CORCs will include the attribute tag CORSIA-eligible in the Puro Registry.
3. The CO<sub>2</sub> Removal Supplier requests the Letter of Authorization from the host country. Later, it shares the Letter of Authorization with the Issuing Body.
4. The Issuing Body publishes in the Puro Registry the Letter of Authorization and identifies the volume of CORCs and their vintage available for trade under those conditions.

5. Once the first transfer conditions are met through the trade of CORCs, the host country (and the using country, when applicable) shall apply the corresponding adjustments to their national GHG inventory. First transfer conditions are described in Table A.1.

A.3.2.4 [reserved] Process of revoking authorization of use by host country and its implication on the Puro Registry will be described here.

### A.3.3 Corresponding Adjustment

A.3.3.1 The conditions on which a host country and a using country must perform the corresponding adjustment of CORCs depends on the authorized use of the CORCs and the definition of the “first transfer” condition.

A.3.3.2 Only during the exercise of NDC use must the host country and the using country perform the corresponding adjustments to their National GHG Inventories.

A.3.3.3 The use of CORCs for international mitigation (CORSIA) or other purposes requires that the host country exclude the CORCs from their National GHG Inventory and avoid double claiming them in their NDC report.

A.3.3.4 The Issuing Body shall ensure that the status on the authorized use and the corresponding adjustment are properly recorded and made publicly available through the Puro Registry.

A.3.3.5 CORCs that have been transferred for NDC or international mitigation (CORSIA) purposes shall be properly labeled and retired from the Puro Registry.

A.3.3.6 CORCs that have been transferred for other mitigation purposes may still be available in the Puro Registry for trading unless the account holder makes a request to retire those CORCs from the Puro Registry.

Table A.1. First Transfer conditions for Corresponding Adjustments.

Authorized Purpose	Corresponding Adjustment	
	Host Country	Using Country
NDC use	Country A, Exclude from their “National GHG Inventory”	Country B, Include to their “National GHG Inventory”
International Mitigation (CORSIA)	Country A Exclude from their “National GHG Inventory”	-
Other	Country A Exclude from their “National GHG Inventory”	-

### A.4 Limitation of Liability

The Issuing Body shall not be liable for any losses incurred by any claims whatsoever arising out of the labeling in the Puro Registry of authorized uses of CORCs under Article 6 and/or CORSIA eligibility.

## APPENDIX B – ONGOING ISSUANCE AND DIGITAL MONITORING, REPORTING AND VERIFICATION

### B.1 Purpose of this Addendum

Describe the requirements and procedures set in place by the Puro Standard for Method 2 Ongoing Issuance.

### B.2 Definitions

- **Ongoing Issuance Right** – Right to receive CORCs issued against monthly Output Reports. This right may be granted for certified Production Facilities that have a successful Output Audit from the previous Monitoring Period that attests regular and steady industrial operation and monitoring.
- **Regular industrial operation and monitoring**: recurring carbon sequestration and accurate monitoring of carbon stored, and carbon emitted for the Monitoring Period. In regular operation, monitoring parameters are observed and measured continuously, typically automatically and reported digitally for the period. Examples of such monitoring parameters are temperature, moisture, weight, injection volume, and electricity consumption.

### B.3 Background

The aim is for Method 2 Ongoing Issuance to evolve into real-time digital Monitoring, Reporting and Verification (dMRV). The goal is to perform online meter readings and automatically generate monitoring reports that are digitally transferred to a certification platform. As intermediary steps the monitoring and reporting frequency is shortened first from annual to monthly, weekly, daily and eventually in a future iteration to digital real-time monitoring of performance.

Monthly MRV is a substantial transformation from the practice where projects previously have submitted annual monitoring reports in PDF-format. Engineered carbon removal projects are in a favorable position to take this step towards digital MRV due to their industrial nature and inherent digitalization of data points. To be conservative we incorporate a safety margin in these early steps towards digital MRV practices.

### B.4 Additional Requirements for Production Facilities for Ongoing Issuance

B.4.1 The evaluation of the Ongoing Issuance Right is done in the performance verification by the 3<sup>rd</sup> party Auditor as part of the Output Audit.

B.4.2 This evaluation can be done when a Production Facility has demonstrated regular industrial operation and successfully completed performance verification for the previous Monitoring Period with a minimum of 3 months of Output.

B.4.3 The Output Auditor evaluates the certified Production Facility's capability to maintain regular industrial operation and repeat the procedures for regular Output monitoring and reporting and any matters affecting the carbon removal quantification.

B.4.4 The Output Auditor submits his evaluation in the Output Audit Report.

B.4.5 The Issuing Body will review the evaluation. The Issuing Body may seek clarifications from the Output Auditor to form the final opinion. The review may result in

- a) a successful review and granting the Ongoing Issuance Right to the certified Production Facility



- b) an unsuccessful review and revoking of the Ongoing Issuance Right from the Production Facility and recommendations for the CO<sub>2</sub> Removal Supplier to improve their processes to meet ongoing issuance requirements.

