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## Brief

# The Role of CCS in the Paris Agreement and its Article 6

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## Executive Summary

### What does Article 6 do?

The key purpose of Article 6 is to enable countries to cooperate on a voluntary basis in order to meet their emission reductions targets, contained in their NDCs, *inter alia* by using international market mechanisms (see “[How will countries use Article 6](#)” below). It does this mainly in two ways: firstly, by means of **cooperative approaches** (contained in **Article 6.2**) to allow transfers of emission reduction units (Internationally Transferred Market Outcomes, ITMOs) according to a robust accounting framework to ensure no double counting, and; secondly, by establishing (in **Article 6.4**) the basis for quantifying the emissions reduction associated with, to a large extent, projects. This latter is due to replace the previous Clean Development Mechanism (CDM), established under the Kyoto Protocol, while becoming more like Joint Implementation (JI) which was established for projects between countries with targets. Both developed and developing countries would be eligible to participate.

It is important to note that in the move to net-zero emissions (Article 4.1 of the Paris Agreement), the potential to cut greenhouse gas emissions and balance any that remain with removals is not spread evenly around the world. There will, therefore, be a need for a global response so that countries can achieve an emissions “balance” cooperatively, and Article 6 will provide the framework to enable this to develop (Evans et al, 2019).

### What does Article 6 not do?

Being mainly concerned with ensuring the environmental integrity of actions undertaken by countries, to avoid double counting, it will not create an international emissions trading market nor, by extension, will it create a global carbon price but may assist in developing transparency around carbon pricing. In addition to cooperation under Article 6 being voluntary and not truly global, the very nature of the Paris Agreement (a bottom-up process) makes that unlikely.

### Where is Article 6 in the negotiations?

As the final part of the Paris Agreement rulebook to be agreed, it had been hoped to conclude negotiations on Article 6 at COP 25 in December 2019. This did not prove possible because consensus around of number of technical issues, mainly around reporting and double counting, could not be reached. These will have to be resolved at the (now postponed) inter-sessional UNFCCC meetings and COP 26. A key cause of the delays to finalizing Article 6 is that, whilst under the Kyoto Protocol all national commitments were reported as tonnes of CO<sub>2eq</sub>, many NDCs are not economy wide and are expressed as reductions in carbon or energy intensity. This causes significant problems in reporting in a common format that will enable clarity in relation to the main objective of the Paris Agreement.

### Where does this leave CCS?

CCS is either directly or, by inference, recognised within in the UNFCCC, the Kyoto Protocol (as well as the associated CDM) and in the Governing Instrument of the Green Climate Fund. Article 4.1 of the Paris Agreement refers to achieving “*a balance between anthropogenic*



*emissions by sources and removals by sinks of greenhouse gases in the second half of this century.*” All this gives assurance that CCS is a technology that can be deployed to significantly reduce emissions in a number of sectors.

The current text(s) on Article 6 refer to both “emission reductions” and “removals” - so, by inference, CCS technologies (including negative emission applications) are covered in both Articles 6.2 and 6.4. This is summarized in [“How is CCS included in Article 6?”](#) below.

### **What next?**

Negotiations will resume at upcoming sessions to try and reduce the outstanding issues so that agreement can be reached at COP 26. The discussions will be based on all three versions of the draft texts prepared by the Chilean COP presidency in Madrid. This means that many issues apparently resolved in the near-final drafts released on the final Sunday of COP 25 are likely to be reopened when negotiations resume during the next climate talks.

### **Key Takeaways**

- Article 6 is an enabler (by providing rules for voluntary cooperation and an accounting framework); it does not contain anything about either national or global targets or ambitions.
- Co-operation under Article 6 is not global, as participation is limited to those countries who voluntarily choose to use Article 6. Some countries currently have NDCs that restrict them to domestic action alone.
- Article 6 itself will not lead to a global carbon price, as it is not designed to do so. However, it has the potential to assist in developing transparency around carbon pricing.
- In the move to net-zero emissions (Article 4.1 of the Paris Agreement), the potential to cut greenhouse gas emissions and balance any that remain with removals is not spread evenly around the world. Article 6 will provide the framework to develop a global response so that countries can achieve an emissions “balance” cooperatively.
- CCS fits under Article 6 as emission reduction technology and carbon removal technology (negative emission technology).
- While the rules for Article 6 are still being negotiated, there is already considerable activity in Article 6 piloting. The current range of pilot work is shown in [“Article 6 Pilots”](#) below.
- There is still a need to understand better how accounting rules and reporting guidelines operate when it comes to accounting for carbon removal with CCS, such as with Direct Air Capture with CCS.



