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To: Iceland's Ministry of Environment, Energy and Climate *Working Group on Carbon Markets*

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## Cross-border Transactions for CCS – a Legal Analysis

### Executive Summary

- The allowance requirement under the EU ETS shall not arise in respect of emissions verified as captured and transported for permanent storage in accordance with the CCS Directive. Thus, an entity regulated under the EU ETS can use CCS to reduce its emissions and subsequent EU ETS allowance obligations.
- However, any emissions (i.e. leaks or fuels used in the transport) from carbon capture, transport and storage (CCS) activities fall under the EU ETS.
- The country importing and permanently storing the CO<sub>2</sub> (in accordance with the CCS Directive) will not need to report this under EU regulations as an emission, unless it leaks.
- The London Protocol covers CO<sub>2</sub> transported for storage with the purpose of storage offshore and does not apply to CO<sub>2</sub> transported with the purpose of storage on land. Thus, there is no requirement for relevant “arrangements”, including bilateral agreements, if storage of CO<sub>2</sub> takes place on land.
- For transport of CO<sub>2</sub> for offshore storage, the EU ETS and CCS Directives act as relevant “arrangements” as required by the London Protocol, and bilateral arrangements/agreements can be agreed only on issues that are not covered by these directives.
- Reporting on CCS/CDR transactions with Paris Agreement’s article 6 IMTOs is required (in the “article 6.2 Initial Report”). It is also required to report on CCS/CDR under the ETF, except if these are negative emissions.
- If the NDC is silent on negative emissions, and the transactions of CCS/CDR units are *not* under article 6, there are no reporting requirements on negative emissions under the ETF.
- If the NDC targets covers CCS or carbon dioxide removal (CDR), including targets on negative emission, information on these topics will need to be included under the ETF reporting.
- The IPCC’s Guidelines on GHG inventory reporting is mainly concerned with leakage from CCS activities and does not provide clear guidance on reporting of storage or direct air capture (DAC).
- A country can set CCS or CDR/DAC targets for national and/or NDC achievement without recourse to Paris Agreement’s (PA) article 6. However, national requirements including quality assessments and third-party verification of the removal units could be helpful to ensure environmental integrity.
- Transactions for CCS and DAC can take place without recourse to PA article 6. However, for ITMOs transactions, compliance with article 6 is a prerequisite.
- National regulations on PA article 6, including the State’s authorization of the use of article 6, will be necessary for private sector to be able to engage in business-to-business or government-to-business ITMOs transactions, including transactions for CCS and DACs.

## INTRODUCTION

CCS is one of the key technological solutions for ensuring a pathway to 1.5 degrees in alignment with the Paris Agreement. Permanently stored CO<sub>2</sub> in geological formations, if appropriately managed, will be one of the few robust carbon neutral solutions for sectors such as the cement and chemical production industries. However, global rates of CCS deployment fall far below what is needed. For countries and private stakeholders to utilize this technology, it will be necessary to ensure that the geological storage site is situated in areas of low geopolitical risk, and with the required institutional and policy instruments in place.

Deployment of CCS technology, even when the host state in question is not directly involved in the transactions, could provide an array of direct or indirect benefits, such as taxable income, increased employment opportunities, synergies for other climate-related technologies, as well as strengthened geopolitical and private sector ties that can be utilized in other areas. In addition, Iceland may also utilize the emission reductions from direct air capture (DAC) stored and sold by Icelandic companies to private companies – for Iceland’s own GHG emission inventories. If the scale of DAC is sufficiently large, and given that the price of CO<sub>2</sub> will increase, this could provide Iceland with substantial income or reduced expenditures to achieve its net-zero target.

With the increased focus on CCS technology, countries now look to develop their national legislation and regulations to ensure international competitiveness. Iceland has an advantage in being a geopolitically stable country with a highly educated workforce, technological readiness and suitable storage sites, among others. However, it will be key to deepen the understanding of the legal and policy requirements, and in particular on whether, and, if so, how CCS in Iceland potentially affect national emission inventories. In addition, it will be essential to understand whether and how article 6 of the Paris Agreement will be applicable. Benefits from understanding the potential linkages between CCS and article 6, but also whether and how CCS deployment can take place outside of article 6, will give Iceland the necessary information to develop its carbon markets and CCS regulations in a way that provides the greatest benefits for Iceland’s government as well as its private sector.

## **PART 1: The current regulatory and policy landscape for CCS transactions**

### **1. *The current international and regional (EU) regulatory and policy regime for CCS transactions – an introduction***

The current international regulatory and policy regime for cross-border CCS transactions is in the early stages. Cross-border transportation of CO<sub>2</sub> for the purpose of storage offshore is no longer prohibited under the London Protocol and its amendments. The Paris Agreement's (PA) cooperation mechanism, its article 6.2 and 6.4, is under discussion by the Parties to the PA, and is meant to ensure a robust market for cross-border trade of emission reductions and removals, including CCS. Six pioneering Parties to the PA have already entered into agreements for the sale and purchase of article 6.2 units, also called ITMOs. None of these include technological carbon removals.

The Intergovernmental Panel on Climate Change's (IPCC) reporting guidelines are geared towards emission reductions and carbon removals from sinks. The same is true for the Paris Agreement's article 4 dealing with mitigation. Thus, the reporting requirements under the IPCC guidelines and the PA's Enhanced Transparency Framework (ETF) do not specifically deal with the issue of CCS, unless CCS activities lead to emissions (usually referred to as leakage). For carbon removals independent of any emission reduction activities, therefore, the reporting guidelines are sparse.

Further, the article 6 transactions do not provide for any specific requirements for stored CO<sub>2</sub>, as it aims to ensure corresponding adjustments for the reduced/removed emissions without taking into account where the CO<sub>2</sub> is stored. In fact, third party storage operators will not be part of the ITMOs developed unless the Party selling the ITMOs has stipulated this (perhaps if it is a requirement for taking part in ITMOs transactions stipulated by the country in which the ITMOs is created). Please note, however, that general requirements for ensuring environmental integrity are applicable, and that it is also likely that the Parties could develop further guidance on storage requirements for emission reductions/removals ITMOs meant for storage.

An array of bilateral agreements entered into in recent years between EFTA and EU Member States aiming to strengthen cross-border cooperation on CCS transport and storage underpins the seriousness of government ambition on CCS. The development of a regional (EU) market for technological CO<sub>2</sub> removals is meant to strengthen government and non-state actors in their pursuit of carbon neutrality.

Finally, the application of the EU EEA Agreement is not straight forward when it comes to CCS transactions. Again, CO<sub>2</sub> as a commodity for storage purposes is not specifically dealt with, and there is considerable uncertainty related to whether the EEA Agreement is applicable for CO<sub>2</sub> with the aim of carbon storage between two EEA States, in particular if the storage site is situated on the continental shelf.

Finally, it should also be noted that the legal application of international and EU regulatory frameworks for storage of CO<sub>2</sub> for carbonation purposes on land versus in geological formations under the seabed often differ. The latter seems to have received much greater attention, perhaps due to the risks of leakage, which again has been the key focus of many of these regulations, the EU ETS included.

Under follows an in-depth assessment of the relevant international and EU regulatory and policy regime on CCS transactions.

**a) EU's view on article 6 and CCS.**

There are no formal views on article 6 and CCS within the EU Commission. The following is a summary from an informal chat with a Policy Officer in the European Commission in the Directorate general for Climate Action. Thus, the following is merely informal input on the current status of key issues relevant for article 6 and CCS.

First, it is important to bear in mind that there are no official views and no common understanding on the issues in question and they are currently being discussed behind closed doors, openly between Parties bilaterally as well as in conjunction with the EU Commission's work on developing reviews in accordance with article 30 of the EU ETS Directive.

Second, there are overarching aspects that will influence the development of the EU regulatory framework for CCS/CDR transactions. One of the key aspects is how the market for CCS will function (and how the EU Commission will assess how it will function). Currently, the market is small and there are few CCS transactions in Europe. Other aspects include how the negotiations under the Paris Agreement's article 6.2 and 6.4 will develop, and what the Member States views are on using article 6. In assessing the current regulatory framework on CCS and CDR it is also important to bear in mind that the EU objectives are until 2030 and then the current legislation will be revised. It is for example not certain what will happen with the EU ESR after 2030.

Further, the EU Commission is also awaiting the report by the IPCC, the Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture Utilization and Storage, to be finalised by 2027. It is assumed that it is unlikely that there will be any formal guidance from the IPCC on reporting on negative emissions in the national GHG inventory reports before then. Once the report has been published, it is likely to lead to a discussion between the Parties of the PA on how to include it in the official guidelines of the UNFCCC. This process is long and time consuming. In the meantime, Parties are free to include information on the topic as they see fit, and creative solutions have been proposed such as entering information under the heading "other" in the reporting table.

In understanding how the regulatory framework will be applied, it is important to bear in mind that the issue of cross border transport of CO<sub>2</sub> is covered by the EU ETS, which divides responsibility according to which jurisdiction the CO<sub>2</sub> emissions are taking place. For transport, the question is which jurisdiction is responsible for the transporting ship. Thus, liability is transferred together with the CO<sub>2</sub> transfers (from the capture installation – to the transporting ship – to the storage installation).

On specific topics, there are ongoing bilateral discussions on whether an EEA country can choose to rely on the EU ETS only (and not on article 6.2 of the Paris Agreement) for emission reductions under the EU ETS from point sources that are captured for cross-border transport with the purpose of storage. The EU Commission notes that many EEA countries have a clear wish to not go through article 6, but instead through the EU ETS. It also noted that the regulatory framework for PA article 6 is ongoing and that the EU Commission will have to see how these discussions are going before the issue can be resolved. Further,

EEA countries, such as Switzerland and Sweden, have already entered into agreements to try approaches under PA article 6.2 and that there is a strong need to be discussing this. It will be important to avoid double counting, hereunder to undertake corresponding adjustments and ensure authorisation. The issue is that there are no regulation or legislation on this topic and that there is no official view from the EU Commission on these types of transactions, with differing viewpoints also within the EU Commission.

On the reporting under the common reporting table (CRT) and the Common Tabular Format (CTF) under the UNFCCC/PA, Member States can report on national targets for negative emissions as these are currently outside of the EU's NDC. However, the reporting on national targets for negative emissions should not be confused with the reporting on the EU's NDC. This is because the EU NDC covers the EU ETS, ESR and LULUCF, which (currently) do not cover negative emissions.

The EU Commission will, however, in accordance with the EU ETS article 30, assess potential options for including negative emissions in the EU ETS by 31 July 2026. This includes how to link removals to the EU ETS, whether it is a good idea, the economic and environmental benefits as well as an impact assessment. Also, whether to leave everything to the market or whether it will be necessary to introduce national targets to incentivise the private sector actors. If it is not found to be a good idea to include it in the EU ETS, then the possibility to include it in the ESR will be assessed. However, it should be noted that the ESR is only until 2030. In any event, it is highly unlikely that carbon removals will not be part of the framework in the EU from 2030 and beyond.

**b) Does transaction of CO<sub>2</sub> with the aim of carbon storage, between two EEA States, come within the regime of the EEA Agreement of Free movement of goods?**

In answering the question above, it is first necessary to assess whether CO<sub>2</sub> in fact falls in under the Agreement on the European Economic Area (EEA Agreement). The purpose of the EEA Agreement is to allow EEA EFTA States to participate in the EU's internal market with its free movement of goods, services and persons.

Article 8.3 of the EEA Agreement states that the provisions of the EEA Agreement shall apply *only* to products falling within Chapters 25 to 97 of the Harmonized Commodity Description and Coding System.<sup>1</sup> The Harmonized Commodity Description and Coding System (the Harmonized System) is a nomenclature database for traded products and commodities.<sup>2</sup>

The Harmonized System lists CO<sub>2</sub> in Section VI – products of the chemical or allied industries – under sub-heading 2811.21.<sup>3</sup> CO<sub>2</sub> destined for storage is not a “product of the chemical or allied industries”. The EEA Agreement's key objective is to ensure the free movement of goods for the common European market. Although CO<sub>2</sub> for storage is not a product specifically created with the purpose of entering the tradable market, it is nevertheless a commodity that has a value and that can be bought and sold on the European market.

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<sup>1</sup> Agreement on the European Economic Area [1994] OJ No L 1, 3.1, 3 and EFTA States' official gazettes. Available at: <https://www.efta.int/sites/default/files/media/documents/legal-texts/eea/the-eea-agreement/Main%20Text%20of%20the%20Agreement/EEAagreement.pdf>

<sup>2</sup> It has been established by the World Customs Organization (WCO) and it is also referred to as the HS Nomenclature, the Harmonized System, or HS.

<sup>3</sup> World Customs Organization. “Harmonized System”, Section VI, chapter 28, Heading 2811, subheading 2811.21. Available at: <https://www.wcotradetools.org/en/harmonized-system>

As such, the validity of distinguishing (i) CO<sub>2</sub> resulting from technological emission reduction/removal from (ii) CO<sub>2</sub> deliberately produced by the chemical industry, is doubtful if a broad interpretation is chosen. Here, it can be argued that “CO<sub>2</sub>” is listed in the Harmonized System, regardless of its place in the nomenclature. This view is supported by the fact that the Harmonized System also lists a significant number of waste and scrap materials which are also not products and commodities in the traditional sense.

On the other hand, if a narrow interpretation is chosen, it can be argued that CO<sub>2</sub> for storage purposes is not a product derived from the chemical industry, is not listed in the Harmonized System and therefore does not fall within the EEA Agreement.

Whether the narrow or broad interpretation should be relied upon will need further research and a deeper legal assessment. Going forward, it will be assumed that CO<sub>2</sub>, regardless of its purpose, falls within the EEA Agreement.

Second, it will be necessary to assess where the delivery of the CO<sub>2</sub> is meant for storage. The application of the EEA Agreement varies depending on whether the CO<sub>2</sub> is delivered onto the territory of the EEA Contracting Party for onshore storage or whether it is meant for offshore storage.

In assessing this, article 126.1 of the EEA Agreement must be considered, which states that the EEA Agreement applies to the territories of EU Member States and EFTA States parties to the EEA Agreement, hereunder Iceland, Liechtenstein and Norway.

Onshore storage of CO<sub>2</sub> clearly falls within the “territory” of the relevant EEA State, and therefore, the EEA Agreement is applicable. However, for offshore storage, it is not as clear.

EU case law stipulates that if the activity is part of the of the State’s exercise of sovereign rights, then it is deemed to take place in the territory of the Member State and EU law is applicable to it.<sup>4</sup> The storage of CO<sub>2</sub> usually takes place beyond the territorial sea, on the continental shelf in the European Economic Zone (EEZ). As such, storage of CO<sub>2</sub> for Member States can be said to be an exercise of “sovereign rights” as defined under the UN Convention for the Law of the Sea (UNCLOS).<sup>5</sup>

However, the case law assesses the application of article 299 of the EC Treaty, and as such is not necessarily directly applicable for the assessment of article 126 of the EEA Agreement.<sup>6</sup> Further, not all EEA countries agree with the ECJ’s interpretation that a territory stretches beyond the territorial sea and into the EEZ

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<sup>4</sup> See ECJ cases: Case C-37/00 *Weber v Universal Ogden Services Ltd*; Case C-6/04 *Commission v United Kingdom*; and Case C-347/10 *Salemink*.

<sup>5</sup> UNCLOS (1982) 1833 UNTS 397, article 56.1(a) and article 77.1. Available at: [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)

<sup>6</sup> Norwegian Government, “Ot.prp nr.99 (2005-2006)”. Available at: <https://www.regjeringen.no/no/dokumenter/otprp-nr-99-2005-2006-/id190602/?ch=12> Also see: the Norwegian Government’s White Paper, “Meld. St. 5 (2012-2013) Report to the Storting – The EEA Agreement and Norway’s other agreements with the EU” (2012-2013), page 13. Available at: [https://www.regjeringen.no/globalassets/upload/ud/vedlegg/europa/nou/meldst5\\_ud\\_eng.pdf](https://www.regjeringen.no/globalassets/upload/ud/vedlegg/europa/nou/meldst5_ud_eng.pdf)

and on the continental shelf. For example, Norway has submitted on a number of occasions in various legal disputes that the EEA Agreement is *not* applicable outside the Norwegian territorial waters – in its EEZ and its continental shelf.<sup>7</sup> This is in line with the interpretation under the UNCLOS, hereunder that a State’s “territory” is limited to the land territory and its territorial sea, whereas it has sovereign rights on the continental shelf and in its EEZ. As such, the EU and Norway have differing opinions on the application of international law and the EEA Agreement as it pertains to defining “territory”.

In conclusion, if a broad interpretation of the Harmonized System’s coverage of CO<sub>2</sub> is taken, the transaction of CO<sub>2</sub> with the aim of carbon storage on land or in the territorial sea, between two EEA States, comes within the regime of the EEA Agreement. However, for the storage of CO<sub>2</sub> on the continental shelf within the EEZ, there might be differing opinions on the applicability of the EEA Agreement. The same can be said if a narrow interpretation of the Harmonized System’s coverage of CO<sub>2</sub> is applied, as the EEA Agreement is meant to only cover products listed there.

**c) If so, are there any special formalities or restrictions set out in EEA legislation regarding such transactions?**

Part II of the EEA Agreement governs the free movement of goods within the European Economic Area (EEA). In short, if the EEA Agreement applies, the Contracting Parties must not in their trade with the other Contracting Parties impose customs (article 10), quantitative restrictions (articles 11 and 12), and tax in excess of tax on similar domestic products (article 14).

Thus, as long as tax on CO<sub>2</sub> imported for storage is not higher than tax on CO<sub>2</sub> for national storage, it is not incompatible with article 14 of the EEA Agreement. In other words, a tax can be introduced for CO<sub>2</sub> imported for the purpose of storage, if it is done in a non-discriminatory manner compared with CO<sub>2</sub> captured within the EEA State. Please note that this is a preliminary finding and further legal assessment is needed to clarify issues pertaining to taxation.

Further, article 13 provides certain exceptions to the prohibition of quantitative restrictions. Thus, an EEA State is allowed to introduce quantitative trade restrictions on grounds of public morality, public policy, public security, protection of health and industrial property, and so on.

**2. EU policies and regulations relevant for CCS and transport**

For the EU to reach its net-zero GHG goal by 2050, it will be necessary to reduce emissions drastically and remove the remaining CO<sub>2</sub> emissions. By 2030, it is proposed that the EU develops at least 50 million tonnes storage capacity, which should grow to around 280 million by 2040.<sup>8</sup> Further, it is estimated that 450 million tonnes of CO<sub>2</sub> per year will have to be captured and either stored or utilized by 2050.<sup>9</sup> After

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<sup>7</sup> Norwegian Court of Appeals cases: LA-2001-1152, Frostating Court of Appeal; LF-2006-24118, Agder Court of Appeal. EFTA Surveillance Authority (ESA) cases: ESA Reasoned Opinion, case no.2229 (2 April 2004); and the EFTA Court case E-8/19 (16 July 2020).

<sup>8</sup> European Commission, “Press Release: Commission sets out how to sustainably capture, store and use carbon to reach climate neutrality by 2050” (6 February 2024). Available at: [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_24\\_585](https://ec.europa.eu/commission/presscorner/detail/en/IP_24_585)

<sup>9</sup> European Commission, “Legislative Framework”. Available at: [https://climate.ec.europa.eu/eu-action/industrial-carbon-management/legislative-framework\\_en](https://climate.ec.europa.eu/eu-action/industrial-carbon-management/legislative-framework_en)



2050, the EU is committed to negative emissions.<sup>10</sup> Direct air capture (DAC), together with capture from biogenic sources, will count for close to half of the CO<sub>2</sub> captured annually by 2040.

The EU ETS and the CCS Directive are the key legal and regulatory instruments covering the capturing, transporting and storing CO<sub>2</sub> in Europe, described below. Other relevant EU policies and regulations relevant for CCS and transport are covered in Annex 2.

## **a) CCS in EU's NDC**

Notably, neither CCS technology nor the CCS Directive are mentioned in the EU's NDC issued 16 October 2023. However, the EU ETS is a key part of the EU's NDC and emission reductions covered under the EU ETS can be subtracted from the EU ETS installations CO<sub>2</sub> emissions in accordance with the CCS Directive. The EU ETS, however, does not cover negative emissions, hereunder DACs or carbon removals independent of emissions. As such, the CCS Directive is indirectly relevant as it pertains to the EU ETS.

Further, the NDC notes the importance of the EU ETS Innovation Fund, which will provide funding for “the commercial demonstration of innovative low-carbon technologies, aiming to bring to the market industrial solutions to decarbonise Europe and support its transition to climate neutrality.”<sup>11</sup> Although it is not mentioned in the EU NDC, the EU ETS Innovation Fund also covers CCS and DAC activities, hereunder “environmentally safe capture, transport and geological storage (CCS) of CO<sub>2</sub> and direct capture of CO<sub>2</sub> from the atmosphere with safe, sustainable and permanent storage (DACs) in geographically balanced locations.”<sup>12</sup> Thus, it can be assumed that negative emissions (i.e. from CCS, bio-CCS and DACs) are not part of the EU's NDC.

## **b) CCS in the European Emission Trading Scheme (EU ETS)**

The EU ETS is one of the EU's cornerstones in achieving its 2030 and 2040 climate targets and its goal of climate neutrality by 2050. The Directive 2003/87/EC on the EU ETS (EU ETS Directive) establishes a system for GHG emission allowance trading within the EU and relevant EEA States.<sup>13</sup> It puts a price on carbon by setting a cap on the maximum number of emission allowances for its covered sectors.<sup>14</sup> In 2023, the cap was tightened to bring emissions down by 62% by 2030 compared to 2005 levels.<sup>15</sup>

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<sup>10</sup> European Commission, “European Climate Law”. Available at: [https://climate.ec.europa.eu/eu-action/european-climate-law\\_en](https://climate.ec.europa.eu/eu-action/european-climate-law_en)

<sup>11</sup> EU's NDC, “Update of the NDC of the European Union and its Member States” (16 October 2023), page 7. Available at: <https://unfccc.int/sites/default/files/NDC/2023-10/ES-2023-10-17%20EU%20submission%20NDC%20update.pdf>

<sup>12</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for GHG allowance trading within the Union and amending Council Directive 96/61/EC (EU ETS Directive), (consolidated text as of 5 August 2024). article 10a para 8. Available at: <http://data.europa.eu/eli/dir/2003/87/2024-03-01>

<sup>13</sup> Ibid. EU ETS Directive

<sup>14</sup> The EU ETS covers industries such as energy, manufacturing, aviation (mainly within the EU), and maritime transport. Recently, a separate emissions trading system was introduced, EU ETS2, that covers fuel combustion in buildings, road transport and additional sectors that will be applicable from 2026.

<sup>15</sup> European Commission, “Our ambition for 2030”. Available at: [https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/our-ambition-2030\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/our-ambition-2030_en)

The fossil energy and industrial point-source capture of GHGs can be used by regulated entities to reduce their compliance obligations under the EU ETS. As such, the EU ETS is driving the demand for emission reductions, including carbon capture and storage (CCS) for the affected industries. In other words, the EU ETS incentivize the capture of CO<sub>2</sub> for permanent storage if the price of compliance with the EU ETS is higher than the cost of GHG capture. For example, the price signal from the EU ETS hit EUR 100 per tonne in February 2023, boosting the business case for CCS, CDR and other green technologies.<sup>16</sup>

The EU ETS Directive is also directly relevant for CCS activities. Any *emissions* from the activities of capture, transport and geological storage of CO<sub>2</sub> which are permitted under the CCS Directive are covered by the EU ETS Directive. As such, any emissions (i.e. leaks or fuels used in the transport) from these activities themselves fall under the EU ETS.

Further, an obligation to surrender allowances under the EU ETS shall not arise in respect of emissions verified as captured and transported for permanent storage to a facility for which a permit is in force in accordance with the CCS Directive.<sup>17</sup> In other words, if an entity regulated under the EU ETS uses CCS to reduce its emissions, the CO<sub>2</sub> captured is subtracted and therefore not subject to the allowance requirements under the EU ETS, as long as it is stored in accordance with a CCS Directive permit. Further, when a transfer from the ship or truck to the network or storage site is completed, the capturing installation can subtract the CO<sub>2</sub>.<sup>18</sup> It is worth noting that only storage facilities in the EEA can obtain a permit under the CCS Directive.<sup>19</sup>

Further, CO<sub>2</sub> captured by an ETS installation can be transferred to another ETS installation for transport or storage, and it does not make a difference whether this transfer crosses national borders or not as long as it remains in the ETS.<sup>20</sup> The EU Commission has clarified that imported CO<sub>2</sub> which is permanently stored in accordance with the CCS Directive in an ETS installation does not need to be reported as emission in the importing country.<sup>21</sup> This is because under the EU ETS, the emission would be deducted from the original ETS installation that would otherwise have emitted them, and there is no impact on the emissions of the ETS installation that stores them unless they leak.<sup>22</sup> In the event the storage site leaks, these

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<sup>16</sup> Global CCS Institute, “Global Status of CCS 2023 – Scaling Up Through 2030” (January 2024), page 43. Available at: <https://www.globalccsinstitute.com/wp-content/uploads/2024/01/Global-Status-of-CCS-Report-1.pdf>

<sup>17</sup> EU ETS Directive, article 12(3a). See also the EU Commission Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of GHG emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012 (Monitoring and Reporting Regulation), article 49, which states that an operator “shall subtract from the emissions of the installation any amount of CO<sub>2</sub> [...] that is not emitted but transferred out of the installation” for CCS purposes. Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02018R2066-20240701>

<sup>18</sup> EU Monitoring and Reporting Regulation, article 49 (a) (ii) or (iii).

<sup>19</sup> EU Commission, “The EU legal framework for cross-border CO<sub>2</sub> transport and storage in the context of the requirements of the London Protocol” (30 September 2022), page 2. Available at: [https://climate.ec.europa.eu/document/download/dfbbc90c-071e-4088-ada2-7af467084b30\\_en?filename=EU-London-Protocol-Analysis-paper-final0930.pdf&prefLang=it](https://climate.ec.europa.eu/document/download/dfbbc90c-071e-4088-ada2-7af467084b30_en?filename=EU-London-Protocol-Analysis-paper-final0930.pdf&prefLang=it)

<sup>20</sup> Ibid, page 15

<sup>21</sup> Ibid, page 16

<sup>22</sup> Ibid page 17

emissions will have to be recorded by the ETS storage installation in the importing country where the storage site is located.<sup>23</sup>

In addition, an obligation to surrender allowances shall not arise in respect of emissions of GHGs which are considered to have been captured and utilized in such a way that they have become permanently chemically bound in a product.<sup>24</sup> This is often referred to as carbon capture and utilization (CCU), and was included after the 2023 revision of the EU ETS Directive. Thus, if emissions are reduced due to CCU, the CO<sub>2</sub> utilized is subtracted and not subject to the allowance requirements under the EU ETS.

It is important to note that the EU ETS does not remunerate negative emissions in the form of extra ETS allowances. However, the EU Commission is currently assessing how they could be accounted for and covered by emissions trading and is planning to issue a report by 2026.<sup>25</sup> At this stage it is unclear whether, and, if so, how carbon removals will be covered by the EU ESR and/or the EU ETS.<sup>26</sup>

It is also worth noting that Switzerland has agreed with its waste incineration plants operators that they can avoid any allocation obligations under the Swiss ETS as long as they undertake carbon capture and storage of a certain scale and within a set time frame.<sup>27</sup> For more information on this, please see Part 2, section 2 a) (iii)

Finally, the EU ETS encourages investment into “environmentally safe” CCS, CCU and direct air capture with safe, sustainable and permanent storage (DACs) through its Innovation Fund.<sup>28</sup> The EU ETS’s Innovation Fund is available for CCS projects from 2027. Further, member states shall use the revenues generated from the auctioning of allowances under the EU ETS for a list of activities, including the environmentally safe CCS of CO<sub>2</sub>, including in third countries, and “innovative technological carbon removal methods, such as DACs.”<sup>29</sup>

### **c) *The CCS Directive and its guidance documents***

Directive 2009/31/EC, also known as the CCS Directive, was adopted in 2009 and establishes a legal framework for the environmentally safe geological storage of CO<sub>2</sub>.<sup>30</sup> It was incorporated into the EEA Agreement and entered into force 16 June 2012.<sup>31</sup>

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<sup>23</sup> *ibid*

<sup>24</sup> EU ETS Directive, article 12(3b)

<sup>25</sup> Publyon “Carbon capture utilization and storage (CCUS): what is the EU’s plan?” (12 March 2024). Available at: <https://publyon.com/carbon-capture-utilisation-and-storage-ccus-what-is-the-eus-plan/>

<sup>26</sup> Informal discussion with Icelandic CCS expert

<sup>27</sup> For more information on how the EU Commission envisions this, please see Part 1 para 1a), above

<sup>28</sup> EU ETS Directive, article 10a(8)

<sup>29</sup> EU ETS Directive, article 10(3)(e)

<sup>30</sup> Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 (CCS Directive). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32009L0031>

<sup>31</sup> Decision of the EEA Joint Committee No 115/2012 of 15 June 2012 amending Annex XX (Environment) to the EEA Agreement. Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22012D0115>

The CCS Directive applies to CO<sub>2</sub> storage in underground geological formations in the territory of an EU Member State, their exclusive economic zone (EEZ) and continental shelf. Thus, it covers both offshore and onshore geological storage of CO<sub>2</sub>. It aims to ensure that there is no significant risk of CO<sub>2</sub> leakage or damage to health or the environment, and to prevent any adverse effects on the security of the transport network or storage sites. It provides a regulatory framework for competent authorities and storage site operators, ensuring that no geological storage is allowed without a permit, and ensuring permits to be issued only when rigorous environmental impact and site selection assessments have been made.<sup>32</sup>

As regards formalities for the storage operator, the CCS Directive sets out that the storage operator must keep a record of and report the quantities and properties of the CO<sub>2</sub> streams received and stored.<sup>33</sup>

The CCS Directive also covers the capture and transport components of CCS. For example, in cases of transboundary transport of CO<sub>2</sub>, transboundary storage sites or complexes, the competent authority in the relevant EEA State shall meet the requirements of both the CCS Directive and other relevant EU legislation.<sup>34</sup> It is also worth noting that the Environmental Impact Directive is also applicable to capture and transport activities.<sup>35</sup>

Article 21 of the CCS Directive on access to transport network and storage sites should also be noted. On the one hand, Member States shall take the necessary measures to ensure that potential users are able to obtain access to transport networks and to storage sites for the purposes of geological storage of the produced and captured CO<sub>2</sub> in a transparent and non-discriminatory manner, applying the objectives of fair and open access.

On the other hand, these obligations may need to be balanced against (i) storage and transport capacity; (ii) the extent to which storage service offering states wants to rely on CCS for abating its own emissions; (iii) the cost of overcoming potential technical incompatibility; and (iv) the duly substantiated reasonable needs of the owner or operator of the storage site or of the transport network and the interests of all other users of the storage or the network or relevant processing or handling facilities who may be affected. However, Member States shall take the measures necessary to ensure that the operator refusing access on the grounds of lack of capacity or a lack of connection makes any necessary enhancements as far as it is economic to do so or when a potential customer is willing to pay for them.

The CCS Directive also sets out requirements for routine inspections, and criteria for the transfer of responsibility from the site operator to the Member State/EEA State. The EU Commission will review the decision of transferring responsibility.<sup>36</sup>

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<sup>32</sup> Op cit n 9 (European Commission, "Legislative Framework")

<sup>33</sup> CCS Directive, article 12(3)(b)

<sup>34</sup> The CCS Directive, article 24.

<sup>35</sup> Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (Environmental Impact Directive). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0052>

<sup>36</sup> Op cit n 9 (European Commission, "Legislative Framework")

In the event of leakage from the storage site, corrective measures must be taken, and allowances must be surrendered under the EU ETS Directive. Additional requirements under the Environmental Liability Directive might also apply in case of pollution.

The EU Commission has also, in July 2024, published the updated Guidance Documents to the CCS Directive.<sup>37</sup> The Guidance Documents represent important guidelines for the permitting and safe operation of CO<sub>2</sub> storage sites. It provides a comprehensive methodological approach for implementing the key provisions for the CCS Directive, including requirements for financial security and contribution.

Finally, the EU Commission has a technical consultant, DNV, and they are organising capacity building workshops to inform all relevant stakeholders of the additional guidance published. These workshops will take place in September 2024 in Brussels and are open to anyone interested in attending.

