June 19, 2023

Input to Structured Consultation for further work on removals

Supervisory Body

United Nations Framework Convention on Climate Change (UNFCCC)

By Email: Supervisory-Body@unfccc.int

Dear members of the Supervisory Body,

We welcome the opportunity to share with you the reflections of the CCS+ Initiative as regards the structured consultation on removal activities. We address a subset of the questions raised in the call for inputs which we deem our work is most relevant for.

The CCS+ Initiative is a unique multi-stakeholder initiative with approximately 50 members working together to develop a comprehensive carbon accounting infrastructure for carbon capture, utilization and storage, as well as carbon dioxide removal (CDR) technologies. The Initiative covers a variety of capture, transport and storage pathways that together reflect the industrial infrastructure to deliver a fully-fledged carbon management economy. So far, the initiative does not cover removal solutions based on storage in soils or in the biosphere; our responses therefore focus on technical removals.

The Initiative has submitted inputs to prior consultations on Article 6.4 and is developing a dedicated guidance note elaborating on the potentials and challenges related to the methodological harmonization of the respective rules and tools under Article 6.4 with CCS+. This is due to be published in June 2023. The guidance identifies opportunities and challenges for applying Article 6 requirements to the methodological framework of the CCS+ Initiative and related activities. It targets regulators and de-facto regulators, as well as the wider climate community spanning academia, civil society, industry, and project developers interested in facilitating the uptake of the modular methodologies developed under CCS+ while promoting consistently high integrity and robust accounting across all carbon market segments.

Cross-cutting questions:

1. Discuss the role of removals activities and this guidance in supporting the aim of balancing emissions with removals through mid-century.

The IPCC in its latest report (IPCC AR6 Synthesis Report) highlights the indispensable contribution of CDR (defined by a flow of CO_2 out of the atmosphere into durable storage). The IPCC also points to differences in the inherent durability of CO_2 storage and differentiates removals based on these differences. This points to a need to advance removals involving inherently highly stable forms of storage such as DACS and BECCS.

Article 6.4 enables international cooperation on climate change mitigation and should not discriminate categories of removals, but rather guide toward ensuring permanence of storage. Many forms of removals are pure climate mitigation technologies and require carbon revenues including through international cooperation e.g. via Article 6.4 to play their role in lowering net-emissions and meeting net-zero.

3. How are these elements understood, in particular, any interrelationships in their functions, timeframes, and implementation?

(a) Monitoring period: Removals are only removals when storage is durable; otherwise, activities merely delay emissions, but do not remove them. The monitoring period therefore must ensure long-term storage (as close as possible to permanent). Different views on what constitutes permanent storage and how monitoring periods should be defined and setup accordingly are currently under discussion (see for example here, here, here and here).
Verra's standard and its requirements for geological carbon storage (GCS) acknowledge that assessing across such timescales is not feasible. Thus, they do not specify a fixed monitoring period for applications, which include underground storage or utilization in products. Instead, monitoring should continue until certain conditions are met. These conditions might include containment at the storage site(s), the absence of a significant risk that the injected CO_2 will have a significant adverse impact on the environment or human health, and the behavior of the CO_2.

These periods ensure that carbon is removed for the timeframe targeted by the Paris Agreement´s long term temperature goals.

(b) Crediting period: The crediting period should enable long-term planning and investments and at the same time avoid risks to lock-in emission intensive practices with the promise of addressing such practices´ emissions with Article 6.4 based removal activities. The monitoring period should exceed the crediting period by far to avoid non-permanent activities participating in article 6.4 cooperation.

(c) Timeframe for addressing reversals: ideally, cases of reversals of CDR should be addressed whenever they occur. The monitoring period determines whether reversals are detected and can, thus, be addressed. The monitoring period therefore is key to enable addressing reversals.

The Verra requirements, which CCS+ is aligning with, includes a system for managing such reversals. Buffer credits are deposited in the GCS pooled buffer account based on the non-permanence risk report assessed by the validation/verification body. In the event of a reversal, the project proponent follows the buffer account reconciliation requirements set out in the VCS Program document Registration and Issuance Process. This ensures that any storage issue is reflected in the country's inventory, transferring responsibility to the states.

Questions on specific elements:

A. Definitions:

Discuss the role and potential elements of definitions for this guidance, including “Removals”.

A clear distinction between emission *removals* on the one hand and emission *reductions* on the other hand is key.

Definition of removals vs. reductions vs. delayed emissions should be based on the long-term outcomes of related activities, not on applied methods.

Storage *permanence* should span a timeframe covering at least that targeted by the Paris Agreement´s long term temperature goals.

B. Monitoring and Reporting:

1. What timeframes and related procedures should be specified for these elements referred to in A6.4-SB003-A03?

a. For initial monitoring and submission of monitoring reports (paragraph 3.2.14);

(a) For subsequent monitoring and submission of monitoring reports (paragraph 3.2.14);

(b) For monitoring and submission of monitoring reports following an observed event that could potentially lead to a reversal (paragraph 3.2.14);

(c) For monitoring and reporting, including any simplified reporting, conducted after the end of the last crediting period of activities involving removals (paragraphs 3.1.10 and 3.2.13).