## Introduction

In recent times, there has been a growing interest within the Institute's membership – and elsewhere – in the opportunities to drive the deployment of CCS by the provisions of Article 6 of the Paris Agreement. This paper draws together all the latest information and thinking on the Article and its role in enabling countries to meet the objectives they have set themselves in their Nationally Determined Contributions (NDCs), with particular emphasis on how it can impact on CCS.

Whilst the Paris Agreement and its Article 6 set the framework, the ongoing negotiations focus on the structures and procedures that would enable countries to understand how to operate within that framework. It must be recognised that at this stage, the text operationalizing Article 6 is under negotiation – there are important areas where issues are still controversial.

The Institute is an accredited Observer to the UN Framework Convention on Climate Change (UNFCCC). As such it attends the regular UNFCCC meetings (the COPs), meetings of the subsidiary bodies and others (e.g. the Green Climate Fund Board). Over the years, this has given the Institute first-hand insights into the developments in the international climate change negotiations, as well as enabling it to develop an important network of policy makers, negotiators and informed observers.

## A little bit of history – the market mechanisms in the Convention

Although market mechanisms are not mentioned specifically in the UNFCCC (the Convention) or its Kyoto Protocol, the intention that they would play a role in meeting the Convention's objectives was always there. Article 4.2. (a) of the Convention states, inter alia, “[...] *These Parties may implement such policies and measures jointly with other Parties and may assist other Parties in contributing to the achievement of the objective of the Convention and, in particular, that of this subparagraph.*”

It was the express intention of key negotiators of the Kyoto Protocol (led by the USA) that it should permit the use of flexibility (i.e. market mechanisms) in meeting the emissions reduction targets that developed nations undertook under the Protocol. This flexibility took three forms:

- **Joint implementation (JI)** (fleshing out Article 4.2. (a)) – which applied to those developed countries with targets and is a transfer of the emission reduction tonnes from one party to the other (i.e. avoiding double counting).
- **The Clean Development Mechanism (CDM)** – which allowed countries with targets to carry out reduction projects in developing countries and count those reductions against their targets. As the developing country did not have a target, the issue of double counting does not arise.

Both JI and CDM were overseen by UNFCCC committees that determine the eligibility of projects – and the transfers of the reduction tonnes are recorded in a central registry



administered by the UNFCCC Secretariat.

- **International Emissions Trading (IET)** – trading between countries with targets only, using the same central registry – but essentially nothing further has transpired by way of establishing rules. The main arguments were around whether the Article allowed countries to delegate trading to companies but that was never agreed.

The Kyoto Protocol is in force until the end of 2020 when the Paris Agreement becomes operational.

## Article 6 of the Paris Agreement

Under the Paris Agreement, all countries who have ratified it are required to set their own targets and will need to report on their emissions and relevant progress. This is a change compared to the previous setting where developed countries had targets and used JI between themselves, and CDM as an offset mechanism for projects in developing countries without targets.

Article 6 establishes a framework for two approaches to markets and one for non-markets although the word appears only once in the Article (“non-market”). The negotiators did not have neither the time nor the inclination to agree on names for these mechanisms, so they are still referred to by their article number.

They are:

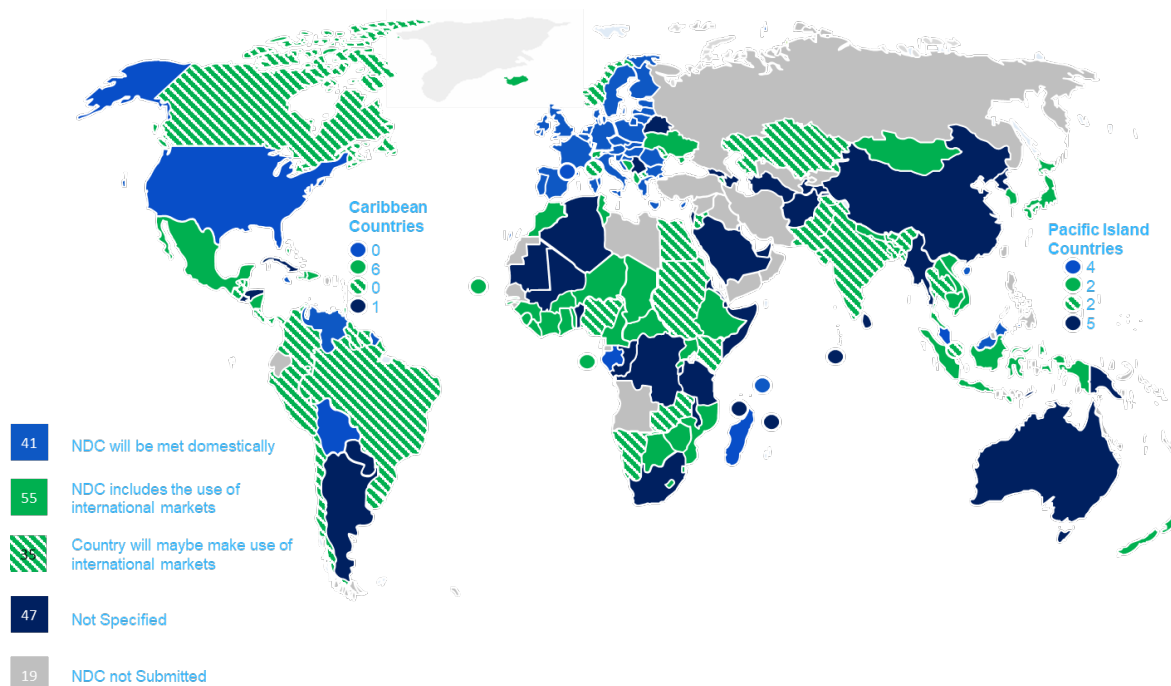
- **Article 6.2** which allows countries to strike bilateral and voluntary agreements to trade units (internationally transferred mitigation outcomes, ITMOs). It establishes an accounting framework that also applies for Article 6.4.
- **Article 6.4** creates a centralised governance system for countries and the private sector to trade emissions reductions anywhere in the world. This system is due to replace the CDM, established under the Kyoto Protocol, while becoming more like JI (projects between countries with targets). The system will be supervised by a specifically established UN Supervisory Body, which tends to mean heavy layer of administration to operate under it (article 6.2 should be easier to use).
- **Article 6.8** develops a framework for cooperation between countries to reduce emissions outside market mechanisms, such as aid, financing adaptation, using taxes to deliver emission reductions. In the current draft texts, it is a work program, not an accounting framework like 6.2 or a mechanism like 6.4. Whether, and to what extent this framework ends up being used, is not clear. The concept of non-market was thrown into the negotiations by anti-market mechanism countries to balance out the text.

## How will countries use Article 6?

Given that the use of international co-operation mechanisms is now a decision of individual countries, it is useful to take stock of which countries have NDCs that allow the use of international cooperation to meet their targets. The International Emissions Trading Association’s (IETA) graph below provides a good overview and shows that we are not talking about a full global market.



**Figure 1. Market friendly NDCs**



Source: UNFCCC NDC registry data elaborated by IETA

## How is CCS included in Article 6?

CCS is either directly (or by inference) recognised within the Convention and the Kyoto Protocol (and in the Governing Instrument of the Green Climate Fund). Article 4.1 of the Paris Agreement refers to “a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.” All this gives assurance that CCS is an environmentally sound technology that can be deployed to significantly reduce emissions in a number of sectors.

However, as ever, the devil is in the detail. The current negotiating text(s) on Article 6 accounting refer to “emission reductions” and “removals” - so, by inference, CCS technologies (including Negative Emission Technologies, NETs) are covered for both 6.2 and 6.4.

With regard to **6.2** – whether CCS is accepted or not would essentially be a matter for the countries “engaging on a voluntary basis in cooperative approaches” and the only issue would be how they account for it in their GHG inventories<sup>1</sup>. Until specific rules for Article 6 are established, the avoidance of double counting is addressed in the guidelines for the transparency framework, where paragraph 77 (d) states, inter alia:

<sup>1</sup> For example, a) how each country applies GHG inventory guidelines to accounting for CCS as well as countries agreeing between themselves on how to account for transboundary transport and storage of CO<sub>2</sub> b) how to account for CO<sub>2</sub> removal with CCS



*“(i) The annual level of anthropogenic emissions by sources and removals by sinks covered by the NDC on an annual basis reported biennially;*

*(ii) An emissions balance reflecting the level of anthropogenic emissions by sources and removals by sinks covered by its NDC adjusted on the basis of corresponding adjustments undertaken by effecting an addition for internationally transferred mitigation outcomes [...]”.*

The point is that even in the absence of agreement on Article 6 there is now text guiding countries on how to account for removals, and how to avoid double counting, and given the bottom up nature of the Paris Agreement, there is no obstacle to them carrying out CCS activities.

The situation is a little more complicated for future **6.4** projects in that there is more work that will need to be carried out to get the mechanism up and running. The Transparency text above gives guidance but as the mechanism is essentially project based there will be more work needed on the modalities. There is also the issue of the transfer of CCS modalities and procedures from the CDM to the 6.4 mechanism – in current state of the negotiations that will not necessarily be a straightforward matter.