B.4.6 The Ongoing Issuance Right is Production Facility specific and cannot be extended to other Production Facilities.

B.4.7 The Issuing Body can revoke the Ongoing Issuance Right from a Production Facility if any of the conditions are not maintained or if there is a perceived risk that they are not maintained.

## B.5 Ongoing Issuance

B.5.1 The Ongoing Issuance is applicable to certified Production Facilities that have an Ongoing Issuance Right.

B.5.2 The CO<sub>2</sub> Removal Supplier submits Output Reports according to the agreed reporting cadence through the digital platform My Puro as specified in the applicable Methodology.

B.5.3 In the Output Report, the CO<sub>2</sub> Removal Supplier shall state any material changes that occurred or are planned to occur in the certified Production Facility since their last verified Monitoring Period.

B.5.4 The certified Production Facility, that has Ongoing Issuance Right, can report Output up to 12 months defined from the end date of their last verified Monitoring Period.

B.5.5 A delay in submitting the Output Report monthly shall result in a warning. Delay in submitting the Output Report beyond 3 months shall result in the Ongoing Issuance Right being revoked and the Production Facility being suspended.

B.5.6 The Issuing Body reviews the submitted monthly Output Report and statements. The review may result in

- a) a successful review and maintaining the Ongoing Issuance Right
- b) an unsuccessful review and revoking the Ongoing Issuance Right

B.5.7 With a successful review, the Issuing Body will issue CORCs for 80% of the reported volume of Output.

## B.6 Ongoing Issuance balance

B.6.1 The balance of Ongoing Issuance is done in the performance verification by the Issuing Body as part of the Output Review. The performance verification will be conducted as specified in chapter 2.3. for the Monitoring Period, typically covering the past 12 months monthly Output Reports. The Issuing Body then determines the Ongoing Issuance balance by subtracting from the verified amount of CORCs for the Monitoring Period the issued amount of CORCs for the same period.

The outcome may be that

- a) the Ongoing Issuance balance indicates that too few CORCs have been issued for the Monitoring Period and the Ongoing Issuance balance for the Monitoring period is negative.
- b) the Ongoing Issuance balance indicates that too many CORCs have been issued for the Monitoring Period and the Ongoing Issuance balance for the Monitoring period is positive.

B.6.2 In the case that Ongoing Issuance balance is negative, the Issuing Body shall Issue the amount of CORCs corresponding to the negative Ongoing Issuance balance over the Monitoring Period to the CO<sub>2</sub> Removal Supplier's Registry Account associated with the Production Facility.

B.6.3 In the case that the Ongoing Issuance balance is positive, CO<sub>2</sub> Removal Supplier is liable to provide the corresponding amount of other CORCs with similar climate impact. The Issuing Body shall

- a) Suspend the Production Facility and the Account associated with the Production Facility
- b) Withdraw the amount of CORCs from the Account of the CO<sub>2</sub> Removal Supplier corresponding to the positive Ongoing Issuance balance.
- c) If the withdrawal is not possible, the Issuing Body shall subtract the amount of CORCs corresponding to the positive Ongoing Issuance balance from the Output volume for the subsequent Monitoring Period.
- d) If no further Monitoring Periods are planned, the CO<sub>2</sub> Removal Supplier shall purchase CORCs of the same type or, if unavailable, of comparable permanence. The Issuing Body shall withdraw the amount of CORCs from the Account of the CO<sub>2</sub> Removal Supplier corresponding to the negative Ongoing Issuance balance.

## DOCUMENT HISTORY

The new version of the document is effective on Issue Date.

Version	Issue Date	Comment
v1.0	17 April 2019	Initial version elaborated with List of Signatories and published on Puro.earth website on the launch date of Puro CO <sub>2</sub> removal marketplace.
V1.1	13 June 2019	Update to annex C and F <ul style="list-style-type: none"> <li>- Annex C. Wooden Building element methodology modified to also incorporate biomass-based insulation materials</li> <li>- Annex F. List of signatories included confidentially (not changed)</li> </ul>
V1.2	08 October 2019	Updates <ul style="list-style-type: none"> <li>• Chapter 3.2.4: CORCs may be issued for 18 months old production (previously 12 months)</li> <li>• Chapter 3.3: editorial changes.</li> <li>• Chapter 3.4: Pre-purchase of Certificates (CORCs).</li> <li>• Chapter 6.4: Aim to use CORC income for growth.</li> </ul>
V1.3	06 December 2019	Updates <ul style="list-style-type: none"> <li>• Chapter 3.3: Certificate auctioning (changes from 48h blind to 96h half-blind).</li> <li>• Chapter 3.4: Pre-purchase of Certificates (changes due to action mechanism update).</li> <li>• Chapter 3.5 Certificate online purchase (added).</li> <li>• Chapter 6.2: CORCs issued in the Experiment phase will expire. normally 12 months after the Issuance date</li> </ul>
V1.4	April 2020	Updates <ul style="list-style-type: none"> <li>• Chapter 3.7 and 6.2: Extension of the expiry date by 6 months.</li> <li>• Chapter 3.5.6: Online shop closed for 3 hours before and after the auction.</li> <li>• Chapter 3.5: Possibility to select removal method in the online shop.</li> <li>• Numbering of subparagraphs in Chapter 1.5. and Annex A,B,C.</li> </ul>
V2.0	June 2020	<ul style="list-style-type: none"> <li>• Chapter 3.1: Settlement is no longer tied to auctions.</li> <li>• Chapter 3.4: Purchase through Certificate Listing Service enabled.</li> <li>• Chapter 3.4: Pre-Purchase transactions enabled outside auctions.</li> <li>• Chapter 3.4.3: Transfer Request added to Pre-purchase agreement process.</li> <li>• Chapter 4.3: Sale of CORCs enabled in external marketplaces.</li> <li>• Annex A, 1.1.12: requirements for safe handling of biochar.</li> </ul>
V2.1	June 2021	<ul style="list-style-type: none"> <li>• Re-structuring: Separate chapters to describe rules for trading (Marketplace) and carbon removal crediting (Registry and Standard).</li> <li>• Annex G: Geologically stored Carbon methodology.</li> </ul>