#### **d) *Legal overlaps with the EU ETS and CCS Directives and the London Protocol***

There are legal overlaps between the regulation on cross-border CO<sub>2</sub> transport and storage under the London Protocol and the EU ETS and CCS Directives. These overlaps have been addressed in a recent communication from the EU Commission (EC).<sup>38</sup> The EC finds that the CCS Directive and the EU ETS Directive can act as a relevant “arrangement” as required under the London Protocol. As such, it is not necessary to enter into bilateral agreements or arrangements to comply with article 6 (2) of the London Protocol. In other words, “any operator of CO<sub>2</sub> transport networks and/or CO<sub>2</sub> storage sites can fully benefit from the EU legal framework to import and/or export captured CO<sub>2</sub> without bilateral agreements.”<sup>39</sup>

The EC also finds that EU Member States and EEA partners (in which these directives are incorporated through the EEA Treaty) *can* enter into additional bilateral arrangements as provided for in the London Convention. However, these arrangements should be strictly limited to residual issues, hereunder matters that are not covered by EU law and should not refer to subject matters covered by EU rules.<sup>40</sup> For further information on the London Protocol and its rules on CO<sub>2</sub> storage and cross-border transport, please see section 5, and for further information on bilateral arrangements and agreements on cross-border transport and storage of CO<sub>2</sub>, please see section 7.

### **3. *How does CCS fit within the UNFCCC and the Paris Agreement, including its article 6?***

#### **a) *Article 6.2 and CCS***

The PA’s article 6.2 caters for the cooperative approaches for the use of ITMOs, and it ensures the possibility for Parties to the PA to cooperate on their NDC achievements bilaterally or multilaterally. Often,

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<sup>37</sup> European Commission “News Article – The European Commission publishes revised Guidance Documents to the CCS Directive (23 July 2024). Available at: [https://climate.ec.europa.eu/news-your-voice/news/european-commission-publishes-revised-guidance-documents-ccs-directive-2024-07-23\\_en](https://climate.ec.europa.eu/news-your-voice/news/european-commission-publishes-revised-guidance-documents-ccs-directive-2024-07-23_en)

<sup>38</sup> Op cit n 20. (EU Commission “The EU legal framework for cross-border CO<sub>2</sub> transport and storage in the context of the requirements of the London Protocol”)

<sup>39</sup> Op cit n 9 (European Commission, “Legislative Framework”)

<sup>40</sup> Op cit n 20. (EU Commission “The EU legal framework for cross-border CO<sub>2</sub> transport and storage in the context of the requirements of the London Protocol”)

the Parties enter into bilateral agreements that provides guidelines and requirements for both the public and private sector’s cross-border trades in ITMOs, including on the use of registries.<sup>41</sup> However, there is no pre-requisite to have entered into a bilateral agreement to offer ITMOs under article 6.2.<sup>42</sup> An ITMO can only be offered if the rules under article 6 are complied with, and need to be authorised by the relevant Party for the use towards an NDC or for other international mitigation purposes (outside an NDC).<sup>43</sup>

Thus, national regulations on article 6, including the State’s authorisation of the use of article 6, will be necessary for private sector to be able to engage in business-to-business or government-to-business ITMOs transactions.

### ***i. Country examples – cooperative approaches under article 6.2***

The UNFCCC provides a web page with a list of the cooperative approaches described in article 6.2 national inventories (IRs) submitted by Parties.<sup>44</sup> At the time of writing, Ghana, Switzerland, Thailand, Vanuatu, Guyana and Suriname have all submitted information on cooperative approaches under article 6.2.<sup>45</sup>

Switzerland has entered into bilateral cooperative approaches with Ghana, Thailand and Vanuatu for (i) the promotion of climate smart agriculture practices for sustainable rice cultivation; (ii) operation of e-buses on bus routes in Bangkok; and (iii) electrification through solar power, respectively.<sup>46</sup>

In addition, two countries have reported on its cooperative approaches without referring to another specific participating party. For example, Guyana have simply referred to itself and to a “transferring participating Party” when citing Parties participating in the article 6.2 cooperative approach.<sup>47</sup> This is because the cooperative approach is the application of REDD+ under national law, which will be used to authorise ITMOs.<sup>48</sup> Further, Guyana reports that it will authorise the use of ITMOs for NDC reporting, and other mitigation purposes, including voluntary and compliance offsetting.<sup>49</sup> Another country with a similar approach is Suriname, which has authorized that the use of GHG emission reductions and/or removals

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<sup>41</sup> Please see section 5 below for a more comprehensive assessment of the bilateral agreements

<sup>42</sup> Informal discussion with expert, Amy Merrill. See also how some countries, such as Guyana and Suriname offer their ITMOs.

<sup>43</sup> Carbon Market Institute, “COP26 Key Takeaways Article 6 Explainer”. Available at: <https://carbonmarketinstitute.org/app/uploads/2021/11/COP26-Glasgow-Article-6-Explainer.pdf>

<sup>44</sup> UNFCCC “Cooperative Approaches”. Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/cooperative-implementation/carp-submission-portal/cooperative-approaches>

<sup>45</sup> Ibid. Per 17 August 2024. Also, the list of submitted IR reports is available here: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/cooperative-implementation/carp-submission-portal/submitted-reports#Annual-information-reports>

<sup>46</sup> Switzerland, “Initial report referred to in decision 2/CMA.3, annex, chapter IV. A (Initial report)”. Available at: [https://unfccc.int/sites/default/files/resource/230517\\_InitialReport\\_Switzerland.pdf](https://unfccc.int/sites/default/files/resource/230517_InitialReport_Switzerland.pdf)

<sup>47</sup> Cooperative Republic of Guyana, “Article 6, Paragraph 2 Initial Report (AIR) Referred to in Decision 2/CMA.3, Annex, Chapter IV. A (Initial Report) in Respect of Authorisation of ITMOs” (February 2024), page 9. Available at: [https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202402221554---Guyana\\_Initial%20Report\\_Feb%202024%20Final.pdf#page=7](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202402221554---Guyana_Initial%20Report_Feb%202024%20Final.pdf#page=7)

<sup>48</sup> All ITMOs issued by Guyana will be certified under the ART TREES, which is an international voluntary framework for REDD+.

<sup>49</sup> Op cit n 48, page 17



under PA article 5.2 and its REDD+ may be issued as article 6.2 ITMOs and used towards an NDC or for other international mitigation purposes.<sup>50</sup>

For Switzerland to issue article 6.2 ITMOs (referred to as “international attestations” in their national legislation under article 10.7 of the CO2 Ordinance), the applicant will have to provide information that proves that the emission reductions have not been claimed by another country (i.e. that no double counting has taken place).<sup>51</sup> Attestations are currently only given for activities authorized under bilateral agreements with Switzerland. Finally, Switzerland allows for CO2 removal (CDR) activities to be counted and eligible for issuance of article 6.2 ITMOs.<sup>52</sup>

The above assessment brings light onto the different approaches countries take in requiring a bilateral agreement or not for the issuance of ITMOs.<sup>53</sup> Further, there are currently no cooperative approaches under article 6.2 exemplifying the use of ITMOs for CCS, BECCs or DACs. Thus, there are currently no examples of a third party involved in the transport and/or storage of CO2 for cooperative approaches that is registered at the UNFCCC database. This despite that one of the key players, Switzerland, intends to issue and use article 6.2 ITMOs for CCS removal activities, and to allow for storage of CO2 abroad for its NDC achievement.

## ***ii. The article 6.2 initial report (IR)***

There are rules and requirements set out for the participation in cooperative approaches under article 6.2. When taking part in a cooperative approach that involves the use of ITMOs, each Party shall submit an article 6.2 initial report (IR).<sup>54</sup> This needs to be submitted no later than *authorisation* of ITMOs from a cooperative approach, or in conjunction with the next biennial transparency report (BTR).<sup>55</sup> The IR shall contain information on a range of issues relevant for the cooperative approach, including a copy of the authorization given by the Party, a description of the approach, its duration, the expected mitigation for each year of its duration, and the participating Parties involved and authorized entities.<sup>56</sup> It must also include information on environmental integrity and that there is no increase in global GHG emissions within and between NDC implementation periods.<sup>57</sup>

## ***iii. Corresponding adjustments***

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<sup>50</sup> Suriname “Article 6.2 initial report (Initial Report) Referred to in Decision 2/CMA.3, Annex, Chapter IV.A”, page 33. Available at: [https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202405291357---Final%20Initial%20Report LOA Suriname.pdf#page=20](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202405291357---Final%20Initial%20Report%20LOA%20Suriname.pdf#page=20)

<sup>51</sup> For a further discussion on this, please see previous paper “Cabon Markets in Switzerland”, Part 2, para 4 b)

<sup>52</sup> Ibid, part 2, para 6

<sup>53</sup> Please also note that Parties have different interpretations on whether bilateral agreements are required or not for the issuance of ITMOs.

<sup>54</sup> UNFCCC/PA, Decision 2/CMA.3, Annex, para 18. Available at: [https://unfccc.int/sites/default/files/resource/cma2021\\_10\\_add1\\_adv.pdf#page=11](https://unfccc.int/sites/default/files/resource/cma2021_10_add1_adv.pdf#page=11)

<sup>55</sup> For those Parties who have not yet submitted their BTR, the submission portal of the centralized accounting and reporting platform (CARP) can be used, available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/cooperative-implementation/centralized-accounting-and-reporting-platform#Templates>

<sup>56</sup> UNFCCC/PA, Decision 2/CMA.3, Annex, para 18 (g)

<sup>57</sup> Ibid, para 18 (h) and (i)

Further, when taking part in cooperative approaches under article 6.2, the Parties are required to undertake corresponding adjustments.<sup>58</sup> This is required to ensure that article 6.2 cooperation does not lead to a net increase in emissions, and to avoid double counting of emission reductions and removals. There are different methods for applying the corresponding adjustment, depending on the type of NDC (single- or multi-year).<sup>59</sup> In the event the NDC is measured in tonnes CO<sub>2</sub> equivalents, corresponding adjustments shall be applied to find the “emission balance”. An emission balance is reflecting the level of anthropogenic emissions by sources and removals by sinks (from the sectors and GHGs) covered by the NDC adjusted on the basis of corresponding adjustments for ITMOs.<sup>60</sup>

#### ***iv. Reporting requirements for “storage country” under article 6.2 IR?***

The above reporting requirements are for those Parties that are participating in the article 6.2 cooperative approach, hereunder the ITMOs transaction. If the ITMOs reflects GHG emissions captured for storage in a different country, it is the Party that has undertaken the ITMOs transaction that must include information on this, as it is relevant for the description of environmental integrity and on whether there has been an increase in “global emissions”. Thus, a third party providing the storage space for the GHG captured is not part of the transaction of the sale and purchase of ITMOs and is therefore not required to report on it under the article 6 IR.

#### ***v. Storage activities and ITMOs***

A country storing CO<sub>2</sub> that has been imported from another country will not be part of the transaction involving the sale and purchase of ITMOs. ITMOs are created from mitigation outcomes that can derive from CCS activities, hereunder either emission reduction or removal of CO<sub>2</sub>.<sup>61</sup> However, the requirements for developing ITMOs are not concerned with the transport and storage of CO<sub>2</sub> connected with ITMOs unless there is leakage. As such, any *pure* carbon storage units under article 6.2 are unlikely.

An exception could be envisioned when the seller of ITMOs has stipulated that the mitigation outcome activity underpinning the ITMOs includes both the CO<sub>2</sub> reduction/removal and the safe storage of the CO<sub>2</sub> reduced/captured. This type of ITMO is likely to be more expensive, reflecting the cost of storage (and possibly transport). Thus, it could be envisioned that the ITMOs in question are sold with information about the price of storage, and therefore in practice functioning as a carbon storage unit “addition” to the ITMO. In theory, however, the pure sale of an ITMO for storage purposes is not currently envisioned under the PA article 6.2.

It should also be noted that it is not clear how the market for ITMOs will respond to ITMOs with storage included. However, what is clear is that there are few EU countries (at this point in time) that can offer this type of ITMO due to their geological limitations and/or long lead times for technological CCS solutions.

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<sup>58</sup> Ibid, para 6 and section C, para 16

<sup>59</sup> Ibid, para 7

<sup>60</sup> UNFCCC/PA, Decision 18/CMA.1, Annex, para 77 (d). Available at: [https://unfccc.int/sites/default/files/resource/CMA2018\\_03a02E.pdf?download](https://unfccc.int/sites/default/files/resource/CMA2018_03a02E.pdf?download)

<sup>61</sup> Global CCS Institute, Tamme, E., and Scowcroft, J. “Brief- the Role of CCS in the Paris Agreement and its Article 6”, page 7 (April 2020). Available at: <https://www.globalccsinstitute.com/wp-content/uploads/2020/05/Article-6-and-CCS-GCCSI-April-2020-final.pdf>



## **vi. The use of article 6.2 for DAC**

The use of article 6.2 for direct air capture (DAC) activities for the achievement of its national and international GHG emission reduction targets (i.e. its NDC) has been envisioned by Switzerland.<sup>62</sup> The potential use of article 6.2 for these transactions are in its early stages, reflected in how Switzerland is entering into bilateral agreements for “test-ballooning” these transactions to better understand the regulatory frameworks.

To take part in article 6.2 transactions, there is no requirement to have bilateral agreements with other countries. However, it will be necessary to have a clear national legal framework that provides for authorisation of ITMOs, that effectively deals with the issue of corresponding adjustments to avoid double counting and adheres to national and regional reporting requirements. Given that the negotiations on article 6.2 (and 6.4) are still ongoing under the PA’s CMA, Parties can influence this topic going forward.

There are few countries with the ability to offer both DAC and storage of CO<sub>2</sub>, and Iceland could potentially be one of the first movers in this field, offering carbon removal (+ storage) ITMOs for countries and/or private actors. It is worth noting that private sector use of ITMOs that are not linked to national targets (i.e. that are linked to voluntary GHG emission reduction/removal targets) can be utilised by Iceland for its own NDC achievement if the carbon removal takes place on Icelandic territory. This is much in the same vein as Switzerland couples its private sector emission reductions to its NDC achievement, either through compulsory requirements or voluntarily.

Another aspect is the use of DAC for compliance with national or international (i.e. NDC) carbon removal targets completely independent of any article 6 transaction. This option leaves out the use of ITMOs but can nevertheless be coupled with third-party verifiers for quality assurance. Bilateral transactions between governments will also be possible, depending on whether the government in question requires the use of article 6 or not for these types of purchases.

In both scenarios (DAC coupled with ITMOs or DAC not coupled with ITMOs), it will be necessary to understand how the EU ETS and/or the Effort Sharing Regulation (ESR) will apply to the accounting of carbon removals. The EU ETS and CCS Directives are likely to apply for transport and storage of CO<sub>2</sub> regardless of how it is counted.

## **b) Article 6.4 and its development on CCS**

Article 6.4 is the centralised governance system for countries and the private sector for trade in emissions reductions globally. It will replace the Kyoto Protocol’s Clean Development Mechanism (CDM), will be supervised by the UN Supervisory Body, and will use the same accounting system that applies to article 6.2. The 6.4 mechanism shall be designed to achieve mitigation and emission reductions, including removals.<sup>63</sup> The mechanism is not yet up and running, and the Parties to the PA will have to agree on several issues, including how the transfer of CCS modalities and procedures from the CDM to article 6.4 will be solved.<sup>64</sup> Before these issues are solved, it is more relevant to assess the use of article 6.2 for CCS purposes.

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<sup>62</sup> Please see previous paper “Carbon Markets in Switzerland”

<sup>63</sup> Op cit n 62. (Global CCS Institute, Eve Tamme)

<sup>64</sup> Ibid, page 6

## **c) CCS reflected in the Paris Agreement's reporting requirements**

Among the commitments under the UNFCCC and the Paris Agreement is the requirement for Parties to develop, periodically update, publish and make available to the Conference of the Parties (COP), national inventories of GHG emissions and removals using comparable methods.<sup>65</sup>

Thus, the Paris Agreement requires that each Party shall provide a national inventory report (NIR) of anthropogenic GHG emissions by sources and removals by sinks.<sup>66</sup> The NIR consists of a national inventory document (NID) and the common reporting tables (CRTs).<sup>67</sup> CRT are tables that include numerical data on emissions and removals, whereas NIDs describe how those emissions and removals were obtained.<sup>68</sup> The information shall be in accordance with the 2006 IPCC Guidelines and its updates and given in CRTs.

### **i. The PA's temperature goal and implications for reporting on CCS**

Paris Agreement's temperature goal is set out in article 2.1 and further refined in article 4.1 which includes the recognition that to achieve it, a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of this century will be necessary.

This balance can be interpreted to mean "cancelling out anthropogenic GHG emissions with removals of GHG emissions from the atmosphere by enhanced action to requester it in carbon sinks (i.e. increase afforestation to sequester more carbon dioxide in vegetation)."<sup>69</sup> Thus, one interpretation is that the removals that are referred to in article 4 pertains to the use of the LULUCF sector (i.e. sinks) to remove carbon emissions.

However, the Paris Agreement applies the definitions under article 1 of the UNFCCC in which "sinks" is defined as "any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere". Thus, according to this definition, emission reductions and technological carbon dioxide removals fall in under the definition of "sinks" and can be used to achieve the "balance" between emissions by sources and sinks. As a consequence, although CCS/CDR is not directly referred to in the PA article 4, it is nevertheless inferred due to the definition under the UNFCCC. As such, the interpretation that article 4 only includes sinks from the LULUCF sector is questionable.

In other words, although there is no direct reference to the use of CCS as a method to achieve this "balance", it does not preclude CCS/DAC from being applied.

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<sup>65</sup> UNFCCC article 4.1(a) and 12.1(a) and Paris Agreement article 13.7(a)

<sup>66</sup> Paris Agreement, article 13.7(a) and Decision 1/CP.24 para 42 and Decision 18/CMA.1, paras 38 and 47

<sup>67</sup> UNFCCC, "National Inventory Submissions 2024". Available at: <https://unfccc.int/ghg-inventories-annex-i-parties/2024>

<sup>68</sup> UNEP presentation, Khetsiwe Khumalo, "Introduction to Common Reporting Tables" (21-25 April 2024). Available at: <https://climate-transparency-platform.org/sites/default/files/2024-04/Day%202-%20Introduction%20to%20Common%20Reporting%20Tables.pdf>

<sup>69</sup> WRI, "INSIDER: Understanding the Paris Agreement's Long-term Goal to Limit Global Warming" (December 15 2015). Available at: <https://www.wri.org/technical-perspectives/insider-understanding-paris-agreements-long-term-goal-limit-global-warming>

Further, the PA's objective is to strengthen the global response to climate change, and the use of CCS and DAC are both contributing to this objective. As we will see below, article 6 of the Paris Agreement caters for the use of international cooperation for "emission reductions" and "removals" activities. And this includes CCS and DACs.

Reporting requirements for CCS and CDR are closely connected with there being an emission source. In other words, the reductions and removals that are not connected with an emission source (i.e. negative emissions) are not included. The consequence of lack of specific inclusion is that there are no specific reporting requirements for the negative emission reductions or removals from these technologies. It will be up to the UNFCCC and/or the IPCC to develop further guidance to assist Parties in their reporting on carbon capture, storage and technological carbon removals, and in particular for negative emissions. In the meantime, however, Parties are not prohibited from providing information on negative emissions, and it is likely that Parties engaged in article 6 transactions for CCS and/or carbon removals will include information on this where they see fit.

### ***ii. Reporting requirements and linkages with the NDC***

Reporting requirements relevant to GHGs under the Paris Agreement need to be seen in light of the Parties' legally binding obligation to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve, and an obligation to pursue domestic mitigation measures to achieve their NDCs.<sup>70</sup> The Parties' NDCs will, when seen together, bring light onto the temperature pathway Parties are currently on, which, together with the global stocktake (GST) will provide insight on whether the long-term temperature goal will be achieved.

Article 4.13 of the PA establishes an obligation on Parties to "account" for their NDCs, including their anthropogenic "emissions" and "removals" corresponding to their NDCs. Thus, on the face of it, it seems that if CCS or technological removal is part of a Party's NDC, it must be accounted for.

### ***iii. Reporting on CCS under the Enhanced Transparency Framework (ETF)***

The enhanced transparency framework (ETF) under article 13 of the Paris Agreement builds on the existing review process under the UNFCCC, and is meant to encourage greater ambition and action by facilitating access to information on both progress in implementing and achieving NDCs under Article 4 of the PA, among others.<sup>71</sup> Thus, the ETF provides the starting point for the Parties' reporting obligations on article 4 and requires Parties to regularly provide, in its biennial transparency report (BTR) the following: (i) a national inventory report of anthropogenic emissions by sources and removals by sinks of GHGs (NIR), prepared using the IPCC methodologies; and (ii) information necessary to track progress made in implementing and achieving its NDC under article 4 of the PA.<sup>72</sup> The ETF is also meant to ensure integrity, comparability, flexibility and avoid double counting, and will be subject to a technical expert review.<sup>73</sup>

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<sup>70</sup> Paris Agreement, article 4.2

<sup>71</sup> UNFCCC Secretariat, "Reference Manual for the Enhanced Transparency Framework under the Paris Agreement – Understanding the enhanced transparency framework and its linkages", page 6. Available at: [https://unfccc.int/sites/default/files/resource/v2\\_ETFreferencemanual.pdf](https://unfccc.int/sites/default/files/resource/v2_ETFreferencemanual.pdf)

<sup>72</sup> UNFCCC/PA Decision 18/CMA.1, para 10 (a)-(e). Information related to adaptation and support is also part of the BTR but is not covered in this analysis.

<sup>73</sup> UNFCCC/PA Decision 18/CMA.1, para 3 and para 150

The NIR consists of a national inventory document (NID) and the common reporting tables (CRT). The IPCC methodologies and definitions to be used are set out in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and its subsequent versions or refinements.<sup>74</sup> In the event national methodologies better reflect a Party's national circumstances, it may use these as long as they are consistent with the IPCC guidelines. Further, each Party shall undertake an uncertainty assessment of "the emission and removal estimates for all source and sink categories" between the starting year and the latest reporting year of the inventory time series, using the IPCC guidelines.<sup>75</sup> If any sources and sinks for specific sectors, categories and subcategories or gases that are included in the IPCC guidelines are not reported by the Parties in the NIR, this should be notified and explained.<sup>76</sup> The notification "not applicable" is relevant in the event an activity under a given source/sink category occur within the Party but do not result in emissions or removals of a specific gas.<sup>77</sup> Whereas the notification "not estimated" will be applicable in the event emissions from a category is considered insignificant.<sup>78</sup> The categories that Parties are obliged to report are energy, industrial processes and product use, and LULUCF and waste.<sup>79</sup> International aviation and marine bunker fuel emissions are reported distinctly.<sup>80</sup>

### *The ETF NIR reporting obligations*

In short, the ETF sets out reporting requirements for a Party to the PA for its "emissions" and "removals by sinks". It does not refer to "emission reductions" directly, but this must be assumed to be implied by the definition of "sinks" under article 1 of the UNFCCC. However, please note that emissions might be precluded from the reporting obligations if they are considered insignificant. Further, under the CRT reporting tables, recovery or capture of GHGs connected with emitting industries will need to be reported. However, CCS or carbon removals, independent of an emission source is not specifically provided for under the CRT table. Thus, the ETF does not provide for reporting obligations for Parties for its CCS/DAC activities with negative emissions.

One reason could be that the ETF is meant to create transparency and provide information around the obligations under the PA, and in particular article 4 which is known as the "mitigation" article with its focus to ensure a balance between emissions by sources and removals by sinks. Thus, emission reductions have been the key focus for article 4 and does not specifically include CCS or technological carbon emission removals independent of any emission source (i.e. negative emissions).

However, this has not precluded the Parties from introducing CCS in cooperative approaches under article 6 of the PA. Further, there is also nothing in article 4 that precludes negative emissions from being used to reduce the emissions prior to reporting on the balance (in which removals of sinks will be balanced

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<sup>74</sup> Ibid, para 17 and 20-24

<sup>75</sup> Ibid, para 29

<sup>76</sup> Ibid, para 30 and 31. The options for notifications are: (a) not occurring; (b) not estimated; (c) not applicable; (d) included elsewhere; or (e) confidential

<sup>77</sup> Ibid, para 31(c)

<sup>78</sup> Ibid, para 32. It should only be considered insignificant if the likely level of emissions is below 0.05 per cent of the national total GHG emissions, excluding LULUCF, or 500 kilotonnes of carbon dioxide equivalent, whichever is lower.

<sup>79</sup> Ibid, para 50

<sup>80</sup> Ibid, para 53

against emissions). However, CCS and DAC activities producing negative emissions (that are not coupled with emissions themselves) are precluded from the reporting obligations due to the above reasons.

*ETF reporting of the NDC and use of article 6*

Each Party shall include information necessary to track progress made in implementing and achieving the NDC under article 4 of the PA.<sup>81</sup> This includes information on national circumstances, institutional arrangements for tracking NDC progress, including on tracking ITMOs, a description of targets in the NDC, identification of indicators, and (if a stand-alone NIR is submitted) a summary of its GHG emissions and removals.<sup>82</sup> The indicators selected to track progress towards implementing and achieving the NDC may be qualitative or quantitative. These indicators could include “net GHG emissions and removals”, indicators for a specific policy or measure, or indicators on carbon neutrality, among other.<sup>83</sup> The selection of indicators is the Party’s choice, and there is no requirement for choosing one or the other. However, once an indicator is chosen, there is an obligation to provide information for each selected indicator for the reference point(s), level(s), baseline(s), base year(s) or starting point(s).<sup>84</sup> Further, the Party shall include a description of each methodology and/or accounting approach used. This includes methodologies associated with any cooperative approaches that involve the use of ITMOs towards its NDC under article 4, consistent with the CMA guidance under article 6.<sup>85</sup> If relevant, information on how double counting of net GHG emission reductions has been avoided, in accordance with the guidance on article 6 shall also be described.<sup>86</sup>

The information required to track progress made in implementing and achieving the NDC under article 4 includes information on the use of article 6. Information is required in the event a Party “participates in cooperative approaches that involve the use of ITMOs towards an NDC under article 4, or authorizes the use of mitigation outcomes for international mitigation purposes other than achievement of its NDC”.<sup>87</sup> The latter could for example include offsetting requirements under Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)<sup>88</sup>. It does not refer to “other purposes as determined by the first transferring participating Party”.<sup>89</sup>

The information required on the use of article 6, as referred to above, includes:<sup>90</sup> (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 (ITMOs) first-transferred/transferred and a subtraction for internationally transferred mitigation outcomes

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<sup>81</sup> Ibid para 61

<sup>82</sup> Ibid, para 91

<sup>83</sup> Ibid, para 66

<sup>84</sup> Ibid para 67

<sup>85</sup> Ibid, para 75 (f)

<sup>86</sup> Ibid, para 75 (d)

<sup>87</sup> Ibid, para 77 (d)

<sup>88</sup> Nature Conservancy, “Article 6 – Q&A on what was decided and next steps after COP26”, page 8. Available at: [https://www.nature.org/content/dam/tnc/nature/en/documents/Article\\_6\\_Common\\_Questions\\_V2.pdf](https://www.nature.org/content/dam/tnc/nature/en/documents/Article_6_Common_Questions_V2.pdf)

<sup>89</sup> Please see the definition of ITMOs under Decision 2/CMA.3, Annex, para 1 (f).

<sup>90</sup> UNFCCC/PA Decision 18/CMA.1, para 77 (d) (i)-(iv)

used/acquired, consistent with decisions adopted by the CMA on article 6; (iii) any other information consistent with decisions adopted by the CMA on reporting under article 6; and (iv) information on how each cooperative approach promotes sustainable development; and ensures environmental integrity and transparency, including in governance; and applies robust accounting to ensure inter alia the avoidance of double counting, consistent with decisions adopted by the CMA on article 6.

In short, information on CCS and/or CDR will need to be reported under the ETF and the article 6 Inventory Report in the event these are part of article 6 ITMOs transactions. In addition, information on CCS and CDR transactions that includes leakage of CO<sub>2</sub> will have to be reported under the ETF. Further, if the NDC includes targets on CCS/CDR, information on this will need to be provided under the ETF. Finally, if the NDC is silent on CCS/CDR, and the transactions of CCS/CDR units are *not* under article 6, there are no reporting requirements under the ETF on these transactions.

#### **4. CCS in NDCs.**

For a quick overview of potential use of article 6 in NDCs, please see Annex 1.

#### **5. *The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (1972 London Convention) and the London Protocol of 1996***

At the international level, the storage and transport of CO<sub>2</sub> for purposes of geological storage under the seabed has not been allowed under the 1972 London Convention and its 1996 London Protocol. However, in recent years, legal barriers to storage of CO<sub>2</sub> under the seabed have been removed through the adoption of amendments under these agreements. The amendments to the London Protocol allow and regulate the storage of CO<sub>2</sub> from CO<sub>2</sub> capture processes in geological formations under the seabed.

Further, preliminary measures have been taken to allow Parties to the London Protocol to enter into bilateral agreements for the transboundary export of CO<sub>2</sub> aimed at geological storage under the seabed, given certain conditions are fulfilled.

##### **a) *The rules regulating storage and transportation of CO<sub>2</sub> – for CCS purposes***

Increased awareness and concern about the impacts of human activities on the marine environment led to the adoption of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter in 1972, also known as the “1972 London Convention”. It entered into force three years later and included a list of prohibited wastes to be disposed at sea.

In the following years, the policies and regulations on dumping and disposal of waste tightened, culminating in the adoption of the London Protocol of 1996 which embraced the polluter pays and precautionary principles, prohibiting all dumping of wastes and other matters at sea, except those on a “reverse” list. As such, CO<sub>2</sub> was prohibited from being disposed of at sea as it was not included in this list of exceptions. At the time, the London Protocol’s article 6 also prohibited cross-border export of waste or other matters for dumping, storage or incineration at sea.<sup>91</sup> “Dumping” includes the storage of wastes or other matter in the seabed and subsoil thereof, and therefore includes the storage of CO<sub>2</sub> in repositories

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<sup>91</sup> 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1971 (as amended in 2006), article 6. Available at <https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/PROTOCOLAmended2006.pdf>



at sea. Notably, “sea” means “all marine waters other than the internal waters of States, as well as the seabed and the subsoil thereof”, and does not include “sub-seabed repositories accessed only from land”.<sup>92</sup>

The London Protocol entered into force in 2006. The same year its parties agreed on an amendment to its annex to allow for *geological storage* of CO<sub>2</sub> in the sub-seabed.<sup>93</sup> The storage of CO<sub>2</sub> (from carbon capture processes) in the seabed was included in the “reverse list” which provides exceptions to the rule that dumping of waste at sea is prohibited. This amendment entered into force a year later. Thus, the amendment opened for countries to store CO<sub>2</sub> for CCS purposes at sea. However, the export of wastes and other matters were still prohibited for dumping or incineration at sea. This limited any cross-border cooperation on CCS activities that involved the transport of captured CO<sub>2</sub> for storage at sea in another country.

**b) *The adopted resolution to allow provisional applications to allow export of CO<sub>2</sub> for CCS activities, and its requirements***

Shortly thereafter, it was agreed that the London Protocol should not constitute a barrier to *transboundary movement* of CO<sub>2</sub> to other countries for disposal as a measure to mitigate climate change and ocean acidification. And in 2009, an amendment to article 6 of the London Protocol was decided, which allowed for the transboundary transport of CO<sub>2</sub> for CCS purposes provided that an agreement or arrangement has been entered into by the countries concerned.<sup>94</sup> However, this CCS export amendment has not yet entered into force.<sup>95</sup> As a consequence, in 2019, the parties to the London Protocol adopted a resolution allowing for the provisional application of the 2009 CCS export amendment through bilateral arrangements.<sup>96</sup> Thus, it allows parties to the London Protocol that have ratified the 2009 amendment to implement it before it has entered into force. In essence, these parties can agree to export and receive CO<sub>2</sub> for offshore geological storage, given that the obligations under the London Protocol are adhered to.<sup>97</sup> Also export between a party to the London Protocol and a third-party is allowed as long as the obligations of the party under the London Protocol are adhered to.<sup>98</sup> In order to provisionally apply the

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<sup>92</sup> Ibid, article 1.7

<sup>93</sup> Resolution LP.1(1) on the Amendment to Include CO<sub>2</sub> Sequestration in Sub-seabed geological formations in Annex 1 to the London Protocol (Adopted November 2006). Available at: [https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/LCLPDocuments/LP.1\(1\).pdf](https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/LCLPDocuments/LP.1(1).pdf)

<sup>94</sup> Resolution LP.3(4) on the Amendment to Article 6 of the London Protocol (adopted on 30 October 2009). Available at

[https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/LCLPDocuments/LP.3\(4\).pdf](https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/LCLPDocuments/LP.3(4).pdf)

<sup>95</sup> Two-thirds of the 53 parties to the London Protocol must ratify the 2009 amendment before it comes into force (ie 35 parties) as it is part of the text of the protocol and not simply an annex. As of April 2022, only ten parties had ratified the amendment (Norway, UK, Netherlands, Iran, Finland, Estonia, Sweden, Denmark, Korea and Belgium, and Germany and France are in the process of ratifying the amendment). For more information, please see Carbon Gap, “London Protocol”. Available at: <https://tracker.carbongap.org/policy/london-protocol/>

<sup>96</sup> Resolution LP.5(14) on the Provisional Application of the 2009 Amendment to Article 6 of the London Protocol (Adopted 11 October 2019). Available at: [https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/LC\\_LP/LP%20provisional%20application%202009%20amendment.pdf](https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/LC_LP/LP%20provisional%20application%202009%20amendment.pdf)

<sup>97</sup> For example, that the countries’ permitting responsibilities are confirmed and allocated.