2. Discuss any further considerations to be given to the core elements for monitoring and reporting in A6.4-SB003-A03; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

C. Accounting for removals:

1. Discuss any further considerations to be given to the core elements for accounting for removals in A6.4-SB003-A03; where possible, identifying their applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

In A6.4-SB003-A03 it is stated that “removals to be credited shall be those in excess of the baseline while deducting any activity emissions and leakage emissions.” The amount of removals in excess of the baseline is directly linked to the requirement of raising ambition over time. The operationalization of a Baseline Contraction Factor (e.g. the Paris Goal Coefficient introduced in the International Initiative for Development of Article 6 Methodology Tools (II-AMT)) is one option to ensure this requirement is met. For removals, the amount of removals already considered in the baseline would need to be defined, which could draw on the host Party´s national policies explicitly addressing and financing removals.

2. For activities involving removals that also result in emissions reductions, what are the relevant considerations, elements, and interactions between this guidance and the requirements for the development and assessment of mechanism methodologies, including.

D. Crediting period:

Discuss any further considerations to be given to the core elements for crediting periods in A6.4-SB003-A03; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

The crediting period is closely related to the discussion of fossil fuel emissions lock-in. Any contribution to LT-LEDS should be reflected in the respective crediting period.

The lock-in discussion relates to the Article 6.4 requirement for activities to contribute to LT-LEDS. In the long term, fossil fuel-based production (which comes with residual emissions) is expected to be minimized. Removal activities will have to be evaluated with regard to their contribution to LT-LEDS. This means that only activity types which are described in the respective country´s LT-LEDS as indispensable to offset residual emissions should be eligible for Article 6.4.

E. Addressing Reversals:

In order to minimize the risk of non-permanence of removals over multiple NDC implementation periods, and, where reversals occur, ensure that these are addressed in full.

1. Discuss the applicability and implementation aspects of these approaches, including as stand-alone measures or in combination, and any interactions with other elements of this guidance:

a. Non-permanence risk buffer (pooled or activity-specific);

In 2011, Decision 6/CMP.7 was adopted which formulates Rules, Modalities and Procedures (RMP) for CO_2 storage. These RMPs should closely inform the current work related to addressing reversals and avoidance of leakage. The RMPs propose a refundable project specific buffer pool approach.

b. Insurance / guarantees for replacement of ERs where reversals occur (commercial, sovereign, other);

c. Other measures for addressing reversals in full.

2. Discuss the appropriate timeframe(s) for applying the approaches, including any interactions with other elements of this guidance and the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

3. What risks of non-permanence need to be minimized, and how can these risks identified, assessed, and minimized?

The monitoring of some removal activities must cover carbon capture, transport, and storage/utilization. Reversals can occur during all steps of the respective value chain (depending on the capture method). Monitoring methodologies should cover all steps of the value-chain, and enable different combinations of capture, transport, storage and utilization modules. Monitoring equipment and methods to quantify both captured and re-released CO_2 are described in detail in the CCS+ Initiative´s methodologies, tools, and modules.

The CCS+ initiative draws on Verra's Non-Permanence Risk Tool for assessing the risks associated with geological carbon storage of a storage site and for determining the appropriate buffer withholding to ensure the permanence of credited emissions reductions and removals.

4. In respect of risk assessment, how should the following elements be considered in the implementation of the approaches in (a) and any other relevant elements in this guidance?

a. Level of non-permanence risk assessment, e.g., activity- or mechanism-level

b. Timing for risk assessment(s)

c. Entity(ies) responsible for risk assessment(s), e.g., activity proponent, 6.4SB, actuary

5. How should the following elements be considered in the implementation of the approaches in (1) above and any other relevant elements in this guidance?

a. Methods for determining the level of buffer pool contributions

The CCS+ initiative draws on Verra's Non-Permanence Risk Tool for assessing the risks associated with geological carbon storage of a storage site and for determining the appropriate buffer withholding to ensure the permanence of credited emissions reductions and removals.

b. Composition of buffer pool, including in relation to ER vintages and contributing activity types or categories

c. Intentional and unintentional reversals

d. Treatment of uncancelled buffer ERs, including after the end of the last crediting period of the contributing activity

e. Specifications for ERs that cancelled for compensate for reversals, including in relation to ER vintages and contributing activity types or categories

f. Replenishment in case buffer cancellations exceed contributions; slide language on re-raising baseline level of storge before new crediting

6. In the event of a reversal, what interactions and implementation aspects should be considered in respect of other elements of the activity cycle?

F. Avoidance of Leakage:

Discuss any further considerations to be given to the core elements for leakage avoidance in A6.4-SB003-A03; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

G. Avoidance of other negative environmental, social impacts

Discuss considerations to be given to core elements for avoidance of other negative environmental, social impacts; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.