V2.2	Dec 2021	<ul style="list-style-type: none"> <li>Chapter 1.3: Governance by Advisory Board.</li> <li>Chapter 3.8: Expiry extended.</li> <li>Chapter 5: Issuance and cancellation reports from the Registry.</li> </ul>
V2.3	Jan 2022	<ul style="list-style-type: none"> <li>2.1.2 Environmental and Social Safeguards.</li> <li>2.1.3 Additionality and Baseline.</li> <li>Annex A: Biochar methodology update from 2019 to 2022 to reflect the latest science.</li> </ul>
V2.4	Feb 2022	<ul style="list-style-type: none"> <li>Terminology change: replace cancel/retirement with retire/retirement.</li> <li>5.1 Reporting: Added possibility for the beneficiary to delay (embargo) the publishing of the retirement for maximum 12 months.</li> </ul>
V2.4.1	Feb 2022	<ul style="list-style-type: none"> <li>Annex A: Biochar chapter 4.2 - Spelling correction of <math>C_{org}</math></li> </ul>
V2.5	March 2022	<ul style="list-style-type: none"> <li>Renaming of "Direct Purchase" to "Service Provider Trade" to align to Appendix 1 Terms and Conditions.</li> <li>4.2 Clarification of conditions related to Service Provider Trade.</li> </ul>
V2.5.1	May 2022	<ul style="list-style-type: none"> <li>Minor spelling mistakes corrected.</li> </ul>
V2.6	May 2022	<ul style="list-style-type: none"> <li>Annex H: Woody Biomass Burial.</li> </ul>
V2.6.1	May 2022	<ul style="list-style-type: none"> <li>Page numbers corrected in Table of Contents.</li> </ul>
V2.7	October 2022	<ul style="list-style-type: none"> <li>Annex B: Carbonated Building Material update from 2019 to 2022 to reflect the latest science.</li> <li>Chapter 1.3: Governance rules updated.</li> </ul>
V3.0	9 December 2022	<ul style="list-style-type: none"> <li>CORC minimum durability set to 100 years.</li> <li>Annex C discontinued: CORC issuance on Bio-based Building Materials methodology (storage durability of 50 years) ceased from January 2023.</li> <li>Chapter 1.2.3 added: reference to normative documents.</li> <li>Chapter 2.1.4 added: reference to leakage.</li> <li>Chapter 4 revised: description of "transfer of ownership" of a CORC instructed with a trade report.</li> <li>Chapter 5 revised to allow the publishing of Audit Reports and project description.</li> <li>Enhanced Rock Weathering added as a valid Methodology.</li> <li>All Methodologies and templates published as separate documents in Puro.earth website. Annex A-H removed from this document.</li> </ul>
V3.1	01 June 2023	<ul style="list-style-type: none"> <li>Removed Chapter 3.4 Certificate Expiry as per resolution in Advisory Board on 31 May, 2023. CORCs no longer expire automatically after 5 years.</li> <li>Chapter numbering from Ch 3.5 unchanged for reference.</li> </ul>
D.4.0	For public Consultation	<ul style="list-style-type: none"> <li>Certification with external methodologies process.</li> <li>Aligning with ISO/CCP terminology for design validation and performance verification.</li> <li>Additional procedures to avoid double counting.</li> <li>Aligning trading of CORCS with Article 6 of the Paris Agreement and CORSIA requirements.</li> <li>Amending Puro Registry requirements to include carbon removal year of production (vintage).</li> <li>Clarifying use of the Platform Agreement.</li> <li>Enhance additionality and leakage requirements.</li> <li>Rules for reversal events and uncertainty assessment.</li> </ul>

- Requirements social safeguards: human rights, Indigenous People, labor rights, gender.
- Requirements for positive Sustainable Development Goals (SDGs) impacts description.
- Article 6 procedures for use of CORCs towards Nationally Determined Contributions (NDCs), international mitigation purposes (CORSIA), and/or other purposes.
- Ongoing Issuance and Digital Monitoring, Reporting, and Verification.