<sup>98</sup> Resolution LP.3(4), page 3

2009 amendment, the parties concerned will need to deposit a declaration of provisional application and notify the Secretary General of IMO of any agreements or arrangements.<sup>99</sup>

***a) The application (or not) of the 1972 Convention, the London Protocol and its amendments – relevance for Iceland***

The 1972 Convention, the London Protocol and its resolutions aim at regulating environmental pollution at sea. They are applicable to the storage of CO<sub>2</sub> *in the seabed and subsoil* and export of CO<sub>2</sub> for the purposes of disposal *into a sub-seabed geological formation*. Therefore, neither of these agreements are aimed at regulating the storage of CO<sub>2</sub> within a country's land territory.

Iceland is a party to both the 1972 London Convention and the 1996 London Protocol. However, based on available information, Iceland has not yet ratified the 2009 amendment or undertaken the necessary procedures for its preliminary implementation. Thus, the following applies for Iceland according to these international agreements:

- CO<sub>2</sub> captured in Iceland to be stored in the seabed or subsoil thereof is allowed.
- The import of CO<sub>2</sub> for storage offshore (i.e. not internal waters accessed only from land) will be prohibited under the London Protocol, unless the 2009 amendment is ratified and preliminary implemented in accordance with the requirements set out by these instruments.
- The import of captured CO<sub>2</sub> from another country for the purpose of storage in geological formations on land in Iceland is allowed, as it does not fall under the auspices of the London Protocol and its amendments. Thus, there is no need for Iceland to ratify the 2009 amendment to the London Protocol for it to allow for the import of CO<sub>2</sub> for purposes of storage on land.
- Countries intending to export its CO<sub>2</sub> to Iceland for CCS storage on land is not prohibited from this under the London Protocol and its resolutions.
- The export of CO<sub>2</sub> from Iceland with the intent of storage at sea in another country is not allowed, unless the 2009 amendment is ratified and preliminary implemented in accordance with the requirements set out by these instruments.
- The export of CO<sub>2</sub> from Iceland with the intent of storage on land in another country is not prohibited under the London Protocol and its resolutions.

Finally, as mentioned above in section 2 d), there are overlaps between the London Protocol and its amendments and the EU ETS and CCS Directives. As such, bilateral arrangements are not necessary if the Parties to the London Protocol intending to transport CO<sub>2</sub> are also EU Member States/EEA members, and unless they intend to cover issues not covered by these two Directives.

***6. The Convention for the Protection of the Marine Environment of the North-East Atlantic of 1992 (OSPAR Convention)***

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<sup>99</sup> Resolution LP.5(14), para 1 and 3



The OSPAR Convention, established in 1992, is an international framework convention governing the marine environment and prevention of pollution in the North-East Atlantic maritime area.<sup>100</sup> Originally, it contains several provisions restraining the use of CCS technologies.

In 2007, however, the parties under the OSPAR Convention recognized the need for CCS to reduce the risk of climate change on the ocean environment. The parties allowed for CCS, hereunder the storage of CO<sub>2</sub> in geological formations in the sub-soil (including sub-seabed) of the OSPAR maritime area, and emphasised the importance of it being done in a geologically safe manner.<sup>101</sup> The parties established guidelines for risk assessment and management of storage of CO<sub>2</sub> streams in maritime geological formations, intended for permanent storage.<sup>102</sup> CCS activities are required to meet a list of preconditions and be stored in accordance with the relevant authority's authorisations and regulations.

Although CCS is allowed, the placement of CO<sub>2</sub> into the water column of the sea and on the seabed was prohibited.<sup>103</sup>

## **7. Bilateral agreements on the issue of CCS and CDR**

Bilateral agreements on the issue of CCS and CDR are being entered into between EEA countries to strengthen cooperation and lay the groundworks for becoming storage hubs for neighbouring countries and for cross-border private-sector agreements on capture, transport and storage of CO<sub>2</sub>. Under follows a selection of these bilateral agreements, declarations and memoranda.<sup>104</sup>

### **a) Cooperation agreement between Norway and Switzerland on CCS and CDR**

The bilateral agreement between Switzerland and Norway on cooperation on CCS and CDR was entered into in May 2024.<sup>105</sup> It provides for the intentions of the two parties for cooperation on CCS and CDR, including transport of CO<sub>2</sub> from Switzerland for permanent storage in Norway, but also for CDR activities taking place in Norway for a Swiss entity.

Norway and Switzerland intend to conclude another bilateral agreement setting the framework conditions for commercial engagements in line with the London Protocol and its 2009 amendment and the Paris

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<sup>100</sup> It has been signed and ratified by Belgium, Denmark, the European Union, Finland, France, Germany, Iceland, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom of Great Britain and Northern Ireland, Luxembourg and Switzerland. Please see: OSPAR Commission, "OSPAR CONVENTION". Available at: <https://www.ospar.org/convention>

<sup>101</sup> OSPAR Decision 2007/02 on the Storage of Carbon Dioxide Streams in Geological Formations. Available at: <https://www.ospar.org/documents?v=32643>

<sup>102</sup> Ibid, para 2.1. See also: OSPAR Guidelines for Risk Assessment and Management of Storage of CO<sub>2</sub> Streams in Geological Formations (June 2007). Available at: <https://www.ucl.ac.uk/cclp/pdf/OSPAR2007-Annex-7.pdf>

<sup>103</sup> OSPAR Decision 2007/01 to prohibit the storage of carbon dioxide streams in the water column or on the seabed. Available at: <https://www.ucl.ac.uk/cclp/pdf/OSPAR2007-Annex-5.pdf>

<sup>104</sup> For a list of bilateral agreements, declarations and memoranda entered into between EEA countries, please see: Op cit n 16, page 48 (Global CCS Institute)

<sup>105</sup> "Declaration of Intent between the Ministry of Energy and the Ministry of Climate and Environment of Norway and the Swiss Federal Department of Environment, Transport, Energy and Communications on Cooperation on Carbon Capture and Storage and Carbon Dioxide Removals" (14 May 2024). Available at: <https://www.bafu.admin.ch/dam/bafu/de/dokumente/international/fachinfo-daten/declaration-of-intent-norway-and-switzerland-on-ccs-and-cdr.pdf.download.pdf/declaration-of-intent-norway-and-switzerland-on-ccs-and-cdr.pdf>

Agreement, including its articles 4 (mitigation), 6 (cooperative approaches) and 13 (the enhanced transparency framework). Particular attention will be given to (i) environmental integrity and permanence in storage; (ii) transparency, including in governance; and (iii) accounting of all emissions caused by the activities under the agreement and avoidance of double counting and double claiming of the achieved mitigation effect.

In addition, they intend to engage in pilot activities to bring early learnings on the necessary international and national frameworks (including on reporting of ITMOs under the PA) through (i) the transfer of ITMOs from CDR in Norway under permanent geological storage to a Swiss entity, per article 6 of the PA; and (ii) transfer of ITMOs achieved from CDR in Switzerland from mineralization of biogenic CO<sub>2</sub> in recycled concrete to a Norwegian entity, per article 6 of the PA.

The intended use of ITMOs may be NDCs or other international mitigation purposes, including national mitigation goals or voluntary climate objectives, such as from the private sector.

### **b) *MoU between Sweden and Switzerland on PA article 6 cooperation for international transfer of industrial carbon removals***

In December 2023, Sweden and Switzerland entered into a memorandum of understanding (MoU) on the intention to establish cooperation for industrial carbon removal technologies (CDR) in the context of the implementation of PA article 6.<sup>106</sup> They aimed at testing the transactions and reporting of ITMOs through the piloting of international transfer of ITMOs based on carbon removal technologies.

As part of the cooperation, they aim to engage with private stakeholders to advance the use of PA article 6 for development and deployment of carbon removal technologies. Finally, they intend to enhance the understanding of how cooperation under article 6 of the PA in the field of CDR can contribute to the implementation of NDCs under the PA or to other international mitigation purposes, including national mitigation goals or voluntary climate objectives, to allow for higher ambition on mitigation actions.<sup>107</sup>

### **c) *Declaration of intent between Switzerland and Iceland on CCS and CDR cooperation***

In 2021, Iceland and Switzerland entered into a declaration of intent to further strengthen cooperation on CCS and CDR.<sup>108</sup> In particular, the parties intended to engage in formal dialogue and exchange information

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<sup>106</sup> “Memorandum of Understanding between the Swedish Energy Agency and the Federal Department of the Environment, Transport, Energy and Communications of the Swiss Confederation on a Cooperation for International Transfer of Industrial Carbon Removals” (9 December 2023). Available at:

<https://www.energimyndigheten.se/4aebc0/globalassets/webb-en/cooperation/international-climate-cooperation/mou-on-bilateral-cooperation-under-article-6-of-the-paris-agreement---sweden-and-switzerland.pdf>

<sup>107</sup> Ibid

<sup>108</sup> “Declaration of Intent between the Federal Office for the Environment of the Swiss Confederation and the Ministry for the Environment and Natural Resources of Iceland on cooperation on climate change mitigation in the field of Carbon Removal and Carbon Capture and Storage” (20 July 2021). Available at:

<https://www.bafu.admin.ch/dam/bafu/de/dokumente/international/fachinfo-daten/2021.07.20%20MoU%20SUI-ISL%20Cooperation%20on%20climate%20change%20mitigation%20in%20the%20field%20of%20Carbon%20Removal%20and%20Carbon%20Capture%20and%20Storage.pdf.download.pdf/declaration-intent-iceland-cooperation-climate-change-mitigation.pdf>

on technology development for CCS and CDR, enhance understanding between businesses and governments on international cooperation and carbon markets, and to consider legal international frameworks to promote cooperation taking into account article 6.2 of the PA.

**d) *MoU between Switzerland and the Netherlands on cooperation on CCS and CDR***

The MoU between Switzerland and the Netherlands was entered into 22 March 2022.<sup>109</sup> In the preamble, they emphasise the need for reaching the goals of the Paris Agreement (PA) and the obligation to deliver on their respective NDCs. They also emphasise the important role CCS and CDR have in meeting the Dutch and Swiss national climate targets and in fulfilling their national climate policy goals. The objective of the MoU is to facilitate sharing of technical knowledge, advice, skills and expertise in the field of CCS and CDR.<sup>110</sup>

They will cooperate on a number of issues, including the consideration of technical, legal, CO2 monitoring and accounting aspects concerning the cross-border transport and storage of CO2.<sup>111</sup> These issues might be subject to another bilateral agreement or arrangement to be agreed between them, possibly with a view to comply with the London Protocol.<sup>112</sup>

**e) *MoUs on arrangements for cross-border transportation of CO2 between Norway and Belgium, Denmark, Netherlands and Sweden***

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<sup>109</sup> “Memorandum of Understanding (MoU) between the State Secretary for Economic Affairs and Climate Policy of the Netherlands and the Head of the Federal Department of Environment, Transport, Energy and Communications of Switzerland on Cooperation on Carbon Capture and Storage (CCS) and Carbon Dioxide Removal (CDR)” (22 March 2022). Available at: <https://www.bafu.admin.ch/dam/bafu/en/dokumente/international/fachinfo-daten/Memorandum%20of%20Understanding%20between%20the%20Netherlands%20and%20Switzerland%20on%20Cooperation%20on%20Carbon%20Capture%20and%20Storage%20and%20Carbon%20Dioxide%20Removal.pdf.download.pdf/Memorandum%20of%20Understanding%20between%20the%20Netherlands%20and%20Switzerland%20on%20Cooperation%20on%20Carbon%20Capture%20and%20Storage%20and%20Carbon%20Dioxide%20Removal.pdf>

<sup>110</sup> Ibid, Section 1

<sup>111</sup> Ibid, section 2(b)

<sup>112</sup> Ibid.

In spring 2024, Norway entered into four bilateral MoUs for the cross-border transportation of CO<sub>2</sub> with the purpose of permanent geological storage in the sub-seabed.<sup>113</sup> The four northern European countries are Belgium<sup>114</sup>, Denmark<sup>115</sup>, the Netherlands<sup>116</sup> and Sweden<sup>117</sup>.

These MoUs build on existing MoUs on energy cooperation, including CCS (Netherland (2021), Belgium (2022), Denmark (2023), Sweden (joint declaration 2022)) as well as MoUs on arrangements for transport and storage of captured carbon across borders (Denmark, Belgium and Netherlands (in 2022 and 2023)).<sup>118</sup>

The following assessment is based on the MoU on cross-border transportation of CO<sub>2</sub> for permanent geological storage between Denmark and Norway.<sup>119</sup> The scope of the MoU is to provide the necessary “arrangements” as required by article 6.2 of the London Protocol, its Resolution LP.3(4) and Resolution LP.5(14).<sup>120</sup> It is worth noting that the MoU is clearly geared toward geological storage in the sub-seabed given that the scope of the MoU is to create arrangements within the remits of the London Protocol. This is not surprising given that Norway’s CO<sub>2</sub> storage potential is found in empty offshore petroleum and gas fields.

The MoU also confirms that necessary permitting procedures for the activities are in place, listing the agencies/ministries responsible, with reference again to the London Protocol. In Norway, it is both the Norwegian Ministry of Energy (No: Energidepartementet)<sup>121</sup> and the Norwegian Environment Agency. The

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<sup>113</sup> Norwegian Government, “Five northern European countries conclude international arrangements on transport and storage of carbon across borders” (18 April 2024). Available at: <https://www.regjeringen.no/en/aktuelt/five-northern-european-countries-conclude-international-arrange-ments-on-transport-and-storage-of-carbon-across-borders/id3035286/>

<sup>114</sup> “Memorandum of Understanding (MoU) between the Minister for Environment of the Flemish Region and the Federal Minister for the North Sea of Belgium and the Minister for Energy and Climate of the Walloon Region and the Minister of Energy of Norway on Cross-Border Transportation of CO<sub>2</sub> with the Purpose of Permanent Geological Storage” (15 April 2024). Available at: [https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-be\\_final.pdf](https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-be_final.pdf)

<sup>115</sup> “MoU between the Ministry of Climate, Energy and Utilities in Denmark and the Ministry of Energy of Norway on Cross-border transportation of CO<sub>2</sub> with the purpose of permanent geological storage” (15 April 2024). Available at: [https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-dk\\_final.pdf](https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-dk_final.pdf)

<sup>116</sup> “Memorandum of Understanding (MoU) between The Ministry of Economic Affairs and Climate Policy of the Netherlands and The Ministry of Energy of Norway on Cross-border Transportation of CO<sub>2</sub> with the purpose of Permanent Geological Storage” (15 April 2024). Available at: [https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-nl\\_signed-no-nl.pdf](https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-nl_signed-no-nl.pdf)

<sup>117</sup> “Memorandum of Understanding (MoU) between The Ministry of Climate and Environment in Sweden and The Ministry of Energy of Norway on Cross-border Transportation of CO<sub>2</sub> with the Purpose of Permanent Geological Storage” (15 April 2024). Available at: [https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-se\\_final.pdf](https://www.regjeringen.no/globalassets/departementene/ed/bilder-nyhetsaker/henrik/mou-cross-border-co2-no-se_final.pdf)

<sup>118</sup> Op cit n 114. (Norwegian government press release)

<sup>119</sup> Op cit n 116. (MoU between Norway and Denmark)

<sup>120</sup> As noted above in Part 1 section 5 b), Resolution LP.3(4) allows for the export of CO<sub>2</sub> for the purpose of permanent geological storage in sub-seabed geological formations if the Parties to the London Protocol have entered into relevant “arrangements”. Resolution LP.5(14) allows for the provisional application of Resolution LP.3(4).

<sup>121</sup> Previously known as the Ministry of Petroleum and Energy

former is responsible for the issuance of exploration permits and exploitation permits for developing CO<sub>2</sub> storage sites, and for granting consent to start injection and storage of CO<sub>2</sub>, whereas the latter is responsible for the issuance of CO<sub>2</sub> permits as well as ETS permits.

The importance of ensuring consistent *reporting* of CO<sub>2</sub> emissions related to carbon capture, transportation, and storage operations, including cross-border transportation for storage is recognized.<sup>122</sup> The MoU states that the participants (the above mentioned ministries/agencies in Norway and Denmark) “will report in their GHG inventories on cross-border CCS operations and related CO<sub>2</sub> emissions” in accordance with the 2006 IPCC Guidelines and its updates in the national GHG inventories as agreed under the UNFCCC.

Further, relevant EU/EEA legislation, and future amendments thereof, will be used as a basis for *monitoring and reporting* of emissions. And the participants will ensure that competent authorities under the EU ETS and the national entities responsible for reporting on GHG inventories will exchange relevant information for complete and transparent reporting.<sup>123</sup>

Thus, specific details on how to report on emissions from CCS and transport operations are not included, but it needs to be reported in the national GHG inventories as provided for under the UNFCCC. In addition, relevant EU/EEA legislation is also applicable and will be used as a basis for monitoring and reporting of emissions. The wording leaves room for interpretation on whether reporting will be required for cross-border CCS operations if these do not lead to “related CO<sub>2</sub> emissions”. However, this will be decided based on the requirements under the IPCC Guidelines as well as the relevant EU/EEA legislation.

#### **f) MoU between Norway and the UK on CCS cooperation**

In 2018, Norway and the UK entered into a MoU on cooperation in the field of carbon capture usage and storage (CCUS).<sup>124</sup> As both countries have storage capacity in the North Sea, the cooperation aimed information exchange for publicly available science and technology information, facilitation of dialogue with experts and industry, and acknowledged the need to drive down costs of deploying CCUS technologies. In March 2023, the MoU on CCS cooperation was increased to include hydrogen, and an annex to the MoU was added to ensure closer collaboration on hydrogen.<sup>125</sup>

#### **g) MoU between Belgium, Flanders and Denmark on cross-border transport for CCS purposes**

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<sup>122</sup> Op cit n. 116, section 3 (MoU between Denmark and Norway)

<sup>123</sup> Ibid, section 3

<sup>124</sup> “Memorandum of Understanding between the Ministry of Petroleum and Energy of the Government of Norway and the Department of Business, Energy and Industrial Strategy of the Government of the United Kingdom of Great Britain and Northern Ireland on Cooperation in the Field of Carbon Capture Usage and Storage” (28 November 2018). Available at: [https://assets.publishing.service.gov.uk/media/5c542d6240f0b62545d8ca21/Memorandum\\_of\\_Understanding\\_UK-Norway.pdf](https://assets.publishing.service.gov.uk/media/5c542d6240f0b62545d8ca21/Memorandum_of_Understanding_UK-Norway.pdf)

<sup>125</sup> Norwegian Government. “Enhanced cooperation on hydrogen” (1 March 2023). Available at: <https://www.regjeringen.no/en/aktuelt/enhanced-cooperation-on-hydrogen/id2965002/>

In September 2022, Denmark, Belgium and Flanders signed the first bilateral agreement on cross-border transportation of CO<sub>2</sub> for the purpose of permanent geological storage.<sup>126</sup> It was pushed forward by the Belgian industry, in particular its chemical companies in Antwerp, which foresaw the importance of the development of CCS infrastructure, including storage of CO<sub>2</sub> in depleted oil and gas fields.<sup>127</sup> It builds on a previous MoU for cooperation on Carbon Capture Utilisation and Storage (CCUS).<sup>128</sup>

The MoU for cross-border CO<sub>2</sub> transport for CCS purposes is an “arrangement” as referred to by article 6.2 of the 1996 London Protocol and its Resolution LP. 3(4). It allocates the responsibility of issuance of permits to each country’s relevant authorities.<sup>129</sup>

Further, The MoU clarifies that it does not create any rights and obligations under international law or create any financial obligations.<sup>130</sup> Finally, the MoU can be amended by mutual written consent and may be terminated by either party.<sup>131</sup> However, in the event of termination of the MoU it will not affect any on-going activities, unless otherwise decided by the parties to the MoU.<sup>132</sup>

In contrast to the MoUs entered into between Norway and Denmark and Belgium and Norway on cross-border transportation of CO<sub>2</sub> for geological storage, this MoU does not refer to the reporting requirements under the PA, nor does it refer to any of the EU/EEA reporting and monitoring requirements.

It is worth noting that the EU Commission refer to this bilateral agreement as an example of a bilateral agreement between EU Member States and EEA partner countries that are party to the London Protocol that “could” be concluded (as an “additional arrangement” is not necessary).<sup>133</sup> In this regard, the EU Commission underlines the importance of concluding additional bilateral arrangements only on issues and subject matters that are not covered by the CCS and EU ETS directives.

## **h) National considerations – the Norway example**

In considering entering into cross-border transactions for CO<sub>2</sub> it will be necessary to understand both the international and regional legal policies and frameworks the country in question is promulgating, as well as its specific national laws and regulations.

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<sup>126</sup> “Memorandum of Understanding (MoU) Between the Minister for Environment of the Flemish Region and the Federal Minister for the North Sea of Belgium and the Minister for Climate, Energy and Utilities of Denmark on Cross Border transportation of CO<sub>2</sub> with the Purpose of Permanent Geological Storage” (September 2022).

Available at: <https://www.kefm.dk/Media/638000596525014193/Bilateral%20arrangement%20DK-BE.pdf>

<sup>127</sup> The Danish Ministry of Climate, Energy and Utilities. “Danmark, Flandern og Belgien underskriver en banebrydende politisk erklæring om grænse-overskridende transport af CO<sub>2</sub> til geologisk lagring» (29 September 2022). Available at: <https://www.kefm.dk/aktuelt/nyheder/2022/sep/danmark-flandern-og-belgien-underskriver-en-banebrydende-politisk-erklæring-om-grænseoverskridende-transport-af-co2-til-geologisk-lagring>

<sup>128</sup> “Memorandum of Understanding (MoU) Between the Minister for Environment of the Flemish Region and the Federal Minister for the North Sea of Belgium and the Minister for Climate, Energy and Utilities of Denmark on Cooperation on Carbon Capture Utilisation and Storage (CCUS)” (13 September 2022). Available at

<https://www.kefm.dk/Media/638000596924426467/MoU%20general%20CCUS%20cooperation%20DK-BE.pdf>

<sup>129</sup> Op cit n. 127, section 2 (MoU between Belgium and Denmark)

<sup>130</sup> Ibid, section 3.

<sup>131</sup> Ibid, section 4 and 5.

<sup>132</sup> Ibid, section 5.

<sup>133</sup> Op cit n 20, page 26 (EU Commission)



For example, Norway, which is normally not involved in regulating the voluntary market, will not allow article 6 ITMO transactions between non-party stakeholders without being involved itself.<sup>134</sup> However, for non-ITMO transactions, the government is not intending to get involved/regulate these trades. Norway is also open to use article 6 for its CCS cooperation, if and when adequate, for example with Switzerland. However, not all cooperation on CCS will trigger article 6 in Norway. For example, imported CO<sub>2</sub> captured somewhere else, if no leakage occur, will not be reported in its regular inventory.<sup>135</sup> The EU NDC would, however, create issues related to any ITMO transfer involving a country part of the EU NDC, as it does not allow for the use of article 6.

Finally, for captured CO<sub>2</sub> in Norway and any imported CO<sub>2</sub>, the national expert assumes there will be “found or created” a place to report the storage as a reservoir, and indicate that there is monitoring.

## **8. Overview of the guidelines for reporting on CCS developed by IPCC**

The Intergovernmental Panel on Climate Change (IPCC) has established Guidelines for National Greenhouse Gas Inventories (the 2006 and 2019 IPCC Guidelines).<sup>136</sup> The IPCC Guidelines are underpinning the CRTs for the Parties electronic reporting of GHG emissions and removals under the Paris Agreement.

### **a) Reporting on emissions and removals**

The national inventories should include anthropogenic GHG emissions and removals taking place within national territory and offshore areas within the jurisdiction of the country in question.<sup>137</sup> This means that it is the country in which the emissions and removals take place that report on it in the national inventory. The emissions to be reported under the national inventory are estimated by the quantity of GHG emissions subtracting the captured emissions.<sup>138</sup> Emissions and reductions associated with CO<sub>2</sub> capture should be reported under the IPCC sector in which capture takes place (i.e. Stationary Combustion or Industrial Activities).<sup>139</sup> This leads to difficulties when reporting on carbon removals not connected with an emission activity. For example, direct air capture (DAC) does not currently have its own place in the CRTs. It could potentially be added in the summary table 1, under section 6 “other”. This section allows for any other emissions or reductions to be added to the inventory report.

### **a) Reporting on export and import of CO<sub>2</sub>**

In the event of a cross-border transfer of CO<sub>2</sub> captured in one country and stored in another, both countries should report on the amount of CO<sub>2</sub> exported and imported, respectively.<sup>140</sup> However, the IPCC Guidelines give limited explanation on where this should be reported. Further, prior to the start of the geological operation, the national inventory compiler where storage takes place should “obtain and

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<sup>134</sup> Correspondence with Norwegian national expert

<sup>135</sup> Ibid

<sup>136</sup> These guidelines were first established in 2006 and later refined with additional supplements in 2019

<sup>137</sup> 2019 IPCC Guidelines, volume 1, chapter 8.2.1. Available at: [https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/1\\_Volume1/19R\\_V1\\_Ch08\\_Reporting\\_Guidance.pdf](https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/1_Volume1/19R_V1_Ch08_Reporting_Guidance.pdf)

<sup>138</sup> 2006 IPCC Guidelines, Volume 2, chapter 2, para 2.3.4. Available at: [https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2\\_Volume2/V2\\_2\\_Ch2\\_Stationary\\_Combustion.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf)

<sup>139</sup> 2006 IPCC Guidelines, volume 2, chapter 5, page 5.7 (para 5.3). Available at: [https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2\\_Volume2/V2\\_5\\_Ch5\\_CCS.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_5_Ch5_CCS.pdf) See also: Op cit n. 20, page 16 (EU Commission)

<sup>140</sup> Ibid, page 5.20 (para 5.10).

archive” and “receive” specific information related to the storage operation.<sup>141</sup> This is mainly with the view to report on fugitive emissions.

As part of the inventory quality assurance/control for the CCS system as a whole, the exporting and/or importing country should “check” that the CO<sub>2</sub> captured does not exceed the CO<sub>2</sub> stored (plus any fugitive emissions) in the inventory year.<sup>142</sup> Further, CO<sub>2</sub> captured should not be reported by the capturing country “without linking it to long-term storage”.<sup>143</sup> However, the imported CO<sub>2</sub> should not affect the importing country’s GHG inventory unless there are fugitive emissions.<sup>144</sup>

**a) Reporting on fugitive emissions from cross-border transport, injection and storage of CO<sub>2</sub>**

The 2006 IPCC Guidelines provide emission estimation guidance for fugitive (i.e. leaked) CO<sub>2</sub> from transport, injection and geological storage.<sup>145</sup> In other words, the fugitive emissions (including from CO<sub>2</sub> that has crossed the border) will have to be recorded in the national inventory. In line with the “territorial approach”, in the event of leakage from pipelines this should be reported by the country in which the leaking pipeline is situated (i.e. within its territory and jurisdiction).<sup>146</sup> In the case of leakage of emissions from CO<sub>2</sub> stored in geological formations this should be included in the inventory of the country in which the point of injection is located.<sup>147</sup> In reporting on fugitive emissions from CO<sub>2</sub> transport, injection and storage, the key category is 1C – both for the common reporting tables (CRT) and the IPCC Guidelines.<sup>148</sup> Under category 1C of the CRT, information on the CO<sub>2</sub> leakage is reported in kiloton (kt), and information must be reported on its implied emission factors and potential emissions.<sup>149</sup>

**a) Geological storage – a narrow definition**

It is worth noting that IPCC states that “geological storage” can take place offshore or onshore “in natural underground reservoirs such as oil and gas fields, coal seams and saline water-bearing formations utilizing natural geological barriers to isolate the CO<sub>2</sub> from the atmosphere.”<sup>150</sup> Emission estimations are not provided for other types of storage options such as “ocean storage or conversion of CO<sub>2</sub> into inert

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<sup>141</sup> For example, the year in which storage of CO<sub>2</sub> will begin, the mass of injected and stored CO<sub>2</sub>, description of the monitoring programme, any fugitive emissions and so on.

<sup>142</sup> Op cit n 140, page 5.18 (para 5.9).

<sup>143</sup> Ibid

<sup>144</sup> Peter Zaman et al, “Does Article 6 have a Role to Play in Carbon Capture and Storage” (December 2023), page 5. Available at: <https://www.hfw.com/app/uploads/2024/04/005658-BRIEFING-Does-Article-6-have-a-role-to-play-in-carbon-capture-and-storage.pdf> Also confirmed by Norwegian national expert that with no leakage the storage would not show up in the storage country’s regular inventory.

<sup>145</sup> Op cit n 140

<sup>146</sup> Ibid. para 5.10 (page 5.20)

<sup>147</sup> Op cit n 138 (2019 IPCC Guidelines)

<sup>148</sup> UNFCCC, “Mapping of the categories in the 2006 IPCC Guidelines for National GHG Inventories and those in the common reporting tables (CRT)”. Available at:

[https://unfccc.int/sites/default/files/resource/Mapping\\_Categories\\_CRT-2006IPCCGLs.pdf](https://unfccc.int/sites/default/files/resource/Mapping_Categories_CRT-2006IPCCGLs.pdf) and 2006 IPCC Guidelines, volume 1, chapter 4. Available at: [https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/1\\_Volume1/V1\\_4\\_Ch4\\_MethodChoice.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/1_Volume1/V1_4_Ch4_MethodChoice.pdf)

<sup>149</sup> UNFCCC, “Common Reporting Tables on NIRs” (3 November 2021). Available at:

<https://unfccc.int/documents/309480>

<sup>150</sup> Op cit n 143, pages 5.5 and 5.11



inorganic carbonates.” Further, the IPCC seems to define “geological storage, ocean storage and mineral carbonation” as separate types of CO<sub>2</sub> storage options.<sup>151</sup>

Thus, injecting CO<sub>2</sub> into the ground for forming stable carbonate minerals (i.e. CO<sub>2</sub> reacting with the minerals in the storage formation and caprock to produce carbonate minerals) is not referred to as the type of “geological storage” that falls under these IPCC Guidelines. One of the reasons for this could be the low risk of CO<sub>2</sub> leakage back to the atmosphere, which does not require the same level of comprehensive monitoring as with other types of CCS storage.

## **PART 2: An overview of different types of CCS transactions**

### **1. *Bilaterally between governments***

For an overview over bilateral agreements, focussing on EEA countries, please see Part 1, section 7.

Figure 1 in [Annex 1](#) shows that there are different approaches to the use of international markets for NDC fulfilment. The EU, the UK and the US, as well as some other countries will meet their NDC domestically without the use of international markets. Whereas Norway, Canada, large parts of South America, India and a number of African countries *might* make use of international markets. Countries in the Pacific Islands, Caribbean countries and several African countries as well as Switzerland have NDCs that include the use of international markets, mostly from the perspective of host country for REDD+ as well as emission reduction projects and programmes (with the exception of Switzerland, which is currently a purchasing country). There are also countries, including Russia, Australia, China that either have not specified whether or not the NDC will be achieved by the use of international markets or not submitted an NDC.

The Norwegian, Swiss and the EU’s NDCs are silent on the use of technological carbon removals for achievement of its emission reduction targets. It must be assumed that the EEA countries with requirements for CO<sub>2</sub> reductions for its private sector will use these as part of their NDC achievement, whether it is through the achievement of their targets in the EU ETS or ESR sectors (and of course the LULUCF sector). There is little information available on the EEA governments intention to utilise the CO<sub>2</sub> captured to reach its NDCs, although this can be inferred from their CCS strategies. As we will see below, Denmark has indicated that the carbon removals from its sectors will be counted towards its national targets for 2025 and 2030.