For **6.8** (non-market approaches), a work program has been proposed.

The existing accounting framework under the UNFCCC and Paris Agreement (GHG inventories compiled using IPCC guidelines) already includes CCS. Any incentives under Article 6 will need to be compatible with these GHG accounting rules which are built to track emission reductions and removals.

**Table 1. CCS relevant references in the draft negotiating texts on Article 6**

GCCSI observation	Reference to CCS as emission reduction technology in the draft texts	Reference to CCS as carbon removal technology in the draft texts
<p><b>Article 6.2</b></p> <p>Most relevant concept to work with because this will be used as a blueprint for cooperation (and already is for pilots) even if Article 6 rules will not be agreed</p>	<p>ITMOs (traded under article 6.2) are defined as <b>emission reductions</b> or emission removals<sup>2</sup></p>	<p>ITMOs (traded under article 6.2) are defined as emission reductions or <b>emission removals</b></p> <p>Also relevant in draft texts:</p> <p><i>“[...] minimizing the risk of non-permanence of mitigation and when reversals of emissions removals occur, ensuring that these are addressed in full.”<sup>3</sup></i></p>

<sup>2</sup> 1 (b) in the Annex of draft texts on Article 6.2

<sup>3</sup> 22 (b) in the Annex of draft texts on Article 6.2





<p><b>Article 6.4</b></p> <p>Will be used if Article 6 rules are agreed. As this is largely project based and supervised by UN Supervisory Body, 6.2 might be more attractive</p>	<p><i>“[...] shall be designed to achieve mitigation of GHG emissions, including, emission reductions, increasing removals [...]”<sup>4</sup></i></p>	<p><i>“[...] shall be designed to achieve mitigation of GHG emissions, including, emission reductions, increasing removals [...]”</i></p>
<p><b>Article 6.8</b></p> <p>Might be used if Article 6 rules agreed.</p>	<p>Could be used to finance adaptation and in this context, demand for low-carbon cement could be relevant for example.</p> <p>Tax incentives or emission standards?</p>	<p>Tax incentives or emission standards?</p>

## Unfinished negotiations on Article 6

The outstanding issues, unresolved at COP 25 are:

How to deal with **outstanding issues from the Kyoto Protocol**. There are a number of CDM projects that are still generating credits (i.e. the project is still operational) – if or how do they transfer into the new mechanism and are those credits still valid. There is a similar issue around unused Kyoto units for developed countries who had binding targets under the Protocol. Equally, there are still outstanding discussions whether the types of projects and methodologies approved by the CDM Executive Board can automatically be transferred to the new Article 6.4 mechanism.

**Corresponding Adjustments** (or “avoiding double counting”) – this arises from the fact that many NDCs are not economy wide and don’t use the same metrics. As Article 6 is intended to help countries achieve their NDCs, some argue that reductions from a project covering a sector not included in an NDC can be included for a country’s reporting on progress towards achieving its NDC (and also be reported as a reduction by the sponsoring country).

**Share of proceeds** – under the CDM, a certain number of the credits generated by a project were retained for to be used to replenish the Adaptation Fund. Whilst this has been accepted for the 6.4 mechanism – whether it should also apply to 6.2 is undecided.

**Overall mitigation** - contribution to net mitigation, through the delivery of an overall mitigation in global emissions. The extent to which 6.4 moves beyond offsetting.

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<sup>4</sup> 32 (a) of Annex in draft texts on Article 6.4 from 13 December and 14 December; 31 (a) of Annex in draft text on Article 6.4 from 15 December