### **2. *Hybrid transactions***

#### **a) *between government and private sector, with or without an NDC element***

##### **i. *US government’s purchase of private sector developed CDR credits***

US Government support for carbon removal has been included as part of the Biden-Harris administration’s action to drive investments needed to achieve the US’s climate goals – cutting GHG emissions in half by

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<sup>151</sup> IPCC, “IPCC Special Report on Carbon Dioxide Capture and Storage” (2005). Available at: [https://www.ipcc.ch/site/assets/uploads/2018/03/srccs\\_wholereport.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_wholereport.pdf)

2030 and reaching net zero by 2050.<sup>152</sup> The US Department of Energy (DOE) has introduced a USD 35 million CDR purchase pilot prize, in which it will purchase carbon removal credits directly from sellers on a competitive basis.<sup>153</sup> The prize structure also asks semi-finalists to elicit private sector purchases for its CDR credits.<sup>154</sup>

The price is the first of a kind effort for the US government to serve as the customer for third-party verified carbon dioxide removal credits.<sup>155</sup> Private entities (both for-profit and nonprofits) and academic institutions are eligible to apply. The CDR technologies include DAC with storage; biomass with carbon removal and storage; enhanced weathering and mineralization; and planned or managed carbon sinks.<sup>156</sup> In May 2024 the semi-finalists were announced which will compete in the second phase of the project.<sup>157</sup> In this phase the applicants will be asked to develop CDR credit purchase contracts covering issues such as measurement, reporting, and verification standards and commercial off-take terms.<sup>158</sup> The DOE has informed that the price is part of a larger government initiative, the “Carbon Negative Shot”, which aim to ensure carbon price at USD 100.<sup>159</sup> It is not clear how the CDR credits will be used by the US government. However, the US government’s support for CDR technologies are meant to “bolster the supply of carbon dioxide removal credits for future government and voluntary private sector purchase efforts” and to support the development of high-quality carbon credits.<sup>160</sup>

## ii. *Project Greensand*

In the Project Greensand, CO<sub>2</sub> is captured and transferred from Belgium to Denmark by ship for safe storage in Denmark’s empty oil and gas fields in the Danish North Sea.<sup>161</sup> INEOS, an oxide company in Belgium, head a consortium of 23 organisations with expertise in CCS, including business, academia, government and start-ups.<sup>162</sup> It is supported by the Danish state through the Energy Technology Development and Demonstration Program. The project is expected to have a storage capacity of up to 1.5

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<sup>152</sup> US White House, “Fact Sheet: Biden-Harris Administration Announces New Principles for High-Integrity Voluntary Carbon Markets” (28 May 2024). Available at: <https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/28/fact-sheet-biden-harris-administration-announces-new-principles-for-high-integrity-voluntary-carbon-markets/>

<sup>153</sup> *Ibid.*

<sup>154</sup> US Department of Energy, “DOE Announces \$1.2 Million to Accelerate America’s Carbon Dioxide Removal Industry” (May 28 2024). Available at: <https://www.energy.gov/articles/doe-announces-12-million-accelerate-americas-carbon-dioxide-removal-industry>

<sup>155</sup> US Office of Fossil Energy and Carbon Management, “DOE Announces \$35 Million to Accelerate Carbon Dioxide Removal” (29 September 2023). Available at: [https://www.energy.gov/fecm/articles/doe-announces-35-million-accelerate-carbon-dioxide-removal?utm\\_medium=email&utm\\_source=govdelivery](https://www.energy.gov/fecm/articles/doe-announces-35-million-accelerate-carbon-dioxide-removal?utm_medium=email&utm_source=govdelivery)

<sup>156</sup> *Ibid*

<sup>157</sup> Further information on the finalists can be found here: <https://www.energy.gov/fecm/carbon-dioxide-removal-purchase-pilot-prize-phase-1-semifinalists>

<sup>158</sup> *Op cit* n 156 (US Office of Fossil Energy)

<sup>159</sup> Informal webinar by US Department of Energy. Available at: <https://www.energy.gov/fecm/funding-notice-carbon-dioxide-removal-purchase-pilot-prize>

<sup>160</sup> *Op cit* n 155 (US Department of Energy)

<sup>161</sup> INEOS, “CO<sub>2</sub> from Belgian INEOS site in Zwijndrecht successfully stored under Danish North Sea” (8 March 2023). Available at: <https://www.ineos.com/sites/belgium/news-index/greensand-breakthrough-in-carbon-capture-and-storage/>

<sup>162</sup> EUDP, “Project Greensand Phase 2”. Available at: <https://eudp.dk/en/node/16466>

Mtpa in 2025 and up to 8 Mtpa by 2030.<sup>163</sup> The storage capacity of Project Greensand is meant to be part of the solution for reaching Denmark’s 2025 and 2030 reduction targets, as Denmark is placing CCS as the cornerstone of these targets.<sup>164</sup> The Danish government has a model of 20% state ownership of the CO2 exploration and storage licenses in Denmark in the “Danish subsoil”, which is a shared resource.<sup>165</sup> This percentage will provide Denmark with profits, but also with ownership of the CO2 stored.

Thus, the Danish government is using licenses for ensuring ownership and profits in shared resources, including storage in its subsoil. Further, the Danish government intends to use the CO2 storage for achievement of its emission reduction targets.

### **iii. The Swiss example**

In Switzerland, the federal government has entered into an agreement with its waste incineration plant operators.<sup>166</sup> The agreement introduces obligations to put at least one CO2 capture plant into operation by 2030.<sup>167</sup> The plant is to have a minimum nominal capacity of 100.000 tonnes of CO2 per year and capture as much as the transport and storage conditions allow. The agreement provides for the incineration plants to be exempt from the Swiss ETS. However, in the event the minimum target is not met by 31 December 2030, the incineration plants must participate in the Swiss ETS.<sup>168</sup> It is worth noting that waste incineration have, per 1 January 2024, only been included for monitoring, reporting and verification purposes and are not yet required to surrender allowances. Thus, according to the EU Commission expert (informal chat 5 September), it is optional for Member States to require waste incineration plants to be part of the allowance system, and only a limited number of Member States have decided to include it. Denmark is one such Member State that has included its waste incineration plants in the EU ETS. In line with the EU ETS Directive (article 30.7), the EU Commission will review and produce a report on whether to include these facilities in the EU ETS by 2026. They could be included already from 2028, and the review will also assess the potential need for a Member State (and EEA participants) to opt out until 2030. It is not clear how this will affect the agreement between the Swiss federal government and its waste incineration plant operators.

Another example, is the Swiss government’s offset obligation for importers of motor fuel to compensate for their emissions with national or international emission reduction projects from article 6.2 of the PA, and in accordance with quality requirements set out in its national legislation.<sup>169</sup> It is worth noting that

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<sup>163</sup> Op cit n 16, page 44 (Global CCS Institute)

<sup>164</sup> Op cit n 163 and Danish Energy Agency, “About CCS”. Available at: <https://ens.dk/en/our-responsibilities/ccs-carbon-capture-and-storage/about-ccs#:~:text=Politically%2C%20it%20has%20been%20decided,reduce%20emissions%20by%20other%20means>.

<sup>165</sup> Danish Energy Agency, “Licenses for exploration and storage of CO2 including environmental consultation rounds”. Available at: <https://ens.dk/en/our-responsibilities/ccs-carbon-capture-and-storage/licenses-exploration-and-storage-co2-including#:~:text=The%20Danish%20state%20is%20a,and%20influence%20regarding%20subsoil%20activities>.

<sup>166</sup> These operators are responsible for 29 waste treatment installations, which are responsible for 5% of the country’s total GHG emissions.

<sup>167</sup> Swiss Federal Office for the Environment (FOEN), “Agreement with waste incineration plants”. Available at: <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/sector-agreements/agreement-waste-treatment.html>

<sup>168</sup> Ibid

<sup>169</sup> Please see previous paper “Carbon Markets in Switzerland”, page 7

Switzerland allows for removal activities abroad (as opposed to reduction activities abroad) to be counted and eligible for issuance of article 6 ITMOs. Also, CO<sub>2</sub> captured in Switzerland and stored abroad is intended to be counted towards the Swiss NDC.<sup>170</sup>

### 3. Commercial transactions

The commercial transactions on CCS and CDR are increasing as national regulations and requirements as well as voluntary climate reduction targets are being developed. Under follows a small selection of commercial transactions:

- In Norway, a few commercial actors have invested in carbon capture. One such actor is Yara, at its plant in Sluiskil in the Netherlands. Yara intends to capture 800.000 tons of CO<sub>2</sub> per year and has entered into an agreement with Equinor's company Northern Lights for storage of CO<sub>2</sub> in the ocean floor on the Norwegian continental shelf.<sup>171</sup>
- In Denmark, the energy producer Ørsted is investing in CCS. From 2026, they will capture minimum 430.000 tonnes CO<sub>2</sub> per year at their two waste incineration plants. Also Ørsted has entered into an agreement for storage of CO<sub>2</sub> with Northern Lights in Norway.
- Northern Lights and Cory entered into an MoU in May 2022 to collaborate on a CCS project between the UK and Norway. In short, Cory will deliver 1.5 million tonnes of CO<sub>2</sub> per year as a result of approximately 90% carbon emission reduction from its energy from waste operation in the London Thames area.<sup>172</sup> Northern Lights, the carbon storage company part of Longship project, has made this possible by offering large-scale CO<sub>2</sub> shipping if access to a jetty/pier is provided.
- In Germany, the Geseke cement plant will, from 2029, produce carbon captured net-zero cement and clinker. Its captured CO<sub>2</sub> will be transported via train to the Danish North Sea (the Wintershall Dea's CO<sub>2</sub> hub) until the necessary pipeline infrastructures are in place.<sup>173</sup>
- Also in Sweden, the cement producers are looking to use CCS. Heidelberg Materials aim to manufacture cement with net-zero CO<sub>2</sub> emissions by 2030, with the goal of achieving negative emissions. They will use CCS technology, and states that it will reduce Sweden's total CO<sub>2</sub> emissions by 4%.<sup>174</sup>
- There are quite a few Swiss private sector buyers of direct air capture carbon removal (CDR) from the voluntary carbon market. These buyers are willing to pay a very high price for these CDR units. Private sector buyers and project developers of these CDR projects are calling upon the Swiss government to ensure that these CDRs can be purchased as ITMOs under the Paris Agreement, even if they are used for voluntary climate targets. As a consequence, the Swiss government is

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<sup>170</sup> Ibid, page 15

<sup>171</sup> EnergiWatch, "Norge undertegner avtaler om CO<sub>2</sub>-lagring med fire EU-land" (16 April 2024). Available at: [https://energiwatch.no/nyheter/politikk\\_marked/article17021002.ece](https://energiwatch.no/nyheter/politikk_marked/article17021002.ece)

<sup>172</sup> Norwegian Government, "Press Release – Cory and Northern Lights announce pioneering international carbon partnership" (13 May 2022). Available at: <https://www.regjeringen.no/contentassets/a8c1aa28204841b3b41641c31e1ee16b/announcement-cory-and-northern-lights-13-may-2022.pdf>

<sup>173</sup> World Cement, "First fully decarbonized cement plant in Germany" (18 December 2023). Available at: <https://www.worldcement.com/europe-cis/18122023/first-fully-decarbonised-cement-plant-in-germany/>

<sup>174</sup> Heidelberg Materials, "Welcome to Slite CCS, one of Sweden's most significant transition projects". Available at <https://www.sliteccs.se/en>

seeking to establish Article 6 partnerships with partner countries and is also considering whether to become a host of article 6 credits.<sup>175</sup>

### **PART 3: A legal analysis on CCS and article 6 relevant for Iceland**

The above assessment of the legal framework needs to be seen in light of the specific needs of Iceland. There are a few key points that should be considered in this regard. First, Iceland is a small country with limited administrative capacity, and any new administrative burden such as reporting requirements under the Paris Agreement article 6, will require time and resources.

Article 6 cooperation is voluntary and is not required for the transactions of carbon storage space or carbon removal units. In some circumstances, article 6 is not necessary or needed. For example, for carbon removal and storage transactions within a country, there is no need to develop ITMOs for this to take place. The US government's ambition to propel its national carbon removal industry forward has been done without reliance on the Paris Agreement's article 6, at least in the first place. Under the US government's CDR prize described above in section 2 a (i), the US relies on third-party verifiers to assess the quality of the carbon removal units that it will purchase. The US government also requires the participants to offer the carbon removal units to private actors. Going forward, the US is following the development of article 6 closely, and its national carbon removal industry will eventually be well positioned to provide for ITMOs, in accordance with the PA requirements under article 6.

Thus, it is possible for Icelandic companies to be a provider of DAC and carbon storage services and to sell these credits without utilising article 6 and its ITMOs. Iceland is not required to report storage activities under the national inventory report, unless there is leakage of CO<sub>2</sub> from the storage activity. Further, the act of storage of CO<sub>2</sub> does not fall under article 6 as it is not part of the mitigation outcomes that creates ITMOs. This means that if the CO<sub>2</sub> is captured abroad has been part of a transaction under article 6 (i.e. that ITMOs have been transferred), Iceland will still not have to report on the storage. This is because the act of storing CO<sub>2</sub> is not considered to be part of the development of the mitigation outcome itself, as the reporting and accounting on ITMOs is between the two countries in this transaction, and do not (currently) involve a third party that undertakes the storage responsibility.

Also, for DAC activities taking place in Iceland is it not necessary to be part of article 6 and sell these as ITMOs. However, if another country or private actors in that country is interested in purchasing ITMOs from that activity for use towards that country's NDC, the DAC activity will need to develop ITMOs. An ITMOs can only be developed if it is authorised under that country's national laws and regulations. In other words, because the CO<sub>2</sub> removal takes place in Iceland it needs to fulfil the requirements under article 6 (i.e. authorisation, corresponding adjustment, etc) to develop mitigation outcomes that can be transferred as ITMOs.

To not offer article 6 ITMOs for DACs could potentially prohibit the reach of these actors in selling their CO<sub>2</sub> reductions to countries for its NDC fulfilment and to companies that have obligations linked to the fulfilment of its country's NDC. Switzerland is an example of the latter, in which the private sector's purchases of EU ETS allowances is used towards the fulfilment of its NDC.

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<sup>175</sup> Please see previous paper "Carbon Markets in Switzerland", page 15

Further, the private sector in Iceland is at the forefront of delivering technologies for carbon storage, such as the facility of Carbfix, as well as direct air capture (DAC), such as the Mammoth DAC plant. Very few countries have the advantage of having both advanced technologies and opportunities for storage of CO<sub>2</sub>.

The potential for import of CO<sub>2</sub> or the use of DAC, coupled with secure storage opportunities in Iceland, could lead to the development of a strong carbon capture and storage sector. Both the physical delivery of CO<sub>2</sub> via ships (as opposed to pipes) as well as the direct capture could be used for international CO<sub>2</sub> transactions with governments and/or the private sector. The potential could not come into full fruition if political and regulatory frameworks are not competitive compared with neighbouring countries as well as other countries betting strongly on these technologies.

However, if public or private participants wish to trade in ITMOs, the rules under article 6 will apply. As many countries and private sector participants are looking to use article 6 ITMOs, potentially excluding this option could reduce Iceland's private sector competitive advantage for DACs. As the use of article 6.2 and (eventually) article 6.4 is hoped to provide better quality emission reduction and removals, some countries or private actors might introduce article 6 as a requirement for CCS/CDR transactions, in particular if these will be used towards national or NDC targets.

However, storage operators will likely not be affected by the lack of an article 6 framework in Iceland. This is because article 6 ITMOs transactions are authorised independent of how/where the CO<sub>2</sub> is stored.

At the same time, there are few countries with the ability to offer both DAC and storage of CO<sub>2</sub>, and Iceland could potentially be one of the first movers in this field, offering carbon removal (+ storage) ITMOs for countries and/or private actors.

It is also worth noting that Iceland is in a special position compared with other countries offering CO<sub>2</sub> storage in that Iceland can offer the storage on land and not in geological formations under the seabed. Thus, many of the regulatory hurdles, such as the requirements under the London Protocol, will therefore not apply. As such, Iceland has less regulatory formalities to comply with for its import of CO<sub>2</sub> for the purpose of onshore storage.

The Icelandic government could use its carbon dioxide removal sector for achievement of national or international GHG removal targets, including possible targets on this in its NDC.

For example, private actors purchase of CCS/CDR for non-compliance reasons (i.e. it is not a legal requirement but rather a self-imposed climate goal that is the reason for the purchase) could be used for achievement of Iceland's domestic climate neutrality goal or could be transferred to Iceland's NDC achievement, in the event that Iceland has an NDC with a CCS/CDR target, and/or a target for negative emission reductions.

Another example of how this can be done is through establishing national carbon removal obligations for Iceland's private sector. This could follow the approach Switzerland has taken with its fuel importers, which



have obligations that can be fulfilled through purchase of emission reductions, and that utilizes these reductions for its NDC achievement.

It is worth noting, however, that any additional targets in Iceland's NDC will have to be reported upon through the Paris Agreement's ETF.

The use, by other countries or foreign private actors, of DAC undertaken in Iceland for the achievement of these countries' national emission removal targets or its NDC is allowed. This can take place with or without article 6 authorisation. However, in order to ensure that no double counting takes place, Iceland should have legal frameworks in place that makes sure it does not count purchases done by foreign private companies for national NDC purposes of their country towards its own national targets/NDC. To avoid this, the article 6 framework could be useful to introduce in Iceland, as it aims to avoid double counting of reductions and removals. Countries could, like Switzerland seem to do, introduce requirements for the use of article 6 for its private sector if emission reduction or removal obligations will be used for NDC achievement.

Further, international regulation under PA article 6 does not cover the content of bilateral agreements nor how Parties can keep private sector accountable. Further, under article 6, there is no requirement that a Party with a third-party storage operator is part of the creation of ITMOs. Thus, the Icelandic government will not be required to comply with the requirements relevant for article 6 ITMOs transactions (such as the authorisation and corresponding adjustment) if its providing storage space only. The consequence is that Parties to the PA can enter into bilateral agreements to strengthen cooperation for transfer of ITMOs for CCS and carbon removals (for example, as Switzerland and Sweden have done) and their private sector can then enter into commercial agreements in which the storage operator is in a third-party country, even when this third-party country has no national regulation in place allowing for article 6 transactions. It is worth noting that the bilateral agreements do not specify *where* the CO<sub>2</sub> will be *stored*, only where it will be captured. Thus, the two countries undertaking the ITMOs transaction do not create legal obligations for a third party. Unless there are national laws and regulations in Iceland regulating its private sector transactions for CO<sub>2</sub> storage space on land, and as long as the requirements under the EU regulations are adhered to, these actors are not prohibited under international or EU law to enter into these contracts. Thus, it is up to the Icelandic government to develop the regulatory framework on whether and how storage of CO<sub>2</sub> can take place in Iceland. In doing this, it is worth noting how international conventions cover cross-border CO<sub>2</sub> transactions (leading to different legal requirements for onshore and offshore storage), the allowance requirements for leaked emissions under the EU ETS, and the monitoring and reporting requirements under the CCS Directive, amongst others.

Finally, it is worth noting that there are different legal interpretations of the application of the EEA Agreement for EEA countries, in particular when it comes to its application in the European Economic Zone (EEZ). In addition, the EEA Agreement is meant to cover products listed in the Harmonized System, which includes CO<sub>2</sub> deliberately produced by the chemical industry (as opposed to CO<sub>2</sub> from emission removal/reduction technologies). Thus, both a narrow and wide interpretation of the EEA Agreement to CO<sub>2</sub> for the purpose of storage could be applied. In any event, the EEA Agreement does not exclude Iceland from introducing tax on imported CO<sub>2</sub> as long as the same tax is introduced for captured CO<sub>2</sub>. Please note that this is a preliminary finding and further research is needed on the application of the EEA Agreement.

# WENGER LAW

This paper does not look into how a strong CO2 removal and storage sector could lead to more jobs, synergies with other technologies, provide taxable income for Iceland or strengthen Iceland's political influence and position with countries and companies it cooperates with. However, it is likely that any measures taken to strengthen Iceland's position in this area could give benefits for a long-term period as the need for carbon removals globally are likely to increase in both the near and long-term.

Thus, the administrative burden will have to be weighed against the potential for Iceland to benefit from including reporting under article 6, in particular for its carbon removal sector.

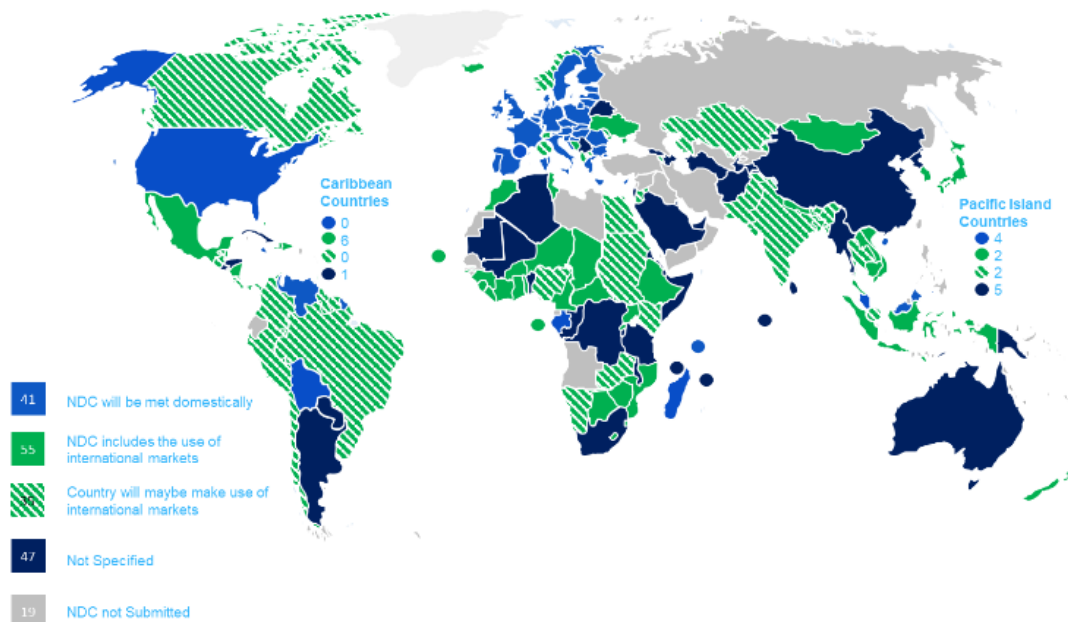
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## Annex 1

The table below gives an overview of countries’ intention to use international markets, including article 6 of the Paris Agreement, to fulfil its targets in their NDCs.<sup>176</sup>

**Figure 1. Market friendly NDCs**



Source: UNFCCC NDC registry data elaborated by IETA

<sup>176</sup> Global CCS Institute, Tamme, E., and Scowcroft, J. “Brief – The Role of CCS in the Paris Agreement and its Article 6”, page 5, (April 2020). Available at: <https://www.globalccsinstitute.com/wp-content/uploads/2020/05/Article-6-and-CCS-GCCSI-April-2020-final.pdf> Please note that the full citation of the source of the table is not included in the bibliography of this paper. It simply states: “UNFCCC NDC registry data elaborated by IETA”.

However, the figure is also found in a paper by Michaelowa et al “Opportunities for mobilizing private climate finance through Article 6”, in which the source of the table is cited as “IETA (2018): Piecing together the future of carbon markets, IETA Insights Quarterly Report N°4, [https://www.ieta.org/resources/Resources/GHG\\_Report/2018/IETA%20Insights%20Q4\\_2018.pdf](https://www.ieta.org/resources/Resources/GHG_Report/2018/IETA%20Insights%20Q4_2018.pdf) (last accessed June 7, 2019)”. However, unfortunately, the link to the IETA paper does not work, so it cannot be checked.

The table is also found in a presentation by International Policy Director in IETA, Stefano De Clara, dated 28 May 2021, page 13. It is presented under the heading “Market Friendly NDCs (2015-2018 update)”. The presentation is available at: [https://unosd.un.org/sites/unosd.un.org/files/1.\\_ieta\\_art6\\_presentation\\_for\\_igcc.pdf](https://unosd.un.org/sites/unosd.un.org/files/1._ieta_art6_presentation_for_igcc.pdf)

Thus, the table is likely from an IETA quarterly report that is no longer available online. However, the table is referenced in secondary sources of newer dates, including from IETA itself in 2021.

## Annex 2 – EU policies and regulations relevant to CCS and transport of CO<sub>2</sub>

### ***Industrial Carbon Management Strategy***

The Industrial Carbon Management (ICM) Strategy was adopted by the EU Commission 6 February 2024.<sup>177</sup> It aims to establish a single market for CO<sub>2</sub> transport and storage services throughout Europe by 2030. The ICM covers carbon capture and storage (CCS), including Bio-Energy Carbon Capture and Storage (BECCS), carbon capture and utilisation (CCU) and carbon dioxide removal (CDR), including Direct Air Carbon Capture and Storage (DACCS). Thus, it covers both emission reductions and carbon removals, and aims at strengthening action at EU level towards reaching the EU’s 2050 target.<sup>178</sup>

According to the EU Commission, it is progressing on all action points put forward, all being meant to enhance the creation of a competitive CCS sector.<sup>179</sup>

### ***The Net-Zero Industry Act***

The Net-Zero Industry Act is part of the EU’s Green Deal Industry Plan to create a more predictable and simplified regulatory environment in the EU. It seeks to scale up technologies that will drive decarbonization, including CCS. It is setting an EU-wide objective for CO<sub>2</sub> storage/injection capacity of 50 million tonnes of Co<sub>2</sub> per year by 2030 and obliges oil and gas companies to contribute to the achievement of this objective.<sup>180</sup> The Net-Zero Industry Act introduces faster permitting processes for net-zero projects, including for CO<sub>2</sub> transport and storage. It also introduces a requirement for Member States to make all geological data related to potential CO<sub>2</sub> storage sites publicly available.<sup>181</sup>

It entered into force in EU Member States at the end of June 2024, with some of the obligations for impacted stakeholders reaching their deadlines in the upcoming months of autumn 2024.<sup>182</sup> According to the EU Commission, they are working closely with competent authorities and storage operators, in view of supporting them in meeting their obligations.<sup>183</sup>

However, The Net-Zero Industry Act is not yet included in the EEA Agreement, and EEA EFTA States recommend amending some of the provisions regarding permitting as well as providing more clarity on

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<sup>177</sup> European Commission, “Towards an ambitious Industrial Carbon Management for the EU” (6 February 2024). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2024%3A62%3AFIN&qid=1707312980822>

<sup>178</sup> Op cit n 9 (European Commission, “Legislative Framework”)

<sup>179</sup> Correspondence with EU Commission expert on CCS 8 August 2024

<sup>180</sup> Op cit n 38

<sup>181</sup> Ibid

<sup>182</sup> Regulation (EU) 2024/1735 of the European Parliament and of the Council of 13 June 2024 on establishing a framework of measures for strengthening Europe’s net-zero technology manufacturing ecosystem and amending Regulation (EU) 2018/1724. Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L\\_202401735](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401735)

<sup>183</sup> Correspondence with EU Commission expert on CCS, 8 August 2024

the environmental procurement criteria.<sup>184</sup> Norway has also shared its separate position paper on the issue.<sup>185</sup>

## **Carbon Capture and Use**

The EU Carbon Capture and Use (CCU) technology is regulated in the EU Directive on the promotion of the use of energy from renewable sources.<sup>186</sup> It promotes renewable fuels of non-biological origin, including fuels produced from captured CO<sub>2</sub>.

## **Trans-European Networks for Energy (TEN-E) Regulation**

CO<sub>2</sub> transport infrastructure projects are within the scope of the Trans-European Networks for Energy (TEN-E). These projects can apply to become projects of common interest (PCIs) or projects of mutual interest (PMI) and subsequently apply for support under the Connecting Europe Facility (CEF). Every 2 years, the Commission adopts an EU list of PCIs and PMIs.<sup>187</sup> In 2023, there was identified 14 cross-border infrastructure projects of PCI/PMI in Europe for CO<sub>2</sub> transport and storage.<sup>188</sup>

## **The Carbon Removals and Carbon Farming (CRCF) Regulation**

On 10 April 2024, the European Parliament adopted the provisional agreement on the Carbon Removals and Carbon Farming (CRCF Regulation).<sup>189</sup> With that, the first EU-wide voluntary framework for certifying carbon removals, carbon farming and carbon storage in products across Europe was created.<sup>190</sup>

The framework aims to create a market for removing CO<sub>2</sub> from the atmosphere, to foster deployment of carbon management and to boost CCS and CDR technologies including bioCCS and direct air carbon capture and storage (DACCS).<sup>191</sup>

## ***Ongoing EU initiatives on CCS***

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<sup>184</sup> EFTA, “EEA EFTA States seek to strengthen EU Net Zero Industry Act for a greener and more competitive Europe” (11 December 2023). Available at: <https://www.efta.int/media-resources/news/eea-efta-states-look-to-strengthen-eu-net-zero-industry-act-greener-and-more>

<sup>185</sup> Please note that Norway, although it shares the ambition of the Net-Zero Industry Act, has stated that it is imperative that some of the provisions of the Act are modified for it to be, if considered EEA relevant, implemented in the EEA Agreement. Also see: Norwegian Government, “Norwegian Government’s position to the Net-zero Industry Act” (10 July 2023). Available at:

<https://www.regjeringen.no/contentassets/67a23335c0c745a08cf8de8b2e55c0b4/2023-07-11-nzia-norwegian-position.pdf>

<sup>186</sup> Consolidated text: Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02018L2001-20181221&qid=1647270042844>

<sup>187</sup> European Commission, “Industrial carbon management”. Available at: [https://energy.ec.europa.eu/topics/carbon-management-and-fossil-fuels/industrial-carbon-management\\_en](https://energy.ec.europa.eu/topics/carbon-management-and-fossil-fuels/industrial-carbon-management_en)

<sup>188</sup> European Commission, “Industrial Carbon Management: Interactive Stories”. Available at: <https://webgate.ec.europa.eu/cineaportal/apps/storymaps/stories/9340ba62369c4f15bc99662070691120>

<sup>189</sup> Op cit n 9 (European Commission, “Legislative Framework”)

<sup>190</sup> More specifically, the framework covers the following activities: (i) permanent carbon removals, hereunder CCS, storage through industrial technologies such as bioenergy with carbon capture and storage (BECCS) and direct air capture with capture and storage (DACCS); (ii) carbon storage in soil, wetlands and forests; and (iii) carbon storage in long-lasting products.

<sup>191</sup> Op cit n 9 (European Commission, “Legislative Framework”)

In addition to the above-mentioned policies and regulations, the EU Commission is also working on further developing the law and policies for CCS, CDR and CCU, also referred to as “industrial carbon management” (ICM), with a focus on the following areas:<sup>192</sup>

- Establishing a single market for CO<sub>2</sub> in Europe.
- Preparations for CO<sub>2</sub> transport and storage regulation. Infrastructure needed to establish a single market for CO<sub>2</sub> in Europe, including a transport and storage regulatory package. This package would consider market and cost structure; third-party access; quality standards or investment incentives for new infrastructure.<sup>193</sup>
- An assessment of the objectives and policy measures needed to ensure sufficient (industrial) carbon removals. This includes further assessment of the volume of CO<sub>2</sub> that should be removed to achieve the 2040 and 2050 reduction ambitions.
- Establishing a carbon accounting framework for utilization of captured CO<sub>2</sub> (in industrial processes).
- Establishing an enabling environment for investors, including international cooperation to ensure that international carbon pricing frameworks take into account removals to address emissions in hard-to-abate sectors.

### **The Environmental Liability Directive**

The EU’s Environmental Liability Directive regulates pollution of CO<sub>2</sub> from CCS activities. Its objective is to establish a common framework for the prevention and remedying of environmental damage at a reasonable cost to society.<sup>194</sup> It builds on the “polluter pays” principle, which ensures that an operator causing the environmental damage is to be held financially liable, leading them to adopt measures and develop practices to minimise the risk of environmental damage.<sup>195</sup> It is a public/administrative law instrument, which means that liability is enforced solely by public authorities, and private claims for property or personal injury is excluded.<sup>196</sup>

The environmental damage must be caused by an activity listed in Annex III, which is an activity carried out in the course of an economic activity, a business or an undertaking. It can also be an imminent threat of such damage from these activities.<sup>197</sup> The list of activities includes operation of storage sites for the geological storage of CO<sub>2</sub>.<sup>198</sup>

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<sup>192</sup> Op cit n 8. Industrial carbon management means technologies that can capture CO<sub>2</sub> or remove it directly from the atmosphere, transport and store/use it

<sup>193</sup> Ibid

<sup>194</sup> Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004L0035>

<sup>195</sup> Ibid, Environmental Liability Directive, preamble para (2) and article 1

<sup>196</sup> Article 3(3)

<sup>197</sup> Ibid, article 3 (a)

<sup>198</sup> In Annex III, activities that are included are regulated under: the Integrated Pollution Prevention and Control (IPPC) Directive, the Groundwater Directive, the Water Framework Directive, directives and regulations covering waste management, discharge of dangerous substances, transport of dangerous goods, industrial air pollution, genetically modified organisms (GMOs), dangerous substances and preparations, and transboundary shipment of waste. Further, the CCS Directive’s article 34 includes the operation of storage sites to the Annex III list.

A causal link between the damage and the act of polluting needs to be established, and environmental damage resulting from events beyond the operator's control is exempted.<sup>199</sup> Environmental damage is defined, and is any damage with "significant risk of human health being adversely affected" or "significant adverse effects" on protected species and habitats, land and water areas. It is not clear what the level of CO2 leakage will have to be for it to fall in under this definition. However, it is clear that environmental liability for leakage is relevant of this leads to local damage to the environment and comes in addition to any allowances required under the EU ETS Directive.<sup>200</sup>

The operator of a CCS activity have an obligation to take preventive and remedial action.<sup>201</sup> The competent authority has great discretion in choosing the right response, including taking the necessary remedial measures itself, and can recover the costs incurred.<sup>202</sup> Further, the competent authority shall take measures to encourage the development of financial security instruments and markets, including financial mechanisms in case of insolvency, to enable the operators to use financial guarantees to cover their liabilities under the directive.<sup>203</sup> The CCS Directive affirms that responsibility of the operator remains after active storage operations have ceased and until the responsibility is transferred to the relevant authority.

The directive has been applicable since 2004, with a deadline to be incorporated into national law by 2007.<sup>204</sup> It complements rules provided under the EU ETS on CCS. It is an instrument with EEA relevance and made part of the EEA Agreement.

The CCS Directive's article 34 places the operation of storage sites for CCS under the Environmental Liability Directive. The CCS directive also relies on the Environmental Liability Directive for allocation of liability where CCS operations result in damage to the local environment.<sup>205</sup>

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<sup>199</sup> Article 4

<sup>200</sup> Op cit n 9 (European Commission, "Legislative Framework")

<sup>201</sup> Article 5 and 6

<sup>202</sup> Article 6.2 (e) and article 8(2)

<sup>203</sup> Article 14

<sup>204</sup> UCL, "Environmental Liability Directive". Available at: <https://www.ucl.ac.uk/cclp/ccsliable-Europe-liabilitydirective.php>

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#### **4. Interviews with Experts:**

Informal interview with Ms Nicole Keller, Team Leader at Environment Agency of Iceland, Thursday 22 August 2024

Informal interview with Ms Amy Merrill, CEO of Integrity Council for the Voluntary Carbon Market (ICVCM), Wednesday 14 August 2024

Informal correspondence with Ms Anca Petre, Policy Officer in the European Commission in the Directorate-General for Climate Action (DG Clima), 8 August 2024

Informal interview with Mr Fabien Ramos, Policy Officer in the European Commission in the Directorate general for Climate Action, Thursday 5 September 2024

Informal correspondence with Mr Peer Stiansen, Senior Advisor, the Norwegian Ministry of Climate and Environment, 22 August 2024



To: Iceland's Ministry of Environment, Energy and Climate *Working Group on Carbon Markets*

From: Wenger Law  
Cathrine Wenger, Managing Partner

Date: 10. May 2024

## THE ROLE OF CARBON MARKETS IN NORWAY

### Executive Summary

- The Norwegian 2030-target, which is set out in the Climate Act and Norway's NDC, is to reduce GHG emissions with at least 55% in 2030 compared with the 1990-level. Norway will cooperate with EU in fulfilling the 2030, and will be utilizing the EU ETS and possibly also flexibilities under the ESR and LULUCF regulation.
- In achieving the 2030-target, Norway will rely on the Paris Agreement's article 6 cooperation for emission reductions outside of the EU/EEA only if there are insufficient flexibilities to purchase the remaining emission reductions under the EU joint implementation (i.e if there are insufficient emission reductions available within the EU).
- Norway has a political climate neutrality goal for 2030, and intends to use article 6 of the Paris Agreement for its fulfilment. This goal is not part of Norway's NDC.
- Norway does not have any *specific* rules or regulations on the voluntary carbon markets (VCM), nor any policies or guidelines for public or private sector engagement in the VCM. However, relevant rules and regulations (ie the Purchasing Act), applies to VCM-transactions.
- Norway is a strong proponent and supporter of REDD+ activities in rainforest countries, and works to assist with building up a robust *international* framework, trough REDD+ and LEAF.
- Norway cooperates with other countrie through the World Bank's TCAF for both climate finance and purchase of ITMOS under article 6. TCAF relies on ia. the Article 6 Rulebook to ensure environmental integrity.
- Private actors seem to take advantage of the lack of specific guidance for the domestic VCM in Norway, in particular in the forestry sector. However, the proposal from the EU Commission on carbon credits from the LULUCF sector, if and when implemented in Norway, could provide greater quality assurance for potential buyers of forest carbon emission reduction units.
- Carbon capture and Storage (CCS) in Norway is being developed through the project Longship, and the VCM and/or article 6 of the Paris Agreement are likely to play a role in ensuring financial viability of these projects.

## **PART 1: The role of carbon markets in climate policy**

### ***1. Key instruments and policy frameworks***

The key instruments in Norway for reducing greenhouse gas (GHG) emissions are the EU Emission Trading System (EU ETS) and sector-specific climate levies/taxes, which together cover around 85% of Norwegian emissions.<sup>1</sup> In addition, other instruments include direct regulation, standards, agreements, subsidies and support for innovation and technology development.<sup>2</sup>

The CO<sub>2</sub> tax on mineral oil and petrol were introduced in 1991, and close to 20 years later it was also introduced on natural gas and LPG.<sup>3</sup> The tax applies to all use of these products for road traffic, and domestic shipping and aviation, as well as agriculture.<sup>4</sup> The second climate-related tax is on production and import of HFC and PFCs, two greenhouse gases. Finally, there is a carbon tax on emissions from petroleum activities on the Norwegian continental shelf for non-ETS emissions of natural gas from petroleum extraction.<sup>5</sup> There are also ongoing discussions to reintroduce a tax on mineral fertilizers for farmers and on waste incineration.<sup>6</sup>

It is worth noting that the Norwegian government aims to not increase overall levels of taxation, and as such is reducing other taxes when introducing new ones. However, this could easily become counter-productive. For example, the rise in carbon taxes has been ‘compensated’ for by reducing the road use duty.<sup>7</sup> As such, there will be no financial consequence for those driving a petrol or diesel car, and the overall emission reductions will be 3 million tonnes CO<sub>2</sub>e lower than without this ‘compensation measure’.<sup>8</sup>

Emissions from petrol extraction from the continental shelf are also covered by the EU ETS.

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<sup>1</sup> Norwegian Ministry of Finance, ‘Meld. St. 1 (2023 – 2024), Melding til Stortinget, Nasjonalbudsjettet 2024’ (23 October 2023), p. 82. Available at: <https://www.regjeringen.no/contentassets/3aef7f0d3bca43b387fd97b6b5cc6905/no/pdfs/stm202320240001000ddpdfs.pdf>

<sup>2</sup> Ibid.

<sup>3</sup> Norwegian Ministry of Climate and Environment, ‘Norway’s National Plan related to the Decision of the EEA Joint Committee No. 269/2019 of 25 October 2019’ (December 2019), p. 4. Available at: <https://www.regjeringen.no/contentassets/31a96bc774284014b1e8e47886b3fa57/norways-national-plan-related-to-the-decision-of-the-eea-joint-committee-no.-269-2019-of-25-october-2019.pdf>

<sup>4</sup> Norwegian Ministry of Climate and Environment, ‘Meld. St 13 (2020-2021), Report to Storting (white paper), Norway’s Climate Action Plan for 2021-2030’, p. 64. Available at: <https://www.regjeringen.no/en/dokumenter/meld.-st.-13-20202021/id2827405/?ch=1>

<sup>5</sup> Ibid., p. 64.

<sup>6</sup> Ibid., pp. 65-66.

<sup>7</sup> Ibid., p. 66.

<sup>8</sup> Ibid.

Norway has been part of the EU ETS through the European Economic Area (EEA) Agreement since 2008 and has since then further expanded its cooperation with the EU.<sup>9</sup>

In 2019, Norway entered into an agreement with the EU and Iceland with commitments for emissions reductions in the sectors that are not covered by the EU ETS, hereunder those covered by the EU Effort Sharing Regulation (ESR) and the land use land-use change and forestry (LULUCF) Regulation (the EEA Joint Committee Decision No 269/2019).<sup>10</sup>

As such, a cornerstone for Norway's achievement of its climate targets is the cooperation with the EU in its carbon markets. There is broad political agreement for the continued cooperation with the EU on climate related issues, despite the government coalition party, the 'Centre Party' (Senterpartiet), being in strong, vocal opposition to EU cooperation on climate.<sup>11</sup>

It is also worth noting that in last year's Norwegian Official Report, (NOU) 2023:25, commissioned by the government on policy choices towards 2050 and a transition to a low emission society, the recommendations underlined that putting a price on carbon will continue to be important, but not sufficient. Thus, the committee recommended a more complex package of policy instruments, including educational measures, taxes, subsidies, and obligations and bans.<sup>12</sup> Of particular interest is the recommendation to draw up a binding plan for a gradual increase of the carbon tax that is applicable also after 2030. To increase taxes is aligned with the current government's policies which has been increasing the tax burden for companies, leading to an emigration of wealthy individuals to other countries such as Switzerland.<sup>13</sup> The Norwegian government is currently drafting a white paper focusing on post 2030 in response to the report tentatively planned for spring 2025, so it is too early to know which of the recommendations will be followed.<sup>14</sup>

During 2008-2020 Norway was utilizing International Emissions Trading, the Clean Development Mechanism (CDM) and to some extent Joint Implementation under the Kyoto Protocol as a

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<sup>9</sup> The European Economic Area (EEA) Agreement and its annexes and protocols (in particular Protocol 31) provides the framework for Norway and other participating EEA Member States to strengthen cooperation for the preservation, protection and improvement of the quality of the environment, including for the cooperation of reduction of greenhouse gas emissions.

<sup>10</sup> Decision of the European Economic Area (EEA) Joint Committee No 269/2019 of 25 October 2019 amending Protocol 31 to the EEA Agreement, on cooperation in specific fields outside the four freedoms. This agreement amends Protocol 31 and effectively includes the ESR and LULUCF sectors in Norway and Iceland.

<sup>11</sup> More on this below, in para 3.

<sup>12</sup> Norwegian Government, 'Press release NOU 2023:25, The transition to low emissions – climate policy choices towards 2050'. Available at:

[https://files.nettsteder.regjeringen.no/wpuploads01/sites/479/2023/10/Pressemelding\\_engelsk.pdf](https://files.nettsteder.regjeringen.no/wpuploads01/sites/479/2023/10/Pressemelding_engelsk.pdf)

<sup>13</sup> Ott Ummelas, Bloomberg, 'Rich Norwegians Flee Fjords for Swiss Exile in Rage About Taxes'. (9 September 2023). Available at: <https://www.bloomberg.com/news/articles/2023-09-09/norway-wealth-tax-pushes-the-rich-to-move-to-switzerland>

<sup>14</sup> Information from the Ministry of Climate and Environment.

supplement to national domestic measures.<sup>15</sup> Going forward, Norway will use the cooperation mechanism under article 6 of the Paris Agreement for bilateral and multi-institutional trade of internationally transferred mitigation outcomes (ITMOS) as a frame for the cooperation with EU and for the implementing the climate neutrality target.<sup>16</sup>

Further, Norway's largest contribution to international climate action is its financing through its International Climate and Forest Initiative (NICFI), established in 2008. NICFI is administered by the Norwegian Ministry of Climate and Environment in collaboration with the Norwegian Agency for Development Cooperation (Norad).<sup>17</sup> This initiative supports tropical forest countries in their efforts to manage rainforests sustainably and reducing market pressures on rainforests by reducing demand for raw materials that drives deforestation.<sup>18</sup> Norway has entered into bilateral agreements with the most important tropical forest countries, and has invested more than USD 5 billion since its inception.<sup>19</sup> In addition, Norway is a strong proponent and supporter of REDD+ activities in rainforest countries, and works to assist with building up a robust international framework, through UN Framework Convention on Climate Change's (UNFCCC) process to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable forest management and forest carbon stock enhancement (REDD+) and the LEAF coalition. The LEAF coalition supports the sale and purchase of high integrity REDD+ credits through a credit standard called The REDD+ Environmental Excellence Standard (TREES).

NIFCI is one of four donor governments to commit funds to the LEAF Coalition, which aims to reverse deforestation in tropical forests through the transactions of carbon credits.<sup>20</sup>

Finally, it is worth noting that Norway's international climate ambition and national policies have been questioned given the fact that Norway is still an active oil and gas producer. Recently, this led to Norway being kicked out of the High Ambition Coalition, which is a climate coalition that was founded in the run up to Paris Agreement and has been pursuing an ambitious outcome.

## **2. The emission reduction targets**

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<sup>15</sup> For more information on the Norwegian contributions under the CDM, please see Norwegian Government, 'Norwegian Carbon Credit Procurement Program' (29 January 2024). Available at: <https://www.regjeringen.no/no/tema/klima-og-miljo/klima/innsiktsartikler-klima/norwegian-carbon-credit-procurement-program/id2415405/?expand=factbox3023301>

<sup>16</sup> More on this below in part 2, para 1.

<sup>17</sup> For more information, please see NICFI's home page, available at: <https://www.nicfi.no/about-us/>

<sup>18</sup> Norway's Climate Action Plan for 2021-2030, op. cit. no. 4, p. 32.

<sup>19</sup> Norwegian Government, 'Norway prolongs forest partnership with Ethiopia' (5 September 2023). Available at: <https://www.regjeringen.no/en/aktuelt/norway-prolongs-forest-partnership-with-ethiopia/id2993100/>

<sup>20</sup> More on this below in part 3, para 1.

The key legal document setting out Norway's emission reduction target for 2030 and 2050 is the Climate Act (Klimaloven).<sup>21</sup> The purpose of the act is to promote the implementation of Norway's climate targets as a part of the transformation of Norway to a low-emissions society by 2050.

In addition to the EU regulations mentioned above, Norway has through its Protocol 31 and its amendments also agreed to incorporate an array of other climate-related directives and regulations. Further, in April 2023, Norway and the EU announced a new Green Alliance to deepen cooperation on climate, environment, energy and clean industry.<sup>22</sup> This agreement aimed to strengthen efforts to combat climate change, including on adaptation, carbon pricing, carbon removals, and carbon capture, transport, utilisation and storage.<sup>23</sup> It also states that the EU and Norway will work closely together to ensure the successful implementation of the Paris Agreement,

## **a) *The 2030 target and its relation to the NDC***

The emission reduction target for 2030 was decided as part of Norway's commitment towards the Paris Agreement. Norway communicated its 2030 target through the Norwegian Intended Nationally Determined Contribution (INDC) in the run up to the Paris Agreement (PA) negotiations in 2015. The target later became Norway's Nationally Determined Contribution (NDC) and was registered in the NDC registry in 2016.<sup>24</sup> At the time, the emission reduction target for 2030 was to reduce emissions by 40% in 2030 compared to 1990-levels.

In 2017, the 2030 target (and the 2050 target) were solidified in law through the ratification of the Climate Act.<sup>25</sup>

In response to the requirements under the PA to deliver NDCs that represent a progression over time and reflect the highest possible ambition, the 2030-target was enhanced. Norway's target for 2030 was first enhanced in February 2020, and strengthened again in November 2022. Both were communicated in Norway's updated NDCs under the PA.<sup>26</sup>

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<sup>21</sup> Norwegian Ministry of Climate and Environment, 'The Norwegian Climate Act' (1 January 2018). Available at: <https://lovdata.no/dokument/NL/lov/2017-06-16-60>

<sup>22</sup> European Commission, 'European Green Deal: New EU-Norway Green Alliance to deepen cooperation on climate, environment, energy and clean industry' (24 April 2023). Available at: [https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip\\_23\\_2391/IP\\_23\\_2391\\_EN.pdf](https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_23_2391/IP_23_2391_EN.pdf)

<sup>23</sup> Ibid., p. 1.

<sup>24</sup> Norwegian Ministry of Climate and Environment, 'Prop. 77 L (2016–2017)'. Available at: <https://www.regjeringen.no/no/dokumenter/prop.-77-l-20162017/id2546463/?ch=10>

<sup>25</sup> Norwegian Ministry of Climate and Environment, 'The Norwegian Climate Act', op. cit. no. 21.

<sup>26</sup> Norway's NDC, 'Update of Norway's nationally determined contribution'. Available at: [https://unfccc.int/sites/default/files/NDC/2022-11/NDC%20Norway\\_second%20update.pdf](https://unfccc.int/sites/default/files/NDC/2022-11/NDC%20Norway_second%20update.pdf)

Now, the Norwegian 2030-target, which is part of its commitment under the NDC, is to reduce GHG emissions with at least 55% in 2030 compared with the 1990-level.<sup>27</sup>

It is an economy wide single-year target and includes all emissions in Norwegian territory, including CO<sub>2</sub> emissions and removals by forests and other sinks ‘that are additional’ (ie. a net target).<sup>28</sup> There are several ways to account for LULUCF, and the Norwegian government has not yet decided on the method going forward.<sup>29</sup>

The Climate Act has been revised to reflect the new and enhanced 2030 target, with the latest inclusion in December 2023.<sup>30</sup>

The Norwegian 2030-target is the same as the EU’s enhanced emission reduction target for 2030 under the Paris Agreement, which was communicated in its NDC in December 2020.<sup>31</sup> As such, Norway “is adopting the same level of ambition” as the EU.<sup>32</sup>

Thus, Norway and EU have similar but separate emission reduction targets for 2030 under the Paris Agreement. However, Norway has stated in its NDC that it intends to fulfil its 2030 target in cooperation with the EU, and they are both committed to reducing their greenhouse gas emissions by at least 55% by 2030 as compared to 1990 levels.

This joint fulfilment can be done through cooperation with the EU in the EU ETS as well as through utilizing the available flexibilities to purchase emission reductions (called emission allocations) under the ESR and LULUCF sectors.<sup>33</sup> Because Norway and the EU have separate NDCs, it will be necessary to use ITMOs/article 6 to distribute the results under the joint fulfilment. ITMOs will reflect the net flow under the different pillars. The “settlement rules” (No: oppgjørsregler) have not yet been agreed.

Only if cooperation with the EU does not lead all the way to realizing the NDC (ie through the EU ETS and possibly utilizing the flexibility mechanisms under the ESR/LULUCF), will Norway use article 6 to purchase emission reductions outside of EU/EEA in addition.<sup>34</sup> The government will also

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<sup>27</sup> Norwegian Ministry of Finance, ‘Meld. St. 1 (2023 – 2024)’, op. cit. no. 1, p. 81.

<sup>28</sup> Norway’s Climate Action Plan for 2021-2030, op. cit. no. 4, p. 12, and NDC, ‘Update of Norway’s nationally determined contribution’, op. cit. no. 26, annex, p. 3.

<sup>29</sup> Interview with Norwegian national expert.

<sup>30</sup> Norwegian Ministry of Climate and Environment, ‘The Norwegian Climate Act’, op. cit. no. 21.

<sup>31</sup> Norway’s Climate Action Plan for 2021-2030, op. cit. no. 4, p. 11.

<sup>32</sup> Norwegian Government, ‘Norway’s new climate target: emissions to be cut by at least 55 %’ (3 November 2022). Available at: <https://www.regjeringen.no/en/aktuelt/norways-new-climate-target-emissions-to-be-cut-by-at-least-55-/id2944876/>

<sup>33</sup> Norwegian Ministry of Climate and Environment, ‘Norway’s National Plan related to the Decision of the EEA Joint Committee No. 269/2019 of 25 October 2019’ (20 December 2019). Available at: <https://www.regjeringen.no/en/dokumenter/norways-national-plan-related-to-the-decision-of-the-eea-joint-committee-no-269-2019-of-26-october-2019/id2684252/>

<sup>34</sup> Norwegian Ministry of Climate and Environment, ‘Prop. 77 L (2016–2017)’, op. cit. no. 24, info relevant for § 3.

rely on article 6 for its achievement of the climate neutrality goal, motivating a purchase program for units from outside EU/EEA.

However, the Norwegian government is *intending* to fulfil the 2030 target only through cooperation with the EU.<sup>35</sup> Only if this is not possible, will Norway use PA article 6 outside of the EU/EEA.

## **b) The NDC**

As noted above, Norway's emission reduction target for 2030 is put forward in its NDC, which is to reduce emissions by at least 55 per cent by 2030, compared to 1990 levels.<sup>36</sup>

For the previous NDC, Norway sought to cooperate with both Iceland and the EU to fulfil this target. This cooperation was based on the EEA Joint Committee Decision No 269/2019 in which the EU, Norway and Iceland agreed on cooperation for achieving the 2030 target. Since the updated 2030 target, however, this agreement has not been revised. Thus, going forward, Norway seeks to fulfil its NDC through climate cooperation with the EU.<sup>37</sup> As such, the climate cooperation with Iceland and the EU on implementing the respective updated NDC targets for 2030 will require further arrangements.<sup>38</sup>

If the climate cooperation with the EU is not enough to fulfil the NDC, Norway will use cooperation under the Paris Agreement's article 6 also outside of EU/EEA to fulfil the 2030 target "that goes beyond what is achieved through the climate cooperation with the EU".<sup>39</sup>

Norway's NDC does not state anything about the share of GHG emissions that will be reduced domestically, those that will be reduced through cooperation with the EU, or those emissions that will be reduced through article 6 cooperation.

## **c) The ESR target**

The ESR is not EEA-relevant and is therefore not included in the EEA Agreement. However, it has been included in the climate agreement with the EU and Iceland, the EEA Joint Committee Decision No 269/2019. According to this agreement, Norway commits to fulfil a greenhouse gas emission reduction target for the period from 2021 to 2030 in accordance with the provisions of the EU Effort Sharing Regulation (ESR). The Agreement sets out the target for emission reductions in the ESR sector of at least 40% reduction of GHG emissions by 2030 compared to 2005 levels.<sup>40</sup> Under the

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<sup>35</sup> News article by the Climate and Environment Minister Andreas Bjelland Eriksen, 'Klimapolitikken trenger internasjonalt samarbeid' (7 December 2023). Available at: <https://www.bt.no/btmeneringer/debatt/i/9z7M5d/cop28-klimapolitikken-trenger-internasjonalt-samarbeid>

<sup>36</sup> Norway's NDC, 'Update of Norway's nationally determined contribution', op. cit. no. 26.

<sup>37</sup> Ibid., p. 1.

<sup>38</sup> Ibid., p. 2.

<sup>39</sup> Ibid., p. 15.

<sup>40</sup> Decision of the European Economic Area (EEA) Joint Committee No 269/2019 of 25 October 2019 amending Protocol 31 to the EEA Agreement, on cooperation in specific fields outside the four freedoms.



updated Fit for 55 ruleset the ESR budget is expected to result in a 50% cut in 2030 compared to 2005.

Article 5 of the ESR allows for participating EEA States to transfer between themselves part of their annual emission allocations as a means to enhance the overall cost-effectiveness of total reductions within the EU, in a proportion up to 10% for a given year in respect of the years 2021 to 2025, and up to 15% in respect of the years 2026 to 2030.<sup>41</sup>

The previous Norwegian government strengthened this goal through its political platform (Granavolden-platform) in 2019, which stated that the emission reductions in the non-ETS sector shall be reduced by at least 45% compared to 2005.<sup>42</sup> If domestic reductions are insufficient, it can be achieved through use of flexibilities under the EU ESR. This additional goal is thus not covered by the EEA Joint Committee Decision No 269/2019.<sup>43</sup>

The commitments of Iceland and Norway on the ESR will be revised in view of the amendments operated by the 2023 revision of the ESR where other EU countries received enhanced targets.<sup>44</sup>

Furthermore, there are ongoing discussions between the EU, Norway and Iceland on how to include the updated target in the EEA Joint Committee Decision No 269/2019.

#### ***d) The LULUCF commitment***

The land use, land use change and forestry (LULUCF) Regulation is not EEA-relevant, and is therefore not included in the EEA Agreement. However, it has been included in the climate agreement with the EU and Iceland, the EEA Joint Committee Decision No 269/2019. Under this agreement the commitment under the LULUCF sector is that emissions from this sector will not exceed removals by 2030.<sup>45</sup> Since the agreement, the EU Commission has enhanced the LULUCF Regulation, which was published in April 2023. As the climate agreement with the EU and Iceland does not cover this enhancement, the Norwegian Parliament will have to approve it before the enhanced LULUCF Regulation is included in an agreement with the EU (and potentially also Iceland).<sup>46</sup>

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<sup>41</sup> More information on the ESR available here: European Commission, 'Effort sharing 2021-2030: targets and flexibilities' (undated). Available at: [https://climate.ec.europa.eu/eu-action/effort-sharing-member-states-emission-targets/effort-sharing-2021-2030-targets-and-flexibilities\\_en](https://climate.ec.europa.eu/eu-action/effort-sharing-member-states-emission-targets/effort-sharing-2021-2030-targets-and-flexibilities_en)

<sup>42</sup> Politisk plattform for en regjering utgått av Høyre, Fremskrittspartiet, Venstre og Kristelig Folkeparti, p. 84. Available at: [https://res.cloudinary.com/hoyre/images/v1647850504/Nye%20hoyre.no/Hovedside/Granavolden-plattformen/Granavolden-plattformen.pdf?\\_i=AA](https://res.cloudinary.com/hoyre/images/v1647850504/Nye%20hoyre.no/Hovedside/Granavolden-plattformen/Granavolden-plattformen.pdf?_i=AA)

<sup>43</sup> Norwegian Ministry of Climate and Environment, 'Norway's National Plan', op. cit. no. 3, p. 5.

<sup>44</sup> European Commission, 'Effort sharing 2021-2030: targets and flexibilities', op. cit. no. 41.

<sup>45</sup> Norwegian Ministry of Climate and Environment, 'Norway's National Plan', op. cit. no. 3, p. 12.

<sup>46</sup> Norwegian Government, 'Forsterket LULUCF-forordning' (12 January 2024). Available at: <https://www.regjeringen.no/no/sub/eos-notatbasen/notatene/2021/juli/forsterket-lulucf-forordning/id2891678/>

Measures to enhance CO<sub>2</sub> removals in forests will play an important role in achieving the 2030 target, and an even more important role for achieving the 2050 target.<sup>47</sup> Further measures are likely to be introduced for the LULUCF sector. For example, the Norwegian government is considering introducing a tax on GHG emissions from peat extraction and a ban on opening new sites for peat extraction.<sup>48</sup>

In the budget for 2024, for the Norwegian Ministry of Climate and Environment allocates NOK 3 000 million for purchasing emission reduction units under the EUs flexible mechanism, hereunder the ESR and the LULUCF Regulation.<sup>49</sup> The budget allocation seems to be for the Norwegian deficit for the first commitment period under the LULUCF Regulation, 2021-2025. For this period, Norway's deficit is approximately 34 million tonnes CO<sub>2</sub>e, according to the estimates available as of early 2024.<sup>50</sup> However the assessment is not certain, and a revision in LULUCF projections with corresponding revisions in these estimates is expected later in 2024.

If Norway is allowed to utilize the EU's mechanism to compensate the deficit, the deficit will be reduced to around 16 million tonnes CO<sub>2</sub>e.<sup>51</sup> It will not be possible to reduce this deficit with national measures during the period 2021-2025. Further, Norway will only be allowed to use the flexibility mechanism for that period if the EU "as a whole" achieves its net-zero goal.<sup>52</sup> It is not certain whether this will be achieved.<sup>53</sup> In addition to the criteria being met that the EU as a whole needs to achieve its 2030 target, another criteria for Norway to have access to the flexibility is that Norway will need to submit evidence to the EU Commission following a pre-defined methodology.

In response to the above facts, the Norwegian government has been given a budget for purchasing the remaining units from other EU countries in accordance with the allowed flexibilities from the ESR and/or the LULUCF. The government points out that neither price nor availability of these types of units are known.<sup>54</sup> However, EU countries with a surplus will not be allowed to transfer it over to the next period (2026-2030).<sup>55</sup>

For the period 2026 to 2030, Norway expects to have a surplus of 7 or 11 million tonnes CO<sub>2</sub>e, depending on which method for calculating the area is used. Norway may sell this surplus to

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<sup>47</sup> Norway's Climate Action Plan for 2021-2030, op. cit. no. 4, p. 26.

<sup>48</sup> Ibid.

<sup>49</sup> Norwegian Ministry of Climate and Environment, 'Prop.1 S Tillegg 1 (2023-2024) for budsjettåret 2024 (fullmakt for kjøp av skogkreditter og utslippsenheter)'. Available at: <https://www.regjeringen.no/contentassets/d49ddd5b2d164e13b17542a7647677c3/no/pdfs/prp202320240001t01dddpdfs.pdf>

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Norwegian Government, 'Forsterket LULUCF-forordning', op. cit. n. 46. See also the LULUCF Regulation, article 13.

<sup>53</sup> Norwegian Ministry of Climate and Environment, 'Prop.1 S Tillegg 1 (2023-2024) for budsjettåret 2024 (fullmakt for kjøp av skogkreditter og utslippsenheter)', op. cit. no. 49.

<sup>54</sup> Norwegian Government, 'Forsterket LULUCF-forordning', op. cit. n. 46.

<sup>55</sup> Ibid.

another EU/EEA country under the flexibility mechanism in the LULUCF Regulation, and if Norway is still part of the EU cooperation on climate change. However the assessment is not certain, and a revision in these estimates is expected later in 2024.

## ***e) The climate neutrality goal***

Norway also has a climate neutrality goal, which has been decided by the Parliament, that Norway shall from 1 January 2030 offset emissions in other countries equivalent to those remaining emission Norwegian GHG emissions. This goal is not communicated in the NDC, but is a national goal that is in addition to the targets communicated under the Paris Agreement.

The climate neutrality target is a political agreement and is not included in the Climate Act. Spurred by the introduction of this goal, in 2017, Norway became part of the Carbon Neutrality Coalition at the first One Planet Summit.

The accounting rules for the climate neutrality goal are not yet clarified. However, it is plausible that it will take into account all emissions and the LULUCF sector.

The climate neutrality goal can be achieved through purchase of emission reductions through the EU ETS, international cooperation on emission reductions, emissions trading and project-based cooperation.<sup>56</sup> Thus, the international transferrable mitigation outcomes (ITMOs) collaborations under Article 6 is intended to contribute towards Norway's climate neutrality target.<sup>57</sup>

Further, the Minister for Climate and Environment has stated that 'emission reductions purchased from outside of the EU will be done through the Paris Agreement's article 6, and not through the unregulated voluntary carbon market'.<sup>58</sup> It has not yet been agreed how the climate neutrality goal will be followed up, and the government will give the Parliament information on this in due time.<sup>59</sup>

The Standing Committee on Energy and the Environment (No: Energi- og Miljøkomiteen), which is a standing committee of the Norwegian Parliament, has recommended that the emission reductions in other countries to achieve the climate neutrality goal must meet standards that guarantee real and permanent emission reductions and environmental integrity.<sup>60</sup>

Finally, the Climate Change Commission, is an independent committee appointed by royal decree by the Norwegian government in August 2021 to develop a report on the transition to a low emission

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<sup>56</sup> Norway's Climate Action Plan for 2021-2030, op. cit. no. 4, p. 38.

<sup>57</sup> Norwegian Ministry of Climate and Environment, 'Norwegian Carbon Credit Procurement Program', op. cit. no. 15.

<sup>58</sup> News article by the Climate and Environment Minister Andreas Bjelland Eriksen. 'Klimapolitikken trenger internasjonalt samarbeid', op. cit. no. 35.

<sup>59</sup> Stortinget, 'Skriftlig spørsmål fra Lars Haltbrekken (SV) til klima- og miljøministeren' (14 October 2019). Available at: <https://www.stortinget.no/no/Saker-og-publikasjoner/Sporsmal/Skriftlige-sporsmal-og-svar/Skriftlig-sporsmal/?qid=77504>

<sup>60</sup> Norway's Climate Action Plan for 2021-2030, op. cit. no. 4, p. 38.

society. In its report, the Climate Change Commission recommends to phase out the climate neutrality goal as it is confusing, and as it is not clear “how the goal is to be achieved, how much of the removals in Norway’s LULUCF sector is to be included and what carbon emission reductions are permitted.”<sup>61</sup> However, it should be noted that the committee is generally skeptical towards the use of carbon markets as a way to transition towards a low emission society, and states that purchasing of emission reductions is basically paying for the reduction twice – first when paying for credits to postpone the transition, and then when the transition towards net zero takes place.<sup>62</sup>

It is unclear whether the recommendations will lead to changes relevant to the carbon neutrality goal. The recommendations from the Climate Change Commission are currently being reviewed by the government, and a White Paper focusing on post 2030 is being drawn up to be presented to the Parliament (No: Storting), the timeframe for this work currently not known – tentatively for spring 2025.