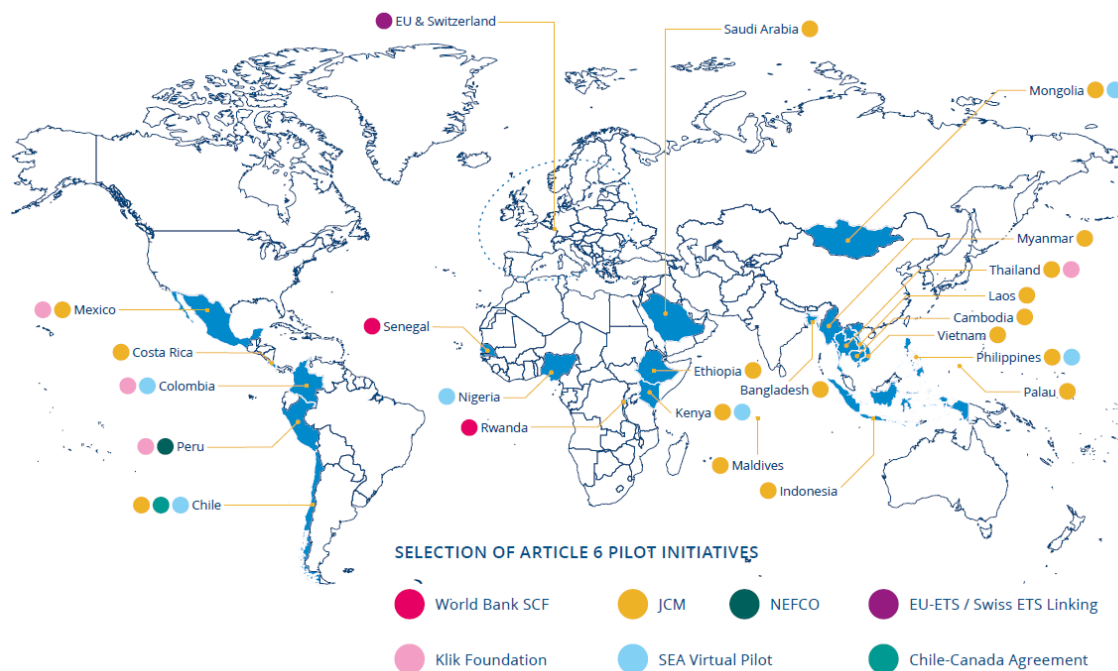
All of this shows that countries have a range of expectations for the Article 6 – some would like to see very flexible rules while others stand for stringent rules. In addition to this as the overarching reason, the negotiations on Article 6 are linked with other negotiation streams which tend to run into problems, including enhanced ambition, funding for loss and damage and \$100-billion-a-year funds for climate finance.

## Article 6 Pilots

Several countries have already started discussions with counterparties on running pilot 6.2 schemes – making it clear that the stalling of the Article 6 negotiations is no real impediment to those countries who want to push ahead<sup>5</sup>. The pilots by Swedish Environment Agency (SEA) aim show how different mitigation activities could be designed under Article 6, under different country-specific settings (SEA, 2020). The outcome should formulate learnings, best practices and incubate ideas that can help inform the framework design and implementation (South Pole, 2020).

Another example are Switzerland and Ghana who are responding to the need to implement enhanced climate actions, by moving ahead with an agenda to engage in “cooperative approaches” under Article 6, to complement Ghana’s Nationally Determined Contributions to address climate change (UNDP, 2020). Figure 2 below maps out a selection of Article 6 pilot activities.

**Figure 2. Selection of Article 6 pilot initiatives**



Source: Greiner et al, 2019

<sup>5</sup> For further reference, please see Hone, D, 2020. “Getting going with Article 6 of the Paris Agreement”



## What next?

Negotiations will resume at upcoming sessions to try and reduce the outstanding issues so that agreement can be reached at COP 26. Making a resolution more complicated is the fact that, in the closing stages of COP 25, it was agreed that the basis for future discussions will include all the draft texts prepared by the Chilean COP presidency in Madrid, at the insistence of Brazil and with the support of the EU and others. This means that many issues apparently resolved in the near-final drafts released on the final Sunday of COP 25 are likely to be reopened when the negotiations resume during the next climate talks.



## References

Evans et al, 2019. In-depth Q&A: How 'Article 6' carbon markets could 'make or break' the Paris Agreement.

[Online]

Available at:

<https://www.carbonbrief.org/in-depth-q-and-a-how-article-6-carbon-markets-could-make-or-break-the-paris-agreement>

[Accessed 02 April 2020]

Greiner et al, 2019. Moving towards next generation carbon markets. Observations from Article 6 pilots.

South Pole, 2020. Practice makes perfect: a project developer's view on Article 6 pilots.

[Online]

Available at:

<https://www.southpole.com/blog/project-development-article-6-pilots>

[Accessed 02 April 2020]

Swedish Energy Agency (SEA), 2020. Operationalizing Article 6 – Lessons from the Swedish Energy Agency's virtual pilots. [Online]

Available at:

<https://www.southpole.com/news/operationalizing-article-6-lessons-from-the-swedish-energy-agencys-virtual-pilots?>

[Accessed 02 April 2020]

United Nations Development Programme (UNDP), 2020. Switzerland and Ghana sign MoU to take action on climate commitments. [Online]

Available at:

<https://www.africa.undp.org/content/rba/en/home/presscenter/pressreleases/2020/switzerland-and-ghana-sign-mou-to-take-action-on-climate-commitm.html>

[Accessed 02 April 2020]



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