## **f) The 2050 target**

One of the overarching goals is that Norway shall become a low-emission society in 2050. This was established by the cross-party agreement on climate policy (“Klimaforliket”) in 2012.<sup>63</sup> This is incorporated into the Climate Act and is often referred to as a guiding star for the transition towards a more circular and low-emission society.<sup>64</sup> This goal is linked to the temperature goal of the PA under article 2.1(a).<sup>65</sup>

In addition, the 2050 goal sets out an emission reduction target: that GHG emissions in 2050 is reduced 90-95% compared to 1990. In assessing whether the 2050 target has been achieved, it will take into account the effect of participation in the European emission trading system for businesses (ie. the EU ETS).<sup>66</sup>

It is not clear how Norway will fulfil its 2050 target and which flexibilities will be available. If Norway continues its climate cooperation with the EU and extends its agreement beyond 2030, flexibilities provided by the EU will be available.<sup>67</sup> However, if Norway chooses to not continue this agreement,

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<sup>61</sup> Norwegian Government, The 2050 Climate Change Commission, ‘The transition to low emissions Climate policy choices towards 2050’, Norwegian Official Report (NOU) 2023:25, p. 72. Available at: <https://files.nettsteder.regjeringen.no/wpuploads01/sites/479/2024/02/The-2050-ClimateChangeCommittee-ENDELIG.pdf>

<sup>62</sup> Ibid., p. 68.

<sup>63</sup> Stortinget, ‘Innst. 390 S (2011-2012)’ (8 June 2012). Available at: <https://www.stortinget.no/no/Saker-og-publikasjoner/Publikasjoner/Innstillinger/Stortinget/2011-2012/inns-201112-390/>, in response to the White Paper on Norwegian climate policy from the same year (Med. St. 21 (211-2012)).

<sup>64</sup> Climate Act § 1 and §4, op. cit. no. 21

<sup>65</sup> Climate Act §4, op. cit. no. 21

<sup>66</sup> Ibid.

<sup>67</sup> Norwegian Government, The 2050 Climate Change Commission, ‘The transition to low emissions Climate policy choices towards 2050’, op. cit. no. 61, p. 65.

it will rely on the rules under the Paris Agreement, and particularly the cooperation for emission reductions under article 6.<sup>68</sup>

### **3. Political influence on EU cooperation**

It is worth noting, however, that the current coalition government consists of the Norwegian ‘Centre Party’ (Senterpartiet), which is strongly opposed to any cooperation with the EU, including on climate.<sup>69</sup> The Centre Party aims to pull Norway out of the ESR and the LULUCF. It is highly unlikely that this will happen as there is a strong majority in the Norwegian Parliament (NO: Storting) for continued cooperation with the EU. However, despite the political majority at the Storting, it is likely that policies in this area will suffer from “horse-trade” processes in which continued cooperation with the EU is traded for other political decisions that may or may not be aligned with the 2030 target. It is also worth noting that even with a change of government in the next election, the Centre Party could still form a coalition with the new government, resulting in a continued push against EU cooperation from within the government.

## **PART 2: Trading of carbon emissions and policy on using carbon markets under article 6.2 and 6.4**

### **1. The budget for purchasing article 6 ITMOS**

In the budget for 2024, the Norwegian Parliament gave the government mandate for spending NOK 8,2 billion for entering into long-term agreements for purchases of ITMOs under the Paris Agreement’s article 6.<sup>70</sup> The mandate shall cover payments for climate finance under Transformative Carbon Asset Facility (TCAF), Global Green Growth Institute (GGGI) and Partnership for Market Implementation (PMI), as well as bilateral agreements with host countries.<sup>71</sup> The government is currently pursuing corresponding adjustments for the emission reductions purchased.<sup>72</sup> This will be clarified in due time.<sup>73</sup> The article 6 ITMOs will be used for achieving the climate neutrality target. Given a linear development in NDCs from 2030 to the 2050 target and current LULUCF projections and accounting fully for LULLUCF, approximately 60 million tonnes

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<sup>68</sup> Ibid.

<sup>69</sup> In its political manifest, it states that it wants to “stop EU’s difficult rules” relevant to climate and energy. Senterpartiet’s manifest on climate (‘Klima og miljø’, 22 June 2021) available at: <https://www.senterpartiet.no/politikk/A-%C3%85/politisk-sak/klima>

<sup>70</sup> Norwegian Ministry of Climate and Environment, ‘Prop. 1 S (2023 – 2024)’, p. 214. Available at: <https://www.regjeringen.no/contentassets/6b83f50e55a54ba78e161758c9198c37/nn-no/pdfs/prp202320240001kldddpdfs.pdf>

<sup>71</sup> Ibid.

<sup>72</sup> Interview with Norwegian national expert.

<sup>73</sup> Ibid.

CO<sub>2</sub> would be required from 2030 and going forward.<sup>74</sup> In addition, Norway will use article 6 for fulfilling its 2030 emission reduction target if cooperation with the EU falls short. For the 2030 target it is not yet clear if additional reductions from article 6 will be required.<sup>75</sup>

To purchase article 6 ITMOS, Norway also hopes to utilize the mechanism Paris Agreement's article 6.4, given that rules and practices that are sufficiently practical to provide a liquid supply.<sup>76</sup> Although Norway has a strong standing in the article 6 negotiations and is working actively to ensure sound rules for market-based cooperation under the Paris Agreement, it has limited influence over the article 6.4 progress, in particular when other large players have strong mandates on the issue.<sup>77</sup>

For the relationship between article 6 and Norway's NDC, please see part 2 para b), above.

Through its involvement in initiatives including the TCAF and a bilateral programme organised through the GGGI, Norway is taking part in the development of pilot projects to test new forms of market cooperation within the framework of the Paris Agreement.<sup>78</sup>

## **2. Participation in the TCAF**

Norway, together with Canada, Germany, Sweden, Switzerland (including both the Swiss State Secretariat for Economic Affairs and the Climate Cent Foundation, Klif),<sup>79</sup> UK and Spain, is participating in the TCAF, an initiative under the World Bank.

The first programme under TCAF is signed for the period 2023-2028, and is for energy transformation and phase out of fossil fuel subsidies in Uzbekistan.<sup>80</sup>

TCAF was launched in 2015 and seeks to assist and incentivize developing countries to raise their climate ambitions by implementing economy-wide or sectoral policies and programs that create conditions for private sector investments in low-carbon technologies, with a view to achieve their Nationally Determined Contributions (NDCs) under the Paris Agreement.<sup>81</sup> It offers a combination of capacity building, results-based climate finance, and carbon market funding.<sup>82</sup> TCAF also works to inform the ongoing processes under Article 6 of the Paris Agreement by developing standards

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<sup>74</sup> Ibid.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid.

<sup>78</sup> Norway's Climate Action Plan for 2021-2030, op. cit. no. 4, p. 32.

<sup>79</sup> Climate Cent Foundation contributions available at: <https://www.klimarappen.ch/index.html?lang=en>. For further information on Klif, please see the part on Switzerland and the description of its compensation scheme for the transport sector.

<sup>80</sup> Norwegian Ministry of Climate and Environment, 'Prop. 1 S (2023 – 2024)', op. cit. no. 70, p. 207.

<sup>81</sup> Norwegian Ministry of Climate and Environment, 'Norwegian Carbon Credit Procurement Program', op. cit. no. 15, and TCAF Brochure, available at: [https://www.tcafwb.org/sites/default/files/inline-files/TCAF\\_A4\\_Brochure\\_0.pdf](https://www.tcafwb.org/sites/default/files/inline-files/TCAF_A4_Brochure_0.pdf)

<sup>82</sup> TCAF Brochure, op. cit. no. 81.

and agreements for carbon crediting instruments and transfer of mitigation outcomes in accordance with the Article 6 rulebook.<sup>83</sup>

To be eligible for TCAF funding several core parameters must be met, including sustainable development, transformational change, baseline(s) setting, additionality, MRV, crediting periods, and pricing considerations.<sup>84</sup> Further, TCAF offers a hybrid funding structure, in which developing countries can access results-based grants and carbon market funding.

The results-based grants are used to support NDC implementation and goes towards developing countries' own national emission reduction targets.<sup>85</sup> **The result-based finance** is used to pay for Verified Emission Reductions (VERs), which are remaining in the host country and can be used for NDC compliance of that host country.<sup>86</sup> Finance for results-based grants will be counted as climate finance under article 9 of the Paris Agreement.<sup>87</sup> Agreeing on results-based finance is the first stage in the operationalization of TCAF.

The next step for TCAF is optional and is for agreeing on **the carbon market funding**.<sup>88</sup> Carbon market funding takes place through article 6 of the Paris Agreement and requires that the Internationally Transferred Mitigation Outcomes (ITMOS) are transferred from the host country towards the purchasing country, with a **corresponding adjustment** in accordance with the article 6 Rulebook.<sup>89</sup> Thus, the ITMOS transferred to TCAF cannot be used by the host country to meet its domestic climate targets and/or for NDC compliance.<sup>90</sup> Instead, the ITMOS will be available for achieving the NDCs of the countries purchasing them.

TCAF looks to the **monitoring, reporting and verification (MRV)** system established under the Paris Agreement, and aims to align its requirements with the host countries' national systems. It also looks to the methodologies developed under the Clean Development Mechanism and the Joint Implementation (JI) operations, or other frameworks if those are more cost-effective.<sup>91</sup>

The TCAF programme will only allow for the purchase of emission reductions that are **additional**.<sup>92</sup> A two-layer approach is established: first, it will only allow transfer of emission reductions that go

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<sup>83</sup> Norwegian Ministry of Climate and Environment, 'Norwegian Carbon Credit Procurement Program', op. cit. no. 15.

<sup>84</sup> TCAF Guidebook, p. 16. Available at: <https://www.tcafwb.org/sites/default/files/2021-12/TCAF%20Guidebook.pdf>

<sup>85</sup> TCAF Brochure, op. cit. no. 81.

<sup>86</sup> TCAF Guidebook, op. cit. no. 84, pp. 3 and 10.

<sup>87</sup> Results-based climate finance are payments made for achieving agreed-upon climate-related results, particularly those targeting reducing GHG emissions. TCAF Brochure, op. cit. no. 81, p. 5.

<sup>88</sup> TCAF Guidebook, op. cit. no. 84, p. 10.

<sup>89</sup> Ibid., pp. 13-14.

<sup>90</sup> Ibid., p. 3.

<sup>91</sup> Ibid., p. 20.

<sup>92</sup> Ibid., pp. 18-19



beyond the host country's unconditional NDC target.<sup>93</sup> Secondly, it will only allow emission reductions that go beyond mitigation efforts funded by international climate finance.<sup>94</sup> This is to ensure that the host country does not sell emission reductions that it needs to achieve its own mitigation targets.

The first layer of the additionality approach relates to the establishment of **baselines**. The baseline established under TCAF are lower than the baselines established for the NDC unconditional target emissions.<sup>95</sup> The TCAF baseline will then be compared with the program emission trajectory to find the available crediting/ERPA volume. The more conservative TCAF baseline is to ensure environmental integrity and to account for uncertainties arising from emission reduction calculations.<sup>96</sup> The baselines will be adjusted to reflect any increase in ambition, such as changes in NDC target and scope, if occurring during the TCAF crediting period.<sup>97</sup>

The second layer of the additionality approach has established a three-step test to assess proportional attribution. The first step is to map all international support to a TCAF operation, and to identify the channels relevant for attribution. The second step is to calculate grant equivalents (ie. subsidy values) and the share of this support to the TCAF operation. The third step is to assess the proportional attribution of emission reductions and the maximum volume of emission reductions under the TCAF operation.

**3.** The project “the Innovative Carbon Resource Application for Energy Transition Project (iCRAFT) is TCAF’s first initiative globally to support policy reforms through payments for emission reduction credits aligned with the Paris Agreement. Through iCRAFT the TCAF will allocate USD 46.25 million to reform Uzbekistan’s energy sector and build a green economy. It will aim to eliminate subsidies for emission-intensive energy to reduce GHG emissions, while simultaneously introduce strong social protection measures to support Uzbekistan’s most vulnerable consumers. The project will also pave the way for Uzbekistan’s access to international carbon markets. The iCRAFT is projected to reduce emissions of around 60 million metric tons of CO<sub>2</sub> over the lifetime of the project, in which around 2 million tonnes will be paid by the project and the remaining emission reductions will be sold in international carbon markets, with potential input from private sector actors. ***Cooperation through the GGGI***

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<sup>93</sup> This is closely connected with the conservative baseline, which is lower established under TCAF than under the host country's NDC.

<sup>94</sup> TCAF Guidebook, op. cit. no. 84, p. 14.

<sup>95</sup> Ibid., p. 18.

<sup>96</sup> Ibid., p. 18.

<sup>97</sup> Ibid., p. 19.

In addition to its participation in TCAF, Norway is pursuing opportunities for cooperative approaches through the GGGI.<sup>98</sup> It entered into an agreement with GGGI in 2019 to develop programs under Paris Agreement's article 6, and it could be relevant to initiate negotiations in 2024 for specific program agreements.<sup>99</sup>

GGGI is an intergovernmental organization that was established in 2012 as part of the UN conference on sustainable development. It works to promote a global transition towards sustainable green growth.<sup>100</sup> Through its Carbon Transaction Facility, authorized in October 2022, it provides technical assistance to host countries to prepare them for participating in carbon trading under article 6 of the Paris Agreement.<sup>101</sup> The Carbon Transaction Facility also aim to catalyze trade of ITMOs between GGGI members and partners through the establishment of one or more carbon trust funds.<sup>102</sup>

#### **4. Carbon Capture and Storage (CCS) and potential use of VCM and/or article 6**

Norway has more than 25 years of experience with safe storage of CO<sub>2</sub> under the seabed with the CCS projects Snøhvit and Sleipner, which are closely monitored to ensure safe storage.<sup>103</sup> It is estimated that the Norwegian continental shelf can store 80 billion tonnes CO<sub>2</sub>e.

The Longship project is a full-scale project for capture, transport and storage of CO<sub>2</sub> (CCS) in Norway. The Norwegian Parliament approved Longship in the state budget for 2021.<sup>104</sup> The aim of the project is to develop CCS as an effective mitigation tool and to contribute to technology development internationally.<sup>105</sup> The white paper that proposed the Longship project highlighted that the government intends to contribute to developing technology for CCS and transport, and that Longship will make a significant contribution to this development. However, it also found that the need for and value of international cooperation on developing technology and reducing emissions.<sup>106</sup>

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<sup>98</sup> Norwegian Ministry of Climate and Environment, 'Norwegian Carbon Credit Procurement Program', op. cit. no. 15.

<sup>99</sup> Norwegian Ministry of Climate and Environment, 'Prop. 1 S (2023 – 2024)', op. cit. no. 70, p. 207.

<sup>100</sup> GGGI Homepage. Available at: <https://gggi.org/about/>

<sup>101</sup> GGGI, 'Implementing Article 6 of the Paris Agreement: Options for governance frameworks for host countries' (August 2023), p. 14. Available at: [https://gggi.org/wp-content/uploads/2023/08/GGGI\\_InsightBrief\\_07\\_Final.pdf](https://gggi.org/wp-content/uploads/2023/08/GGGI_InsightBrief_07_Final.pdf)

<sup>102</sup> Ibid.

<sup>103</sup> Norwegian Ministry of Energy, 'Closer cooperation between Norway and Switzerland on CCS' (25 November 2022). Available at: <https://www.regjeringen.no/en/aktuelt/closer-cooperation-between-norway-and-switzerland-on-ccs/id2948504/>

<sup>104</sup> Norwegian Government, 'Carbon capture and storage – CCS'. Available at: <https://www.regjeringen.no/en/topics/energy/carbon-capture-and-storage/id86982/>

<sup>105</sup> Norwegian Ministry of Energy, 'Meld. St. 33 (2019–2020) Longship - capture, transport and storage of CO<sub>2</sub>'. Available at <https://www.regjeringen.no/en/dokumenter/meld.-st.-33-20192020/id2765361/>

<sup>106</sup> Ibid., p. 71.

A total of NOK 25.1 billion will be invested in the Longship project, which is currently under construction.<sup>107</sup> The government will cover approximately 2/3 and the industry will cover approximately 1/3 of the costs in the project's first phase.<sup>108</sup>

Longship consists of three parts: (i) capturing of CO<sub>2</sub> from Norcem's cement factory in Brevik, and the transportation by ship to a terminal before it is transported via pipelines to be permanently stored in geological formations under the seabed; (ii) the construction of the capture facility of CO<sub>2</sub> from Hafslund Oslo Celsio's waste incineration facility, and transport via ship to the storage site; and (iii) the collaboration called Northern Light between Shell, Equinor and Total to develop transport and storage of 1,5 million tonnes (up to 5 million in the second phase) CO<sub>2</sub> per year. The first commercial contract was entered into in August 2022 between Northern Lights and Yara in the Netherlands.<sup>109</sup>

So far, the operators who will be running the storage facility have signed agreements to receive 800,000 tonnes of CO<sub>2</sub> per year from the Netherlands and 450,000 tonnes per year from Denmark.<sup>110</sup>

Going forward, the Norwegian government is working on finding ways to incentivize private sector involvement in CCS.<sup>111</sup> This includes on how to ensure direct air capture (DAC) is financially viable, including how the CO<sub>2</sub> levy and the carbon market can be utilized.<sup>112</sup> The government has also been tasked with ensuring that European actors with large emissions can be served by CCS in Norway, with the view that it is commercially viable.<sup>113</sup>

The Norwegian Directorate for Environment (Miljødirektoratet) has found that a government financial contribution of NOK 2000 per ton CO<sub>2</sub> the actors remove with CCS could be a useful incentive.<sup>114</sup> In particular if this financial contribution is combined with support for technology development, and/or financed through CCS projects in the voluntary carbon market (VCM).<sup>115</sup> The

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<sup>107</sup> Norwegian Government, 'Carbon capture and storage – CCS', op. cit. no. 104.

<sup>108</sup> Ibid.

<sup>109</sup> Information page on CCS in Norway by Norsk Petroleum. Available at:

<https://www.norskipetroleum.no/en/environment-and-technology/carbon-capture-and-storage/>

<sup>110</sup> Norwegian Government, The 2050 Climate Change Commission, 'The transition to low emissions Climate policy choices towards 2050', op. cit. no. 61, p. 211.

<sup>111</sup> The Norwegian Parliament has tasked the government this in its Vedtak 713, 728 and 729. Available at:

<https://www.stortinget.no/no/Saker-og-publikasjoner/Vedtak/Vedtak/Sak/?p=89008>

<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

<sup>114</sup> Norwegian Environment Agency, 'Industrien kan fjerne CO<sub>2</sub> med nye virkemidler' (13 March 2023). Available at:

<https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2023/mars-2023/industrien-kan-fjerne-co2-med-virkemidler/>

<sup>115</sup> Norwegian Environment Agency, 'Notat – Industriell karbonfjerning – potensial, kostnader og mulige virkemidler' (10 March 2023), p. 6. Available at:

<https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2023/mars-2023/industrien-kan-fjerne-co2-med-virkemidler/>

price for emission reduction units from the VCM in the future is highly uncertain. However, it is likely that there will be strong willingness to purchase as these are permanent.<sup>116</sup>

In practice, Norway is therefore looking into the possibility of cooperating with Europe and other EEA countries. For example, Norway has strengthened cooperation on CCS with Switzerland and are exploring bilateral cooperation on CCS and/or carbon dioxide removal (CDR) such as direct air capture and storage.<sup>117</sup> If such cooperation takes place with Swiss financing at Norwegian territory, the emission reductions are likely to be correspondingly adjusted and be used to achieve the Swiss NDC, and not used towards Norway’s NDC.<sup>118</sup> As such, there will likely be an article 6 component in this type of cooperation and Norway intends to say something about this in its Initial Report under the Paris Agreement, like Switzerland has already done.<sup>119</sup>

Specific legal issues also arise, many of which will depend on the development and implementation of laws and regulations at the EU level.

One example is the EU Regulation establishing a voluntary Union certification framework for permanent carbon removals, carbon farming and carbon storage in products, which was adopted 10 April 2024, and is likely to enter into force by the end of 2024 (CRCF Regulation).<sup>120</sup> The CRCF Regulation is likely to be incorporated into the EEA Agreement.<sup>121</sup> However, please note that the current government coalition Centre Party is against EU cooperation on climate issues and might attempt to stall or hinder progress. The CRCF Regulation contains rules to monitor, report and verify the authenticity of carbon removals taking place within the EU/EEA. Further, it stipulates that certified units from carbon removal can only be used for the EU’s climate objective and NDCs and not towards third party NDCs, in order to avoid double counting.

Another example is how the EU ETS necessarily will be relevant for emission heavy entities interested in carbon removals. The EU ETS provides the main incentive for CCS deployment.<sup>122</sup> Further, captured, and safely stored CO<sub>2</sub> within the EU/EEA will be considered “not emitted” under the EU ETS.<sup>123</sup> Thus, cement factories and other compliance entities in Norway can use CCS to reduce their own emissions to comply with their EU ETS compliance obligations. The rules related

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<sup>116</sup> Ibid., p. 13.

<sup>117</sup> Norwegian Ministry of Energy, ‘Closer cooperation between Norway and Switzerland on CCS’, op. cit. no. 103.

<sup>118</sup> Norwegian Environment Agency, ‘Industrien kan fjerne CO2 med nye virkemidler’, op. cit. no. 114.

<sup>119</sup> Interview with Norwegian national expert

<sup>120</sup> EU Parliament and the Council of the European Union. “Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for permanent carbon removals, carbon farming and carbon storage in products” 2022/0394 (COD). Available at: [https://www.europarl.europa.eu/meetdocs/2014\\_2019/plmrep/COMMITTEES/ENVI/DV/2024/03-11/Item9-Provisionalagreement-CFCR\\_2022-0394COD\\_EN.pdf](https://www.europarl.europa.eu/meetdocs/2014_2019/plmrep/COMMITTEES/ENVI/DV/2024/03-11/Item9-Provisionalagreement-CFCR_2022-0394COD_EN.pdf)

<sup>121</sup> Interview with Norwegian national expert.

<sup>122</sup> European Commission. “Carbon capture, storage and use” (December 2021). Available at: [https://climate.ec.europa.eu/eu-action/carbon-capture-use-and-storage/overview\\_en](https://climate.ec.europa.eu/eu-action/carbon-capture-use-and-storage/overview_en)

<sup>123</sup> Ibid

to bio-CCS and DAC are not yet clear, and there is an ongoing dispute with the EU on how this should be interpreted. In short, the Norwegian government's interpretation of the EU rules is that CO<sub>2</sub> captured from biological origins can be counted and subtracted from the factories' emissions, leading to incentives for capturing emissions from municipal waste and so on. The EU has a different understanding of the rules, arguing that negative emissions should not be accounted for under the EU climate legislation.<sup>124</sup> In contrast to the EU system for accounting, both BECCS and DAC can be deducted when calculating a State's total emissions under the Paris Agreement.

Also the development of rules and regulations related to article 6 under the Paris Agreement are likely to affect Norway's policies on carbon removals. Although the rules on article 6 are not yet agreed, there seems to be general acceptance for including removals under both article 6.2 and 6.4.<sup>125</sup> EU Member States are not allowed to utilize article 6 for fulfilment of the EU's NDC. Hypothetically, however, this could change, with exceptions potentially carved out for removals in EEA countries. However, no such restriction is on the Swiss NDC. Thus, one question is whether Switzerland could purchase emission reductions in Norway, for example through DAC, through article 6 and use it towards its Swiss ETS, and subsequently its NDC fulfilment. In Norway, however, since 2015 it has not been possible to use article 6 for fulfilling its obligations under the EU ETS.

The CRCF Regulation will be reviewed in 2026. The review will, among other things, assess needs to review aspects to ensure continued alignment with the rules and guidance of Paris Agreement article 6.2 and 6.4, including baselines, monitoring period, activity period, additionality, leakage, non-permanence and liability, as well as address requirements related to authorisation and corresponding adjustments.<sup>126</sup> The assessment will also review the use of certified units to compensate emissions generated outside of the EU NDC and shall be accompanied, if necessary, by a legislative proposal.<sup>127</sup>

It is also worth noting that if the rules for EEA countries will apply much in the same way as for EU countries, the incentives for third party countries to engage in removal projects in Norway will decrease. For example, Switzerland will be mainly interested in these projects for achieving its own climate targets, including its own NDC (which is not connected to the EU's NDC).

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<sup>124</sup> For a letter on the matter from the Norwegian Ministry of Climate and Environment to the European Commission, written 14 March 2024, please see <https://www.regjeringen.no/contentassets/21415921babb4268ad8c7ab63875bc3d/carbon-removals-in-the-effort-sharing-regulation-letter-from-norway.pdf>

<sup>125</sup> ITMOS traded under article 6.2 are defined as results of activities representing "emission reductions or removals", and SB's recommendations on activities regarding removals under article 6.4. Available at: <https://unfccc.int/sites/default/files/resource/a64-sb009-a02.pdf>

<sup>126</sup> Ibid, page 26

<sup>127</sup> Ibid, page 54

Finally, it has not yet been decided how DAC will be reflected in Norway’s NDC, but there is little risk of double counting if a separate CCS/DAC goal is submitted through the NDC.<sup>128</sup> Further, the accounting rules related to removals differ depending on which system it is: for the Paris Agreement it is clear, but for the EU-rules (including on LULUCF) it is not clarified yet.

## **Part 3: Policies on the Voluntary Carbon Markets**

### **1. Norway’s purchase of carbon credits from forest programs abroad (REDD+)**

As mentioned above, Norway's International Climate and Forest Initiative (NICFI) is one of four donor governments to commit funds to the LEAF Coalition, which aims to reverse deforestation in tropical forests through REDD+ programs.<sup>129</sup>

The LEAF Coalition works as a pool of public and private sector buyers and rainforest host country sellers of certified carbon credits from REDD+ programs. REDD+ is a process that enhances carbon stocks through forest restoration and protection. The LEAF Coalition’s REDD+ programs allow for the transactions of carbon credits that are approved through the independent, voluntary international initiative, Architecture for REDD+ Transactions’ (ART) and its TREES standard.<sup>130</sup> ART TREES is an international policy standard that aims to ensure high levels of environmental integrity and social safeguards for the REDD+ programs undertaken in the host countries. In addition to the ART TREES, the LEAF Coalition also has its own set of requirements for host countries to be allowed to be part of the LEAF Coalition.<sup>131</sup> In addition, the LEAF Coalition also employs stringent buyers criteria to ensure that action taken by buyers is in addition to emission cuts in their value chains.<sup>132</sup> The emission reductions purchased under the LEAF Coalition will not be counted towards the purchasing country’s NDC.<sup>133</sup> The emission reductions will remain available for the host state’s NDC, at its sole discretion. As such, the transactions will not be subject to corresponding adjustments. However, please note that private sector buyers will be able to report on the purchased carbon units for their voluntary climate targets.<sup>134</sup> One criteria for the use of these credits, however, is the third party validation of the company’s science-based targets, in alignment with the Science Based Target Initiative (SBTI).<sup>135</sup>

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<sup>128</sup> Interview with Norwegian national expert

<sup>129</sup> LEAF Coalition’s Home Page is available at: <https://www.leafcoalition.org/home>

<sup>130</sup> TREES stands for “The REDD+ Environmental Excellence Standard”

<sup>131</sup> LEAF Coalition, ‘Overview of the LEAF Coalition Proposal Review Process’ (December 2022). Available at: [https://resources.leafcoalition.org/wp-content/uploads/2023/01/Overview-of-proposal-review-process\\_v2.pdf](https://resources.leafcoalition.org/wp-content/uploads/2023/01/Overview-of-proposal-review-process_v2.pdf)

<sup>132</sup> LEAF Coalition, ‘Buyers’ Qualification Policy’. Available at: <https://resources.leafcoalition.org/wp-content/uploads/2022/12/FINAL-LEAF-Coalition-Buyers-Qualitification-Policy-02.23.pdf>

<sup>133</sup> See for example the documents relevant for the transactions involving Ghana and Costa Rica: Emergent, ‘Costa Rica and Ghana agree landmark deals to supply forest carbon credits to leaf coalition buyers’ (2 December 2023). Available at: <https://resources.leafcoalition.org/wp-content/uploads/2024/01/COSTA-RICA-AND-GHANA-AGREE-LANDMARK-DEALS-TO-SUPPLY-FOREST-CARBON-CREDITS.pdf>

<sup>134</sup> LEAF Coalition’s Buyers’ Qualification Policy, op. cit. no. 123.

<sup>135</sup> Ibid.



## **2. The private sector and its relation to the VCM**

There is an increasingly strong focus on utilising the voluntary carbon market to offset own emissions, emissions in companies' value chain, and beyond. The calls for the private sector to establish net zero targets and carbon neutral goals are getting stronger. Global initiatives, such as the Science Based Target Initiative (SBTi) are driving this trend.<sup>136</sup> There is also the increased focus on climate risk reporting, both under the EU, for example its Corporate Sustainability Reporting Directive (previously called the Non-Financial Reporting Directive) and its taxonomy regulation, as well as global reporting frameworks, such as the Task Force for Climate Related Financial Disclosures and the International Sustainability Standards Board (ISSB).<sup>137</sup>

The Financial authority undertook a mapping exercise of private sector reporting on climate risk in 2020.<sup>138</sup> This revealed that Norwegian companies' reporting on sustainability and climate risk is relatively weak, with large potential for improvement.<sup>139</sup>

In autumn 2021, PWC and the non-governmental organization ZERO undertook a mapping exercise of 30 Norwegian companies and their view on the VCM and carbon credits.<sup>140</sup> They found that Norwegian companies struggle with understanding the VCM and finds it very difficult to navigate this market.<sup>141</sup> Norwegian companies look to the standard under the Clean Development Mechanism and Gold Standard.<sup>142</sup> These standards dominate the market, followed by Verra's Verified Carbon Standard (VCS). The findings revealed that 48 % of Norwegian companies are purchasing carbon credits today, and 16% plans to do so in the future.<sup>143</sup> Further, 36 % do not purchase carbon credits. However, the reason is that some are lagging behind and have not addressed the issue. Of those 36% it is only 19% that find the purchase of carbon credits irrelevant to reach their carbon neutral goal.<sup>144</sup>

## **3. Domestic private sector VCM projects**

There are currently no policies or regulations in place for private sector's development of projects and emission reduction credits in the voluntary carbon markets (VCM) within Norwegian borders. As there are regulations covering emission reductions under the compliance carbon markets (i.e. the EU ETS and the ESR) as well as carbon taxation, the Norwegian government is currently less

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<sup>136</sup> Interview with Norwegian national expert

<sup>137</sup> Ibid.

<sup>138</sup> Finanstilsynets, 'Kartlegging av foretakenes bærekraftsrapportering' (2020). Available at:

[https://www.finanstilsynet.no/globalassets/tilsyn/finanssiell-rapportering/kartlegging\\_av\\_foretakenes\\_barekraftsrapportering\\_01092020.pdf](https://www.finanstilsynet.no/globalassets/tilsyn/finanssiell-rapportering/kartlegging_av_foretakenes_barekraftsrapportering_01092020.pdf)

<sup>139</sup> Ibid., p. 2.

<sup>140</sup> PWC, 'Jakten på klimanøytralitet og ansvarlig bruk av klimakreditter' (2022), p. 13. Available at:

<https://www.pwc.no/no/nyheter/zero-rapporten/jakten-paa-klimanoytralitet-rapport-2022.pdf>

<sup>141</sup> Ibid., p. 14.

<sup>142</sup> Ibid.

<sup>143</sup> Ibid., p. 15.

<sup>144</sup> Ibid.



inclined to also regulate voluntary carbon emission reductions within Norwegian borders.<sup>145</sup> The Norwegian government is not making any corresponding adjustments for emission reductions under the VCM within the Norwegian borders.<sup>146</sup> As such, there is no risk of double counting towards NDCs. However, there is a risk of co-claiming, hereunder that the Norwegian government and the purchasers of VCM credits both claim the reductions. VCM forestry projects in Norway can take place outside of the 800 plots that is accounted for by the Norwegian government.<sup>147</sup> As such, private companies could claim the emission reductions that are also reported towards Norway's NDC (this is called co-claiming, and must be differentiated from double claiming).<sup>148</sup> Furthermore, there are no national requirements set out for private sector participation in the VCM, as is the case under the private-public partnership coalition TCAF, for example. Instead, purchasers of the emission reduction units will have to rely on the Purchaser Act (Kjøpsloven) which regulates sale and purchases.<sup>149</sup>

The EU does not allow for the use of article 6 for private actors in their fulfilment of their EU ETS requirements.<sup>150</sup> Further, the VCM (not being article 6) is not intended to be used to fulfil Norway's climate neutrality goal.

The lack of national regulation has, however, not deterred private sector actors from establishing domestic markets. One of the best known is Trefadder.

#### **4. Case study - Trefadder**

In Norway, it is the company Trefadder, that is the only actor already operating with domestic forest projects under the VCM. Trefadder has sold carbon credits for more than NOK 5 million since its inception in 2020 to several large companies in Norway and abroad, and claim to have planted and seeded 600 000 trees in total.<sup>151</sup> As such, the VCM market for domestic projects in Norway is relatively small.

Trefadder is a Norwegian company that sells self-assessed carbon credit certificates to companies for planted trees in forest areas in Norway.<sup>152</sup> They advertise with “100% tracking” with

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<sup>145</sup> Interview with Norwegian national expert

<sup>146</sup> Ibid.

<sup>147</sup> Ibid.

<sup>148</sup> However, please note that co-claiming is not uncommon on a global basis, with the TCAF as an example of how private sector participants are allowed to claim the emission reductions for their own voluntary climate target purposes. The difference between co-financed and co-claimed versus double-financed and double-claimed must be noted. The definitions co-financing/co-claiming are used when the emission reductions are financed and claimed in two different systems (i.e. sovereign vs private). The double finance/double-claiming takes place when the emission reductions are being used twice within the same system (i.e. in the same the accounting system for sovereigns under article 6; or by two companies for the same or similar claims in their national reporting/marketing).

<sup>149</sup> Interview with Norwegian national expert

<sup>150</sup> Ibid

<sup>151</sup> <https://nforeningen.no/nyheter/trefadder-skal-plante-en-million-traer-i-2023>, and the company reports of Trefadder is available at: <https://proff.no/selskap/trefadder-as/haugesund/skogbruk/IF9T6U1019>

<sup>152</sup> Trefadder, Homepage. Available at: <https://trefadder.no/slik-fungerer-det/#klimasertifikat>

a specific GPS area and forest details available for the customer purchasing these credits. They also offer a so-called marketing package that companies can utilize for these credits.<sup>153</sup> They do not have an official methodology or a third-party verification system set up, and do not establish baselines nor set out requirements for additionality or permanence. It is unclear what type of forest areas are approved. Since 2024, Trefadder encourages the inclusion of forest areas that have been denied conservation status and subsequent compensation from the Norwegian government.<sup>154</sup> Most of the potential forest areas for conservation are in areas that are of marginal financial value for the forest industry.<sup>155</sup> As such, the areas that Trefadder seem to approve have low financial value and are not in risk of being deforested, and have been offered to the Norwegian government as conservation areas. It must be questioned whether Trefadder is simply a way for forest owners to receive financial contributions for their forests that otherwise would be left alone, falling short of government approved conservation status.

It is not clear how Trefadder will be able to adhere to the stringent requirements that are coming from the EU for the VCM markets under the LULUCF sector.<sup>156</sup> Hopefully, EU regulations will ensure that Norwegian actors adhere to robust standards to ensure that the carbon removal projects are credible.

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<sup>153</sup> Ibid.

<sup>154</sup> The Norwegian government has established a method for forest owners to voluntarily apply for conservation status to achieve the national target of 10% of conservation forests in Norway. The criteria for forest conservation is that the forest area has a certain standard of biological diversity or quality. The political goal is that the conservation shall have as little consequence for the forest industry as possible. Once the forest has achieved this status, the government proceeds to pay a price based on the value the forest would have had it been used for forestry. More information on voluntary conservation available at: <https://frivilligvern.no/status-for-skogvernet/>  
<sup>155</sup> <https://frivilligvern.no/aktuelle-omrader/>

<sup>156</sup> The EU Commission is proposing an initiative for an EU-wide voluntary certification framework for carbon removals. It will utilize third-party verification and certification of carbon removals, management of certification schemes and functioning registries, to ensure transparency and credibility of the certification process. More information on the proposal: European Commission, 'Questions and Answers on EU Certification of Carbon Removals' (30 November 2022). Available at: [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_22\\_7159](https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_7159)

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### **3. Interviews with Experts:**

Interview with Norwegian national expert Peer Stiansen, Ministry of Climate and Environment, 2 February 2024



To: Iceland's Ministry of Environment, Energy and Climate *Working Group on Carbon Markets*

From: Wenger Law  
Cathrine Wenger, Managing Partner

Date: 11 March 2024

## THE ROLE OF CARBON MARKETS IN SWEDEN

### Executive Summary

- Sweden is part of the EU, and EU policies and regulation has a major impact on how its climate policy can be developed. Sweden's Nationally Determined Contribution (NDC) is the EU's NDC.
- Sweden is part of the EU ETS as well as the non-trading sector, such as those covered by the Effort Sharing Regulation (ESR), and the land use land-use change and forestry (LULUCF) sector.
- Due to a policy roll-back of the fuel blending mandate for domestic transport, Sweden is not on track to meet its 2030 and 2050 emission reduction targets.
- To be able to achieve its 2030 emission reduction target, Sweden will have to rely on supplementary measures: these include options to use bio-CCS, LULUCF projects, and the purchase of international emission reductions under Paris Agreement's article 6.2. In practice, however, article 6.2 will likely be the most important supplementary measure.
- EU does not allow for the use of article 6 for the achievement of its NDC. However, Sweden has a more stringent national net-zero target than that required by the EU, and as such will be allowed to, and intends to, use article 6 for achievement of its national climate targets. As EU does not allow for the use of article 6, Sweden will not undertake corresponding adjustments for these purchased emission reduction units.
- Swedish authorities has not set out any specific requirements for the voluntary carbon market (VCM), apart from the voluntary trade under article 6.2. For article 6.2 only, the Swedish authorities are utilizing international frameworks to ensure that robust environmental standards are being complied with, such as Gold Standard.
- Further, for article 6.2 trades, Sweden is currently developing a framework for assessing sustainable development (SD) and will require a third-party verified SD report before authorizing article 6.2 units.

## **PART 1: The role of carbon markets in climate policy**

### ***1. Instruments and policy frameworks***

The key to Sweden’s climate policy governance since the early 1990s has been the pricing of emissions.<sup>1</sup> Emissions trading and taxation schemes, hereunder the EU’s Emissions Trading System (EU ETS) and the carbon tax with exemptions for biofuels have been the cornerstone instruments of this strategy.<sup>2</sup> These have been supplemented by sectoral initiatives, such as subsidies to low emission vehicles, and normative requirements such as biofuel standards.<sup>3</sup>

Sweden is part of the EU, and perhaps not surprisingly, “the EU’s climate policy has a major impact on how Swedish policy can be conducted.”<sup>4</sup> This includes policies and frameworks for the EU ETS as well as the non-trading sector, such as those covered by the Effort Sharing Regulation (ESR), and the LULUCF sector. EU policies are instrumental for Sweden in meeting its national targets, and cover a wide range of sectors, including transport, industry, electricity and heating, homes and premises, waste, agriculture and forestry.

In addition, Sweden has an array of national instruments and measures impacting on the national climate targets that fill in and expand on the EU regulations. However, Sweden aims to not introduce overlapping instruments. Further, a key starting point for any climate policy in Sweden is that it must be as cost-effective as possible.<sup>5</sup>

It is also worth noting that Sweden, in its reliance on carbon markets, utilizes regional and international mechanisms and frameworks. As mentioned above, the EU’s ETS, as well as the Effort Sharing Regulation (ESR) provide Sweden with access to markets for trading emission reductions. Furthermore, Sweden has been using the Kyoto Protocol’s Clean Development Mechanism (CDM), and has been a strong proponent of the development of a cooperation mechanism under the Paris Agreement’s article 6. Sweden has a more stringent national target than that required by the EU, and as such will be allowed to, and intends to, use article 6 for achievement of its national climate targets.<sup>6</sup> Further, Sweden relies on frameworks established under the Voluntary Carbon Markets (VCM) for its government’s purchases of carbon credits for its bilateral emission reduction projects. The use of carbon

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<sup>1</sup> Ministry of Environment of Sweden, “Sweden’s long-term strategy for reducing greenhouse gas emissions” (December 2020), p. 35. Available at [https://unfccc.int/sites/default/files/resource/LTS1\\_Sweden.pdf](https://unfccc.int/sites/default/files/resource/LTS1_Sweden.pdf)

<sup>2</sup> Ibid.

<sup>3</sup> For the latter example, please see the case study on fuel blending requirements in this paper

<sup>4</sup> Op. cit., n. 1, p. 4. Ministry of Environment of Sweden.

<sup>5</sup> Ibid., p. 36.

<sup>6</sup> More on the use of article 6.2 and 6.4 below in part 2

markets by Sweden is tied to its climate policy framework, and in particular the national climate goals.

The key climate policy instrument in Sweden is the climate policy framework. The climate policy framework was adopted by the Swedish Parliament (Riksdag)<sup>7</sup> in 2017.<sup>8</sup> It includes (i) national climate goals; (ii) a Climate Act (Klimatlagen); and (iii) a Climate Policy Council (SE: Klimapolitisk Råd).

The Climate Act in Sweden does not set out the specific GHG reduction targets, but requires the government to steer by a set of rules that aim to ensure the following: (i) to reduce dangerous disturbances in the climate system; (ii) to protect ecosystems as well as current and future generations against dangerous effects of climate change; and (iii) to reduce GHG emissions and to undertake adaptation action.<sup>9</sup> Further, the Climate Act ensures that the Swedish government's climate policy work is to be based on the long term time-bound emission reduction targets decided by the Parliament (Riksdag).<sup>10</sup> The government's budget proposals are to be used as the key document in which the Parliament is kept informed about the achievement of the climate targets and an assessment of whether new instruments or initiatives are needed.<sup>11</sup>

In other words, the climate policy framework aims to establish goals for emission reduction, amongst others, to steer climate ambition and action both nationally and internationally. As such, these goals (including their supplementary measures) are important for understanding the context and intended use for the different carbon markets to be utilized in attaining these goals. In short, the Swedish government's climate goals and the requirements for how to achieve these will, together with the regulatory frameworks, steer the use and incentives for use of the different carbon markets. As will be seen below, this is particularly so for the use of article 6 in the achievement of Sweden's net-zero goal. As well as the use of the ESR flexibilities in achieving the ESR reduction target. As Sweden is the only EU country with a stringent voluntary national goal that goes beyond that given to it by the EU Commission, this has led Sweden to be the only EU country interested in using article 6 for fulfillment of its net zero goal.

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<sup>7</sup> The Riksdag is the highest decision-making assembly in Sweden. More information available at: <https://www.riksdagen.se/en/>

<sup>8</sup> An overview: Energimyndigheten, "Det klimatpolitiska ramverket" (10 May 2023). Available at <https://www.energimyndigheten.se/klimat--miljo/sveriges-energi--och-klimatma/det-klimatpolitiska-ramverket/#:~:text=Kompletterande%20%C3%A5tg%C3%A4rder&text=S%C3%A5dana%20%C3%A5tg%C3%A4rder%20f%C3%A5r%20anv%C3%A4ndas%20f%C3%B6r,koldioxid%20i%20skog%20och%20mark>

<sup>9</sup> Klimat- och näringslivsdepartementet, Klimatlagen 2017:720, § 2. Available at <https://rkrattsbaser.gov.se/sfst?bet=2017:720>

<sup>10</sup> Ibid., § 3

<sup>11</sup> Ibid., § 4

Under follows a short overview of Sweden’s national climate goals.

## **2. Sweden’s net-zero goal**

The climate policy framework’s key national climate goal is that Sweden’s ETS and ESR sectors, by 2045 at the latest, shall not have any net emissions of greenhouse gases (GHGs) to the atmosphere and should thereafter achieve negative emissions.<sup>12</sup> At least 85% reduction are to be reduced from Swedish territory (as compared to 1990 levels).<sup>13</sup> And no more than 15% of the emission reductions shall be achieved through supplementary measures.<sup>14</sup> We refer to this goal as a “net-zero goal.”

The net-zero goal goes above and beyond the climate goal set by the EU, which is to be climate-neutral by 2050, and aim to achieve negative emissions thereafter.<sup>15</sup> In addition to Sweden aiming to be net zero five years before the EU (2045 vs 2050), the goal also differs in its content, and “Sweden is likely to become climate neutral [according to the EU definition] long before 2045”.<sup>16</sup>

Please note that the recent EU Commission communication proposes an additional goal for 2040 – which is to reduce GHG emissions by 90% compared to 1990 levels.<sup>17</sup> The communication does not stipulate any specific targets for Sweden.

The reasoning behind having a climate policy that is more stringent than required by the EU is that Sweden should act as a forerunner, providing an example for others to follow.<sup>18</sup> For example, it has been noted that Sweden should be “amongst a small group of countries in the forefront of combating climate change” and “a trailblazing country on climate issues.”<sup>19</sup>

## **3. Supplementary measures**

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<sup>12</sup> Op. cit., n. 1, p. 3. Ministry of Environment of Sweden.

<sup>13</sup> Ibid.

<sup>14</sup> Ministry of Climate and Industry of Sweden, “Draft updated National Energy and Climate Plan (NECP) for Sweden” (10 July 2023), p. 5. Available at [https://commission.europa.eu/system/files/2023-07/EN\\_SWEDEN%20DRAFT%20UPDATED%20NECP.pdf](https://commission.europa.eu/system/files/2023-07/EN_SWEDEN%20DRAFT%20UPDATED%20NECP.pdf)

<sup>15</sup> European Commission, Press Release “2050 long-term strategy” (undated). Available at [https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy\\_en](https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy_en)  
Also see article 2 in EU Regulation 2021/1119 (the European Climate Law). Available at [eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1119](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1119)

<sup>16</sup> Nordic Council of Ministers, “EU versus national climate policies in the Nordics – Nordic Economic Policy Review 2023” (8 May 2023), p. 133. Available at <https://pub.norden.org/nord2023-001/nord2023-001.pdf>

<sup>17</sup> EU Commission, Press Release “Commission presents recommendation for 2040 emissions reduction target to set the path to climate neutrality in 2050” (6 February 2024). Available at [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_24\\_588](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_588)

<sup>18</sup> Op. cit., n. 16. Nordic Council of Ministers.

<sup>19</sup> SOU 2020:4, “Vägen till en klimatpositiv framtid”, p. 70. Available at <https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2020/01/sou-20204/>

It is impossible to meet the net-zero goal in Sweden with emissions reductions alone based on today's knowledge and technology.<sup>20</sup> Thus, there is a need to complement or counterbalance approximately 11 million tonnes CO<sub>2</sub>eq per year by 2045.<sup>21</sup> This can be done through so called "supplementary measures". The supplementary measures needed to reach the net-zero goal are counted in line with rules decided at international level.<sup>22</sup>

There are three supplementary measures that are allowed to be used, hereunder:

- (i) increased net removal of carbon dioxide in forests and from land use (LULUCF);
- (ii) verified emission reductions from investments in other countries (article 6); and
- (iii) negative emission technologies such as capture and storage of biogenic carbon dioxide (BECCS).<sup>23</sup>

Due to the difficulties in predicting the future trends of the cost of measures and availability of alternative technologies, a detailed distribution between the different types of supplementary measures in 2045 is not appropriate.<sup>24</sup> However, it is likely that Sweden will have to rely heavily on the supplementary measures from article 6 emission reductions as it will likely have difficulty in meeting its LULUCF targets and BECCS will likely remain a very costly method of reducing emissions, at least in the near term.<sup>25</sup> More information on each supplementary measure can be found below in part 2.

The volume of supplementary measures is to be built up continuously over time.<sup>26</sup> After 2045, the supplementary measures will need to increase to attain negative emissions.<sup>27</sup> Finally, the proposed strategy predicts that the supplementary measures will probably need to remain at a high level for a long time also after 2045.<sup>28</sup>

#### **4. ESR and LULUCF**

Emissions that are covered by the sectors outside of the EU ETS have separate goals. Following the revision of the EU's Effort Sharing Regulation (ESR) in 2023, Sweden shall now reduce emissions in the ESR-sector with 50% by 2030 compared to 2005.<sup>29</sup> This is 10% more

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<sup>20</sup> Op. cit., n. 19, p. 73. SOU 2020:4.

<sup>21</sup> Ibid., p. 84. For specific CO<sub>2</sub> targets, please see *ibid.*, p. 72.

<sup>22</sup> Op. cit., n. 1, p. 3. Ministry of Environment of Sweden.

<sup>23</sup> Ibid., and Interview with Swedish national expert, David Newell, Energimyndigheten, 1 February 2024

<sup>24</sup> Op. cit., n. 19, p. 85. SOU 2020:4.

<sup>25</sup> Interview with Swedish national expert

<sup>26</sup> Op. cit., n. 19, p. 72. SOU 2020:4.

<sup>27</sup> Op. cit., n. 1, p. 12. Ministry of Environment of Sweden.

<sup>28</sup> Op. cit., n. 19, p. 75. SOU 2020:4.

<sup>29</sup> EU Commission, Press Release "Questions and Answers – Increasing the ambition of the EU's Effort Sharing Regulation and boosting natural carbon sinks" (9 October 2023). Available at [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_23\\_4757](https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_4757)

than the national targets set in 2018.<sup>30</sup> However, the national ESR goals for Sweden are more stringent than those under the EU ESR.

For the **ESR-sector, the national climate goals are as follows:**<sup>31</sup>

- by 2030 at the latest the emissions shall be at least 63% less than in 1990, and maximum 8% can be achieved with supplementary measures (SE kompletterande åtgärder);
- by 2040 at the latest the emissions shall be at least 75% less than in 1990, and maximum 2% can be achieved with supplementary measures;
- by 2045 at the latest the emissions shall be at least 85% less, and maximum 15% can be achieved with supplementary measures.

The ESR-goal for 2030 in Sweden goes above and beyond that which has been agreed with the EU for the ESR sector. As there are different baseline years it is not clear exactly how much. However, according to some researchers, the Swedish national ESR target for 2030 translates to a reduction of 61% compared to 2005 emissions.<sup>32</sup> And if the supplementary measures are used to its full potential, the goal is to reduce emissions with 52%.<sup>33</sup> The goal for Sweden under the ESR regulation is 50% reduction in 2030 compared to 2005 levels.<sup>34</sup>

Sweden does not have a separate national goal for the LULUCF-sector.<sup>35</sup> However, Sweden's goal is set out in the EU's LULUCF Regulation and is amongst the most stringent emission reduction requirement for 2030 amongst the EU Member States.<sup>36</sup> The goal is to increase uptake of emissions with 4 million tonnes CO<sub>2</sub>eq till 2030 compared with 2016-2018.<sup>37</sup>

## **5. Other climate related goals**

In addition to the net zero target and the targets for the ESR sector, Sweden has established additional climate-related goals, hereunder:

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<sup>30</sup> Ibid.

<sup>31</sup> The ESR-sector includes emissions that are not included in the EU ETS (domestic transport (apart from aviation), agriculture, non-road mobile machinery, waste, houses and premises, fluorinated greenhouse gases (F-gases), use of solvents, and emissions from industry and energy.

<sup>32</sup> Op. cit., n. 16, p. 135. Nordic Council of Ministers.

<sup>33</sup> Ibid.

<sup>34</sup> ESR Regulation: Regulation (EU) 2023/857 of the European Parliament and of the Council (19 April 2023). Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0857&qid=1708338258317>

<sup>35</sup> Prop. 2023/24:1, "Utgiftsområde 20 – Klimat, miljö och natur", Appendix 1 (Bilag 1), p. 29. Available at <https://www.regeringen.se/contentassets/e1afccd2ec7e42f6af3b651091df139c/utgiftsomrade-20-klimat-miljo-och-natur.pdf>

<sup>36</sup> LULUCF Regulation: Regulation (EU) 2023/839 of the European Parliament and of the Council (19 April 2023). Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0839>

<sup>37</sup> Op. cit., n. 36, p. 30. Prop. 2023/24:1.

- an overarching environmental quality objective linked to reducing the average global temperature increase (with no time frame); and
- a milestone target to reduce emissions from domestic transport by at least 70% by 2030 compared with 2010.<sup>38</sup> The domestic transport target excludes domestic aviation as this is part of the EU ETS.

Relevant to reaching the climate goal through energy efficiency, is the following energy policy targets:

- The objective for the composition of electricity production in 2040 is 100 % of fossil free electricity production.<sup>39</sup> However, it does not mean that it is an end-date for nuclear power production.<sup>40</sup> Please note that the current Swedish government has underlined its commitment to nuclear power production.
- Sweden's energy consumption to be 50% more efficient by 2030 compared with 2005.<sup>41</sup>

## **6. Sweden's NDC**

Sweden's latest updated Nationally Determined Contribution (NDC) towards the Paris Agreement was submitted as part of the EU's NDC on 19<sup>th</sup> October 2023.<sup>42</sup> It clarifies the overall EU target for its Emission Trading System (ETS) sector – which is to reduce emissions from the sectors covered by the EU ETS by 62% from 2005 levels by 2030.<sup>43</sup>

Further, the EU's NDC sets out the EU GHG emission reduction target of 40% by 2030 compared to 2005 for the sectors covered by the Effort Sharing Regulation (ESR).<sup>44</sup> The targets under the ESR are also set out for each EU Member States, and for Sweden it is 50%.<sup>45</sup>

The year of comparison differs in the EU and national target for the ESR sector, which makes it difficult to ascertain how much further the Swedish national goal goes. However, some researchers find that the Swedish national target in the ESR sector corresponds to a domestic reduction of at least 52%, which is merely 2% more stringent.<sup>46</sup> The margin used to

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<sup>38</sup> Ibid., pp. 9 and 11.

<sup>39</sup> Op. cit., n. 14, p. 7. Ministry of Climate and Industry of Sweden.

<sup>40</sup> Op. cit., n. 36, p. 26. Prop. 2023/24:1.

<sup>41</sup> Ibid.

<sup>42</sup> UNFCCC's NDC registry. <https://unfccc.int/NDCREG>

<sup>43</sup> Update of the NDC of the European Union and its Member States (16 October 2023), p. 15. Available at <https://unfccc.int/sites/default/files/NDC/2023-10/ES-2023-10-17%20EU%20submission%20NDC%20update.pdf>

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> Op. cit., n. 16, p. 129. Nordic Council of Ministers.



be larger, but the EU is rapidly catching up with its introduction of increasingly more stringent climate targets.<sup>47</sup>

Sweden's national targets that go "above and beyond" the EU targets have not been communicated in the EU's NDC, and are therefore not subject to the same rules applicable to those EU targets for Sweden that have been communicated to the UNFCCC/PA. However, it is worth noting that Sweden's long-term strategy for reducing GHGs communicated to the UNFCCC in December 2020 included the national net-zero target and the other sectoral targets that go above and beyond the EU targets.<sup>48</sup>

## **7. Achievement of goals**

In its budget proposal for 2024, the Swedish government found that the prognosis for achieving the climate goals for the ESR sector in 2030 and 2040 is bad.<sup>49</sup>

Further, Sweden is currently not on track to meet its 2045 net zero goal, and the gap in emission reductions needed is calculated to be 21,9-23,6 million tonnes.<sup>50</sup>

In total for the ESR and LULUCF sectors, the total gap in the years 2021-2030 is estimated to be 10 million tonnes in 2030.<sup>51</sup> Thus, there will be a gap within both the ESR and LULUCF sectors, and it will therefore not be possible to use any flexibilities provided under these regulations to compensate for these gaps. In other words, as there is no "over-achievement" in the LULUCF sector, it will not be possible to compensate in the ESR-sector, and vice-versa.

Further, the transport-sector goal is not possible to achieve with current policies.<sup>52</sup> The current assessment is that emissions can be reduced by 39-53% till 2030 compared to 2010. As the goal is 70%, this leads to a gap of 3,4-6,3 million tonnes.<sup>53</sup>

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<sup>47</sup> Ibid.

<sup>48</sup> Op. cit., n. 1. Ministry of Environment of Sweden

<sup>49</sup> Op. cit., n. 36, p. 15. Prop. 2023/24:1.

<sup>50</sup> Ibid., p. 25.

<sup>51</sup> Ibid., p. 30.

<sup>52</sup> Ibid., p. 27.

<sup>53</sup> Ibid.

## **PART 2: Trading of carbon emissions and policy on using carbon markets under article 6.2 and 6.4**

### **1. Supplementary measures and their relation with the carbon markets**

#### **a. LULUCF**

The EU's LULUCF Regulation sets out the goal that the LULUCF sector must not have any net emissions.

The LULUCF sector is one of the supplementary measures that can be used to achieve the national climate goals. It is not clear how the effect of increased removal or reduced emissions from the LULUCF supplementary measures are counted. The Swedish expert committee proposed that only the "additional effect" on removal and emissions that can be "estimated in a reliable manner" should be counted.<sup>54</sup> This would mean that the full accounting effect available under the EU's LULUCF Regulation would not be used towards the national climate goals. In 2023, the EU revised the LULUCF Regulation, with binding national targets and new methodologies for MRV. When these new methodologies are used, Sweden will be unlikely to meet its LULUCF targets.<sup>55</sup>

#### **b. BECCS and CCS**

Sweden is leading the global efforts in attaining net negative emissions.<sup>56</sup> Bio-CCS, also known as BECCS, is one of the three supplementary measures that can be used to achieve Sweden's net-zero goal. There is currently no formal CCS strategy<sup>57</sup> However, in 2018, the Swedish government decided to establish an expert committee to propose a strategy on how Sweden should achieve its net-zero goal.<sup>58</sup> The strategy was published in 2020 and included an action plan with specific proposals for BECCS in Sweden.<sup>59</sup> Three main recommendations for government policy were proposed.<sup>60</sup> The first was the creation of a support scheme for negative emissions in the form of reverse auctions, which is a form of state aid.<sup>61</sup> Secondly, it was recommended to agree on a treaty with Norway for transport of

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<sup>54</sup> Op. cit., n. 19, p. 96. SOU 2020:4.

<sup>55</sup> Input from Swedish national expert, David Newell, 8 March 2024

<sup>56</sup> Op. cit., n. 19, p. 70. SOU 2020:4.

<sup>57</sup> Nordic Council of Ministers, "Regulatory framework for CCS in the Nordic countries", p. 49. Available at <https://pub.norden.org/temanord2023-521/temanord2023-521.pdf>

<sup>58</sup> Op. cit., n. 19, p. 3. SOU 2020:4.

<sup>59</sup> Ibid., p. 70.

<sup>60</sup> Op. cit., n. 57, p. 49. Nordic Council of Ministers.

<sup>61</sup> For more information about how the BECCS auction will work, please see

<https://www.energimyndigheten.se/en/sustainability/carbon-capture-and-storage/state-aid-for-beccs/>

CO<sub>2</sub> across borders. Third, was the creation of a national center for CCS to be part of the Swedish Energy Agency.<sup>62</sup>

The Swedish Energy Agency has been assigned to develop the support scheme for BECCS, planning the design of the reverse auctions, with SEK 36 billion set aside for the years 2026-2046.<sup>63</sup> The goal is to capture 2 million tonnes biogenic CO<sub>2</sub> per year by 2030, with the potential of five times as much in a 2045 perspective.<sup>64</sup> The ambition is that the first auction will take place in 2023, with the first storage in 2026.<sup>65</sup>

Further, in 2022, Norway and Sweden agreed to intensify the cooperation on CCS.<sup>66</sup> There is ongoing work to get in place an agreement between the two countries on import/export of CO<sub>2</sub> as soon as possible to ensure that private companies can cooperate on storage at the Norwegian continental shelf.<sup>67</sup> Both countries have ratified the necessary changes in the London Protocol (on dumping) to allow for transportation of CO<sub>2</sub> from Sweden to Norway for offshore storage.<sup>68</sup>

It is likely that the Swedish state aid for BECCS will be combined with support from EUs Innovation Fund as well as sale of credits from the Voluntary Carbon Market (VCM).<sup>69</sup>

Please note it has been difficult to find more information on the accounting rules set up for transfer of CCS emissions from Sweden to Norway. Or on the type of businesses that will transport CCS emissions, and whether those fall under the EU ETS regulation. And whether the reductions will be accounted for both under the EU ETS and otherwise (i.e. as supplementary measure). The Swedish national expert refers to Svante Söderholm at Energimyndigheten for further information on this topic.

### **c. Article 6 overview**

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<sup>62</sup> Op. cit., n. 57, p. 49. Nordic Council of Ministers.

<sup>63</sup> Ibid.

<sup>64</sup> Swedish Energy Agency. “State aid for BECCS” (4 March 2022). Available at

<https://www.energimyndigheten.se/en/sustainability/carbon-capture-and-storage/state-aid-for-beccs/>

<sup>65</sup> Swedish Energy Agency. “The reversed auction for bio-CCS will be postponed” (27 June 2022). Available at

<https://www.energimyndigheten.se/en/news/2022/the-reversed-auction-for-bio-css--will-be-postponed/>

<sup>66</sup> Government of Norway. “Norge og Sverige enige om å intensivere samarbeid om karbonfangst, transport og lagring (CCS)” (5 April 2022). Available at <https://www.regjeringen.no/no/aktuelt/norge-og-sverige-enige-om-a-intensivere-samarbeid-om-karbonfangst-transport-og-lagring-ccs2/id2907401/>

<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

<sup>69</sup> Norwegian Directorate for Environment / Miljødirektoratet, “Industrien kan fjerne CO<sub>2</sub> med nye virkemidler” (13 March 2023), p. 15. Available at <https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2023/mars-2023/industrien-kan-fjerne-co2-med-virkemidler/>

Article 6 is one of the supplementary measures that can be used to attain the part of Sweden's national climate targets as set out in the Climate Policy Framework *that go above-and-beyond* the EU climate targets set for Sweden.<sup>70</sup>

However, article 6 can also be used to contribute to results-based climate finance, as well as by the private sector for its emission reduction initiatives and voluntary climate commitments.<sup>71</sup>

In the budget decision for international climate investments for 2024, there is set aside around SEK 150 million for the international cooperations aligned with the PA's article 6 (the article 6 program).<sup>72</sup>

There seems to have been a slight change in government policy that *in theory* opens for Swedish authorities using article 6 for land-use removals abroad. In short, in the budget for 2023 it was clarified that the article 6 program was intended for mitigation of energy-related emissions (typically due to the burning of fossil fuels) and not for land use-related removals (ie LULUCF).<sup>73</sup> However, in the budget for 2024, there is no requirement that finance under the article 6 program must go to energy related emissions.<sup>74</sup> As such, it can be implied that article 6 finance can include BECCS and other CCS measures as well as measures for land use-related removals. It is not clear, however, exactly which measures Sweden intends to finance. Thus, formally there are no restrictions on the use of article 6 for BECCS or land-use removals in the 2024 budget. However, *in practice* the Swedish authorities view LULUCF projects abroad as problematic and are unlikely to invest in them in the near term.<sup>75</sup>

In undertaking the cooperation under article 6, Swedish authorities can enter into bilateral agreements with other countries; as well as agreements with project/program developers, together with other interested parties; and through multilateral cooperations and initiatives.<sup>76</sup>

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<sup>70</sup> Interview with Swedish national expert

<sup>71</sup> Interview with Swedish national expert

<sup>72</sup> The Swedish government's 2024 budget on international climate investments (20 December 2023). Available at <https://www.esv.se/statsliggaren/regleringsbrev/Index?rblid=24210>. For the Swedish government's 2023 budget on international climate investments (22 December 2022), please see <https://www.esv.se/statsliggaren/regleringsbrev/?rblid=23160>

<sup>73</sup> Swedish Environment Research Institute, "The role of carbon dioxide removal in contributing to the long-term goal of the Paris Agreement" (December 2023), p. 36. Available at <https://www.diva-portal.org/smash/get/diva2:1825937/FULLTEXT01.pdf>

<sup>74</sup> Op. cit., n. 72

<sup>75</sup> Input from Swedish national expert, David Newell, 8 March 2024

<sup>76</sup> Op. cit., n. 72, p. 3. The Swedish government's 2024 budget.

As noted above, article 6 cannot be used for the climate targets that are part of the EU's NDC, as this is not allowed under EU rules; article 6 units cannot be used to meet the EU's NDC.<sup>77</sup> As such, Sweden's use of article 6 for its national above-and-beyond goals will not be used to make corresponding adjustments in Sweden/the EU.<sup>78</sup> However, the host country will be required to make corresponding adjustments; thus in reality the host country will increase its reported emissions.<sup>79</sup> In practice, the emissions reductions will likely be cancelled/retired in the article 6 registry.<sup>80</sup>

The above policy has been included in the MOUs that Sweden has entered into with host countries, and which states that: "Sweden intends to acquire ITMOs generated in accordance with the Paris Agreement Rules and reserves the right to use the ITMOs generated through this cooperation for compliance with its national targets and/or to have the ITMOs cancelled."<sup>81</sup>

The article 6 units will be cancelled after they have been transferred and as they are applied to Sweden's national targets.<sup>82</sup> After transfer to Sweden, there will be a period before the units are used/cancelled. It will ultimately be a political decision whether Sweden applies the units to its targets or sells to another party/entity under article 6 or simply cancels them without applying them to its targets or selling them.<sup>83</sup> This decision will likely be made closer to 2030 when such decisions will need to be made. Regardless, units must be transferred to Sweden and the host country must make the corresponding adjustment regardless of what Sweden does with it later.<sup>84</sup>

As such, there seems to be several options for Sweden's government in using the article 6 units: (i) using them for its national above-and-beyond targets (note that using them for their EU targets is not allowed); (ii) cancel them without applying them to targets; and (iii) sell them to another country. For neither of these options there will be a corresponding adjustment. This is because a corresponding adjustment is only required when transferring article 6 units that are covered by a Party's NDC in accordance with para 36 Decision 1/CP.21. Article 6 units are not part of the Swedish NDC (which is the same as the EU NDC). And EU NDC sets

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<sup>77</sup> Interview with Swedish national expert

<sup>78</sup> Interview with Swedish national expert

<sup>79</sup> Interview with Swedish national expert

<sup>80</sup> Interview with Swedish national expert. Please note that it is not yet decided what the term is under the PA, but it is likely that it will be "cancelled".

<sup>81</sup> Memorandum of Understanding between the government of Sweden and the government of Nepal relating to cooperation for the implementation of Article 6 of the Paris Agreement, para 6 (1 June 2022). Available at <https://www.energimyndigheten.se/4aa6e0/globalassets/webb-en/cooperation/international-climate-cooperation/mou-on-bilateral-cooperation-under-article-6-of-the-paris-agreement---sweden-and-nepal.pdf>

<sup>82</sup> Interview with Swedish national expert

<sup>83</sup> Interview with Swedish national expert

<sup>84</sup> Interview with Swedish national expert

out a domestic reduction of GHG emissions, which will be achieved without the use of international credits.

For the same reason, article 6 units used by Swedish private sector for international commercial aviation offsets through CORSIA will not require a corresponding adjustment.

## **2. Article 6 for carbon removals**

In a recent study commissioned by the Swedish Environment Agency, the use of article 6 for carbon removals (i.e CCS and BECCS) was noted.<sup>85</sup> The study found that there was limited literature on using carbon markets to incentivize carbon removal, but that it was quickly growing. It also noted that “trading under article 6 will likely be necessary to incentivize countries with excess capacity to go net-negative to balance out remaining emissions from countries without the ability to mitigate to net-zero.”<sup>86</sup> It was also suggested, to ensure environmental integrity, that emissions should be offset with like-for like carbon removal.<sup>87</sup>

Finally, it was noted that separate targets for emissions reduction and carbon removal would lead to greater clarity and allow for responsible carbon removal deployment as the focus of article 6 will eventually shift towards carbon removal activities.<sup>88</sup> It is not clear whether the recommendations of creating separate targets will lead to new policies and specific climate goals for carbon removals and the potential use of article 6.

It is also worth noting that Sweden and Switzerland recently “took the first steps towards establishing an international market for carbon removals under the Paris Agreement framework, signing a declaration of intent.”<sup>89</sup> At COP28 in Dubai in December 2023, the countries announced a pilot project to test the rules for international carbon markets in the field of carbon removal technologies.<sup>90</sup> The memorandum of understanding (MOU) between Sweden and Switzerland also aims to “enhance understanding of how cooperation under Article 6 of the Paris Agreement in the field of industrial removal technologies can contribute to the implementation of NDCs under the Paris Agreement or to Other International

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<sup>85</sup> Op. cit., n. 74, p. 9. Swedish Environment Research Institute

<sup>86</sup> Ibid.

<sup>87</sup> This means that removal from fossil fuel sources should be part of geological storage, whereas land-use and short-lived emissions should be included in conventional CDR.

<sup>88</sup> Op. cit., n. 74, p. 10. Swedish Environment Research Institute. For a list of recommendations for Swedish policies on CDR, please see *ibid.*, pp. 14-15.

<sup>89</sup> Swedish Energy Agency, “The role of carbon removals in achieving the goals of the Paris Agreement” (16 January 2024). Available at <https://www.energimyndigheten.se/en/news/2024/the-role-of-carbon-removals-in-achieving-the-goals-of-the-paris-agreement/>

<sup>90</sup> Ibid.

Mitigation Purposes, including national mitigation goals or voluntary climate objectives, to allow for higher ambition in mitigation actions.”<sup>91</sup>

An important take away from the above analysis is that there are potential overlaps between the supplementary measures. This is because article 6 can be used to finance BECCS and BECCS is a supplementary measure, and because carbon removals, including BECCS, is possible under the article 6-supplementary measure. Article 6 can also, in theory, be used for LULUCF projects. However, in practice, this it is very unlikely that Swedish authorities will do so.

### **3. Article 6 and its connection with the VCM**

It is worth noting that the VCM is likely to be part of the BECCS supplementary measure.

The VCM is also, however, relevant for article 6-supplementary measure in that Sweden utilizes the Gold Standard as a framework for its bilateral cooperation under article 6.2.

Private sector use of article 6, however, will likely not be linked to the fulfilment of the Swedish net-zero target that go above-and-beyond (and as such is allowed to be fulfilled with article 6 units). If both a private company and Sweden would claim the same units for meeting their targets, this would likely be seen as double claiming, which is viewed as problematic and would be unlikely to occur due to the reputational risk involved for both companies and Sweden.<sup>92</sup> However, it cannot be absolutely ruled out.<sup>93</sup>

### **4. Article 6 and government policies on using the carbon markets**

The use of article 6 cooperation should be seen in relation to Sweden’s international climate finance, which per 2020 was approximately SEK 6 billion per year, mainly focused on LDCs and with limited focus on results-based climate financing.<sup>94</sup> In short, Sweden’s international climate investments are focused on two key areas: “international results-based climate finance” and “supplementary measures”.<sup>95</sup> The latter will be used to achieve the climate goals in the climate policy framework. In addition, article 6 in Sweden is used by airlines for

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<sup>91</sup> Memorandum of Understanding between the Swedish Energy Agency and the Federal Department of the Environment, Transport, Energy and Communications of the Swiss Confederation on a Cooperation for International Transfer of Industrial Carbon Removals (9 December 2023). Available at <https://www.energimyndigheten.se/4aebc0/globalassets/webb-en/cooperation/international-climate-cooperation/mou-on-bilateral-cooperation-under-article-6-of-the-paris-agreement---sweden-and-switzerland.pdf>

<sup>92</sup> Interview with Swedish national expert

<sup>93</sup> Interview with Swedish national expert

<sup>94</sup> Op. cit., n. 19, p. 112. SOU 2020:4.

<sup>95</sup> Op. cit., n. 36, p. 4. Prop. 2023/24:1.



ICAOs Carbon Offsetting and Reduction Scheme for International Aviation (CORSA), as well as by private sector companies in achieving their voluntary commitments.

The key government policies or frameworks on the use of article 6 as a supplementary measure is what has been decided under the Climate Policy Framework.

However, an inquiry commissioned by the Swedish Environment Agency (SEA) and published in 2020 set out several recommendations by an expert committee relevant for the use of carbon markets in Sweden, including article 6.<sup>96</sup> These policy recommendations are influencing the development of policies on the use of article 6 in Sweden.

The expert committee recommended that bilateral agreements or multilateral initiatives should be performed to *ensure additionality, to contribute to sustainable development and help to raise the climate ambition of the host country*, as well as strive to being as *cost-effective* as possible.<sup>97</sup> In order to achieve this, the following elements were highlighted: “choice of country, programme and type of measure, the conditions set in relation to the host country’s own policies and by the number of units resulting from the measures carried out being calculated in relation to a strict reference scenario.”<sup>98</sup>

The expert committee also recommended that climate finance initiatives should be linked to article 6 to ensure measures to be calculated in line with internationally agreed principles.<sup>99</sup> Further, it was recommended to increase climate finance, including under the supplementary measures, towards middle income countries in urgent need for turning current emission trends around as opposed to LDCs.<sup>100</sup>

Interestingly, the expert committee found that the estimated marginal costs of units from mitigation outcomes in other countries were estimated to come in about the same level or higher than the estimated marginal costs of equivalent supplementary measures in Sweden.<sup>101</sup> This means that the costs of the three supplementary measures were found to be the same. It was noted, however, that this could change with new technologies or measures. It is worth noting that another paper has found that the cost of national measures is higher than with the use of flexibilities provided under the European ESR.<sup>102</sup>

The expert committee proposed a new programme on international mitigation of GHGs under article 6 with an annual budget to be used for both results-based climate funding of

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<sup>96</sup> Op. cit., n. 19, p. 111. SOU 2020:4.

<sup>97</sup> Ibid.

<sup>98</sup> Ibid.

<sup>99</sup> Ibid., p. 113.

<sup>100</sup> Ibid., pp. 112 and 113.

<sup>101</sup> Ibid., p. 112.

<sup>102</sup> Please see the discussion on the ESR above.

mitigation measures as well as “achieving the targets of the supplementary measures”.<sup>103</sup> In addition to being used for supplementary measures, article 6 was also thought to be used for other international climate financing.

Finally, it was assumed that a corresponding adjustment would be made in the host country regardless of whether the units acquired would be used as part of the host country’s climate financing or as part of the supplementary measures. This is in line with the article 6 rules, where host countries must make a corresponding adjustment unless the units are so-called ‘mitigation contribution units/unauthorized A6.4ERs’.<sup>104</sup>

## **5. Article 6.2 cooperation**

The Swedish Environment Agency (SEA) (SE: Energimyndigheten) works with developing international climate cooperation under the PA article 6. Part of the work includes establishing agreements and identify activities that can reduce emissions. In order to enter into agreements, it is necessary to undertake capacity building and development of frameworks in the host country.<sup>105</sup>

Sweden is actively engaged in the PA article 6.2 bilateral agreements or MOUs and is participation in pilot projects.<sup>106</sup> Sweden’s article 6 pilot projects cover a wide range of activities for around 12 developing countries.<sup>107</sup> In 2022, Sweden entered into a memorandum of understanding (MOU) with Nepal and the Dominican Republic.<sup>108</sup> From before, it had entered into an MOU with Ghana.<sup>109</sup> The SEA also has dialogue with several other countries on potential cooperation.<sup>110</sup>

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<sup>103</sup> Op. cit., n. 19, p. 113. SOU 2020:4.

<sup>104</sup> The unauthorized A6.4ERs is in essence a type of climate finance rather than carbon finance as you just make a contribution to the host country’s climate targets without any ability or intent to transfer the unit to another country.

<sup>105</sup> For an example of a training course in Nepal, please see: GGGI, Training on Mitigation Outcome Purchase Agreement, Nepal (June 2023). Available at <https://gggi.org/training-on-mitigation-outcome-purchase-agreement-nepal/>

<sup>106</sup> IETA, “Visualising Article 6 Implementation”. Available at <https://www.ieta.org/resources/visualising-article-6-implementation/>

<sup>107</sup> Ibid.

<sup>108</sup> Op. cit., n. 36, p. 27. Prop. 2023/24:1.

<sup>109</sup> Memorandum of Understanding between the government of Sweden and the government of Ghana (9 November 2021). Available at <https://www.energimyndigheten.se/4aa6c1/globalassets/webb-en/cooperation/international-climate-cooperation/mou-on-bilateral-cooperation-under-article-6-of-the-paris-agreement---sweden-and-ghana.pdf>

<sup>110</sup> Energimyndigheten, “Samarbeten under Parisavtalen” (30 January 2024). Available at <https://www.energimyndigheten.se/klimat--miljo/internationella-klimatsamarbeten/parisavtalet/samarbeten-under-parisavtalet/>

The project Stella Fortuna in Ghana is the first Swedish project under article 6.2.<sup>111</sup> It was for the installation of solar panels on roofs with batteries on commercial and industrial buildings in Ghana. It created educational opportunities for women in Ghana and promoted “social sustainability.”

As noted above, article 6, including article 6.2, can be used for achieving Sweden’s net-zero target that goes above and beyond the EU (i.e it cannot be used for NDC fulfilment). It can also be used by the private sector for achieving their voluntary targets, and for the fulfilment of offset requirements under ICAO’s CORSIA. The Swedish authorities are utilizing frameworks under the VCM to ensure that robust environmental standards are being complied with, such as to ensure additionality and conservative baselines and so on.<sup>112</sup> Currently, Sweden has an agreement with Gold Standard for delivering this framework.<sup>113</sup> The Swedish authorities also intend for other international standards to be utilized, and not only the Gold Standard.<sup>114</sup>

Sweden also intends to require the private sector to apply Gold Standard or other standards when using article 6.2 for acquiring mitigation outcomes.<sup>115</sup> Private companies will also be required to validate and verify the outcomes.<sup>116</sup> These requirements are only for private companies use of article 6.2 (and likely 6.4 in the future), and not for the VCM as a whole.

Further, Sweden has decided to only allow for the use of article 6.2 if it is aligned with sustainable development. Sweden conducts its own due diligence on projects that it will be acquiring credits from, using third party sustainable development (SD) reports to assess whether projects are good or not. These SD reports will also be required for private buyers in Sweden. Thus, Sweden aims to develop robust safeguards for sustainable development in the article 6 projects that both the government and private sector companies acquire credits from.<sup>117</sup> The project, Stella Fortuna in Ghana, was used as a pilot project to test how to set standards and measure sustainable development alignment.<sup>118</sup> Work is ongoing to specify sustainable development standards for reporting and monitoring that Sweden is going to require before transfer and receipt of any article 6 units in Sweden’s account. An

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<sup>111</sup> Energimyndigheten, “Sverige bidrar till energiomställningen i Ghana” (24 November 2023). Available at <https://www.energimyndigheten.se/nyhetsarkiv/2023/sverige-bidrar-till-energiomstallningen-i-ghana/>

<sup>112</sup> Interview with Swedish national expert

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

<sup>115</sup> Ibid.

<sup>116</sup> Ibid.

<sup>117</sup> Ibid.

<sup>118</sup> See for example, the MOU with Ghana, article 4, para 4, which states that “Parties shall endeavour to ensure Mitigation Outcomes only originate from mitigation activities that (a) are in line with sustainable development and any related strategies and policies.” Further requirements for respect of human rights and no exacerbating of social conflict are also stipulated. Op cit. n. 109

independent verifier will be relied upon to assess whether the projects are in fact sustainable development aligned, and Sweden will require an additional SD report from one or more third parties. Sweden is doing this to ensure that Sweden and companies in Sweden are ensuring that they are not endangering the SDGs and hopefully contributing to the SDGs.<sup>119</sup>

In addition to the specific requirements on ensuring sustainable development alignment, Swedish authorities are also currently working on a framework that will result in changes and additions to relevant regulations and ordinances in Sweden to align it with article 6.

## **6. Article 6.4 cooperation**

PA's article 6.4 establish a mechanism, similar to the KPs CDM, but with new and/or revised methodologies and requirements for validation, registration, monitoring, verification, certification, issuance, renewal, first transfers, voluntary cancellation and other processes, including methodologies for establishing baselines.<sup>120</sup>

Sweden will, in utilizing article 6.4, look to the Paris Rulebook and the methodologies that are stipulated by the Parties to the PA.

In addition, Sweden is stipulating more stringent requirements for adhering to sustainable development before any mitigation outcomes can be transferred to the Swedish account. As noted above, The Swedish Energy Agency is currently working on developing methods to measure and follow up the contribution to sustainable development in Sweden's upcoming Article 6 collaborations.<sup>121</sup>

## **Part 3: Policies on the Voluntary Carbon Markets**

### **1. The VCM in Sweden**

Sweden does not have an official policy related to the voluntary carbon market (VCM), and has not directly regulated the VCM.<sup>122</sup> The exception is Sweden's policy on article 6 that can be utilized through the VCM and which can be used by private sector.<sup>123</sup>

However, the VCM is *indirectly* regulated by the EU, through its Corporate Sustainability Reporting Directive (CSRD), the proposal for a Green Claims Directive and the Carbon

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<sup>119</sup> Informal interview with Swedish national expert

<sup>120</sup> Decision 3/CMA.3, para 5. Available at <https://unfccc.int/decisions?f%5B0%5D=body%3A4099>

<sup>121</sup> Swedish Energy Agency. "Article 6 of the Paris Agreement" (Last updated: 30 June 2023). Available at <https://www.energimyndigheten.se/en/cooperation/swedens-program-for-international-climate-initiatives/paris-agreement/article-6-of-the-paris-agreement/>

<sup>122</sup> Interview with Swedish national expert

<sup>123</sup> For more details, please see description of Article 6 above.

Removals Certification Framework.<sup>124</sup> Another *indirect* source of guidance for the use of VCM in Sweden is international initiatives and frameworks such as the science-based targets initiative (SBTI) and Verra or Gold Standard.<sup>125</sup>

Further, Sweden is relying on the VCM framework Gold Standard in its article 6.2 arrangements.<sup>126</sup> The Swedish Energy Agency's (SE: Energimyndigheten) cooperation with Gold Standard includes adjusting working methods and methodologies from trade under the Kyoto Protocol to the new set of rules under the Paris Agreement.<sup>127</sup> It also consist of developing digital instruments for mapping and follow-up of how emissions trading contribute towards sustainable development.<sup>128</sup> In other words, Sweden is using the Gold Standard's framework for its bilateral cooperation on emissions trading under article 6.2. However, as noted above, Sweden is not limiting itself to only using the Gold Standard as an international standard for its article 6.2 cooperation.

Further, Swedish authorities do not have a mandate to sign up to international initiatives on the VCM, such as the Voluntary Carbon Markets Integrity Initiative (VCMI) and Integrity Council for the Voluntary Carbon Market (ICVCM) that work to improve the standards in the VCM. Further, although Sweden took part in the work under the Nordic Council of Ministers with the Action plan for Nordic cooperation on the VCM, it has not been officially endorsed by Sweden.<sup>129</sup> Sweden has for example not been able to endorse the initiatives at COP28 that increase government action and regulation of the VCM, as was done by Netherlands, Germany, Finland, Belgium, Austria and the UK.<sup>130</sup> This is because they do not have a policy mandate for this at this point in time.

There is also not one central marketplace in Sweden for trading in the VCM as it is not bounded by national boundaries and as there are many global markets.<sup>131</sup>

Trade under the VCM is undertaken by private parties that purchase credits from other private parties or foreign governments, and these trades are not directly regulated. There is

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<sup>124</sup> Interview with the Swedish national expert. Proposal for the Green Claims Directive, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0166>

<sup>125</sup> Interview with Swedish national expert

<sup>126</sup> Greenbiz, "Article 6 creates two kinds of carbon credits — what that means for business" (10 December 2021). Available at <https://www.greenbiz.com/article/article-6-creates-two-kinds-carbon-credits-what-means-business>

<sup>127</sup> Op. cit., n. 102. Energimyndigheten.

<sup>128</sup> Ibid.

<sup>129</sup> Action plan for Nordic cooperation on the VCM (28 November 2022). Available at <https://www.norden.org/en/publication/harnessing-voluntary-carbon-markets-climate-ambition>

<sup>130</sup> Interview with Swedish expert. See also the publication by the VCMI, "VCMI on COP28: The beginning of the end of fossil fuels: we need to use every form of finance to deliver this commitment" (14 December 2023). Available at <https://vcmintegrity.org/vcmi-on-cop28/>

<sup>131</sup> Input from Swedish expert

indirect legislation on the claims that companies can make based on VCM credits regulated by the EU's Green Claims Directive.<sup>132</sup>

Finally, the lack of a mandate, as well as lack of time and resources, limit the possibility to engage with existing policy initiatives, but also does not allow for the Swedish Energy Agency to develop its own national policies at this point in time. This could change if there is strong political focus and attention on the importance of regulation of the VCM, or if the Swedish Energy Agency proposes to do so and the proposal is welcomed by the government.

## A case study

### ***How sectoral policy decisions affect the achievement of climate goals and the need for carbon markets – a case study of the fuel blending mandate for domestic transport***

GHG emissions from domestic transport accounted for 32% of Sweden's territorial emissions in 2018.<sup>133</sup> The majority of emissions stems from cars and heavy goods vehicles.<sup>134</sup> As part of Sweden's climate ambition, it has set a specific target for the transportation sector – to reduce emissions from domestic transport by at least 70% by 2030 compared with 2010.

Total emissions from the transport sector have fallen by 15% between 1990 and 2018.<sup>135</sup> The reduction in emissions is the result of an increase in biofuels and more energy-efficient technology.<sup>136</sup> The increase in biofuels has been enabled by government policies, including what is known as the “reduction mandate”.<sup>137</sup>

A tax relief for biofuels was first introduced in Sweden and gave it a head start in transport emission reductions compared to other EU countries.<sup>138</sup> However, uncertainties related to whether the tax reliefs could be defined as illegal State aid by the EU Commission led the Swedish government to replace it with a biofuel reduction mandate, introduced in 2018. The

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<sup>132</sup> Input from Swedish expert

<sup>133</sup> Op. cit., n. 1, p. 18. Ministry of Environment of Sweden.

<sup>134</sup> Ibid.

<sup>135</sup> Ibid.

<sup>136</sup> Ibid.

<sup>137</sup> Lundberg, Liv, “What you need to know about the Swedish biofuel reduction mandate” (22 November 2023). Available at <https://www.ri.se/en/news/blog/what-you-need-to-know-about-the-swedish-biofuel-reduction-mandate#:~:text=The%20Swedish%20reduction%20mandate%20that,be%20drastically%20lowered%20by%202024>

<sup>138</sup> Lundberg, Liv, et al., “Executive summary: Styrmedel och biodrivmedel i EU – i går, idag och imorgon – Samband mellan konsumtion, produktion och styrmedel för biodrivmedel” (May 2022), p. 6. Available at [https://f3centre.se/app/uploads/FDOS-44-2022\\_50479-1-ExSum\\_220509.pdf](https://f3centre.se/app/uploads/FDOS-44-2022_50479-1-ExSum_220509.pdf)

reduction mandate obliges fuel distributors to mix biofuel into petrol and diesel to achieve lower emissions (also known as “the reduction obligation” (SE: reduktionsplikt)).<sup>139</sup>

The reduction mandate has been shown to promote high-performance biofuels and emissions reductions in Sweden.<sup>140</sup> In fact, Sweden has had the largest emission reductions in the road transport sector compared to other EU countries.<sup>141</sup> The reduction mandate was raised till 30.5% in the beginning of 2022, correlating with an increase in diesel price of about 1 SEK. Since then, the diesel price has fluctuated, and it is not clear how much of the fluctuation is due to fluctuations in the global oil price versus the price of biofuel.<sup>142</sup> However, biofuel is generally more expensive than fossil fuel.<sup>143</sup> And it can be safe to assume that at least some of the price increase is linked to the reduction mandate.<sup>144</sup>

Sweden, as well as other European countries, were hit hard in 2022 with increasingly higher fuel, electricity and food prices, making it harder for citizens to make the ends meet. In the run-up to the national election in 2022, therefore, the reduction mandate and its potential negative effect on increasing fuel prices came into the limelight amongst prominent politicians.<sup>145</sup> In the autumn of 2023, therefore, the Swedish government put forward a bill, that was later approved by the Swedish Parliament, that lowered the reduction mandate to 6% starting in January 2024.<sup>146</sup> In short, it aimed at reducing the fuel price at the pump.<sup>147</sup>

The effect of the reduced biofuel requirement on national *production* of biofuels in Sweden is not clear, and it has been shown that there are other factors, such as global market demand for biofuels and closeness to existing infrastructure, that weighs more heavily on investment decisions.<sup>148</sup>

However, the reduced biofuel requirement (to 6%) leads to an increase in emissions from the transport sector of 5,1-8,4 million tonnes CO<sub>2</sub>eq per year in 2030. This is the main reason

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<sup>139</sup> Ibid., p. 3.

<sup>140</sup> Ibid.

<sup>141</sup> Ibid., p. 3, figure 1. The figure compares EU countries’ reductions in GHG intensity for fuel in the transport sector between 2010-2019, and shows that Sweden has almost three times greater reductions than the next best country, Finland.

<sup>142</sup> Op. cit., n. 126. Lundberg, Liv.

<sup>143</sup> Op. cit., n. 127, p. 4. Lundberg, Liv.

<sup>144</sup> Further study on the relation between the diesel price and the requirements of the biofuel reduction mandate has been planned. For contact details of the author of the study, please see: Lundberg, Liv (Research Institutes of Sweden), “Reduktionsplikt välfungerande modell för minskade utsläpp av växthusgaser”. Available at <https://f3centre.se/sv/forskningsprojekt/samband-mellan-styrmedel-produktion-och-konsumtion-av-biodrivmedel-i-europa-och-hur-det-paverkar-sverige/>

<sup>145</sup> Op. cit., n. 126. Lundberg, Liv.

<sup>146</sup> Ibid.

<sup>147</sup> Interview with Swedish national expert

<sup>148</sup> Op. cit., n. 127, p. 8. Lundberg, Liv.



why Sweden currently is not likely to reach its climate goals in 2030 for the ESR sector.<sup>149</sup> Other policy measures, at both national and EU-level are needed to ensure that the 2030 and 2040 goals can be met.<sup>150</sup>

As mentioned above, the sectoral transport goal will not be achieved.

As a consequence, the Swedish government has stated that it intends to compensate for the reduced emissions reductions with other measures in order to meet the ESR commitments.

This includes using the EU's flexibility mechanism to "compensate" for the lost emission reductions. The flexibility mechanism opens for trade of emission reduction units for EU and some EEA countries within the EU ESR and the LULUCF sectors. As per February 2024, the Swedish government has set aside 110 million SEK for these types of transactions.<sup>151</sup> However, the potential of using the flexibility mechanism is uncertain as the market size is unknown and there is a lack of clarity on how many countries will be willing to trade in this market (i.e., uncertainty about the number of sellers and buyers and the amounts of units available).<sup>152</sup> Further, the flexibility mechanism has not been tried and tested and there have been very few transactions in this market to-date. The Swedish government is likely to increase the budget for the use of this flexibility mechanism up until 2030 if it can be shown that there is a market.<sup>153</sup>

Finally, it is worth noting that one study finds that the restrictions on the use of supplementary measures for the use of ESR flexibilities (i.e Sweden's restrictions on buying emission-quota units from other EU Member States) is not cost-effective.<sup>154</sup> The same study does not attempt to quantify the positive demonstration effects (being a front-runner, and advance technological development, and facilitate international negotiations) of having more stringent national goals and less flexibilities. The study concludes that these positive benefits should be weighed against the quantified increase in Swedish household's welfare when the possible flexibilities under the EU ESR are being maximized.<sup>155</sup>

This case study highlight the following: (i) Sweden turned to the carbon market (here, the ESR flexibility mechanism) when domestic policies led to increased burden on citizens and public outcry (during a time of government election); (ii) the achievement of the climate goal for the ESR sector became more vulnerable to outside factors due to the change from

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<sup>149</sup> Interview with Swedish national expert

<sup>150</sup> Op. cit., n. 36, p. 26. Prop. 2023/24:1.

<sup>151</sup> Interview with Swedish national expert

<sup>152</sup> Ibid.

<sup>153</sup> Ibid.

<sup>154</sup> Op. cit., n. 16, pp. 160-161. Nordic Council of Ministers.

<sup>155</sup> Ibid.

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domestic sectoral policies (normative obligations) to reliance on carbon markets (here the ESR flexibility mechanism); and (iii) there is tension between the policy aim of promoting cost-benefit instruments with the vision of Sweden being a front runner and the promotion of positive demonstration effects.

Finally, it is interesting to note that an instruments' apparent success (leading to being "best in class" in the EU) is not a hinder for scrapping this instrument.

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Interview with Swedish national expert, David Newell, Energimyndigheten, 1 February 2024

Input from Swedish national expert, David Newell, Energimyndigheten, 8 March 2024



To: Iceland's Ministry of Environment, Energy and Climate *Working Group on Carbon Markets*

From: Wenger Law  
Cathrine Wenger, Managing Partner

Date: 10. May 2024

## Carbon Markets in Switzerland

### Executive Summary

- A revised CO<sub>2</sub> Act has been adopted by the Swiss Parliament spring 2024 for the period 2025-2030. It took into account the outcomes from a referendum and introduces greater flexibilities in using article 6.2 units. The revised CO<sub>2</sub> Act will be subject to a public referendum in July 2024.
- Switzerland is not part of the EU ETS, but has its own Swiss ETS that is linked to the EU ETS since 2020.
- A domestic compensation scheme for importers of petrol and diesel allows these companies to utilize Paris Agreement's article 6.2 and purchase emission reductions abroad to comply with its emission reduction requirements. Under the scheme, the flexibility for using article 6.2 is one-fourth (25%) of total emissions. This is likely to increase to one-third (33%) if the CO<sub>2</sub> Act revision is approved in Parliament.
- The article 6.2 units purchased in compliance with the fuel compensation scheme is utilised by the Swiss government for its NDC fulfilment.
- A CO<sub>2</sub> levy is imposed on those companies that are not part of the Swiss ETS. However, the revised CO<sub>2</sub> Act proposes that no CO<sub>2</sub> levy is applicable if the company in question is committed to reducing its carbon emissions and have communicated specific reduction objectives to the Swiss government. This exception has previously been applied only to companies in specific sectors.
- Switzerland's NDC includes the use of article 6.2 units (also known as ITMOs), but is silent on how large share of international purchases (as opposed to domestic emission reductions) will be used for achieving its NDC.
- Switzerland has blacklisted certain article 6.2 project activities, including land use and forestry activities. This is not the case for domestic projects, where forestry activities are allowed.
- Switzerland is interested in developing regulatory frameworks for implementing direct air capture with carbon storage (DACCs) partly or exclusively directly at geologically suitable locations abroad. Hereunder to arrange for direct air capture technologies and storage of GHG emissions at the territory of the host country, which then will be counted (wholly or partly) towards Switzerland's national and international GHG emission reduction targets (ie its NDC).
- For voluntary purchases of article 6.2 units, the purchaser can decide whether or not to surrender it to the Swiss government. If not surrendered, the host country will have done a corresponding adjustment, but not the Swiss government. As such, the voluntary emission reduction that is not surrendered will be contributing to closing the emission gap.

## Disclaimer

This paper has been written mainly informed by desk top research and by one interview with a Swiss national expert. The interviewee has not reviewed the paper, but merely provided information in an interview that has been used as a source to inform the paper. As such, only the footnotes referring to the interview reflect the interviewees point of view. It is also worth noting that the cut-off date for research was 11 March 2024, which means that the revised CO2 Act that was adopted by the Swiss Parliament after this date is not reflected in the paper. The revised CO2 Act is subject to a public referendum, with a deadline of 4 July 2024.

## PART 1: The role of carbon markets in Switzerland

### *1. The role of carbon markets in Switzerland*

Switzerland has used carbon markets for a very long time and will continue to do at least until 2030. The next revision of the CO2 Act for the period from 2031 will determine a use of carbon markets for the next NDC period.<sup>1</sup> As a country that is outside of the EU, it has developed its own national carbon markets that are working independent of the EU's markets.

For example, Switzerland is not part of the EU ETS, but has its own Emission Trading System that is linked to the EU ETS since 2020.<sup>2</sup> Participants in the Swiss ETS have, since the Linking Agreement entered into force, been able to benefit from emissions trading in the EU ETS allowing for greater flexibility for meeting their CO2 targets.<sup>3</sup> Since 2020, the Swiss government also included domestic flights and international flights between EU, UK and EEC States in its ETS.<sup>4</sup> It is worth noting that the two ETS systems simply recognize emission allowances from each other, and Switzerland has therefore not had to adopt any EU regulation on the EU ETS.<sup>5</sup>

In addition, Switzerland has its own domestic compensation mechanism for importers of petrol and diesel, which allows these companies to utilize Paris Agreement's article 6.2 and

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<sup>1</sup> Interview with Swiss national expert

<sup>2</sup> For the Agreement between the EU and Switzerland on the linking of the Swiss ETS and the EU ETS, please see: "Agreement between the European Union and the Swiss Confederation on the linking of their greenhouse gas emissions trading systems" (7 December 2017). Available at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22017A1207\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22017A1207(01))

<sup>3</sup> Federal Office for the Environment (FOEN), "Linking the Swiss and EU emissions trading systems" (undated). <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/ets/linking-swiss-eu.html>

<sup>4</sup> Ibid.

<sup>5</sup> Federal Department of the Environment, Transport, Energy and Communications (9 December 2019), "Linking of emissions trading schemes: Agreement ratified by Switzerland and EU". Available at <https://www.bafu.admin.ch/bafu/en/home/documentation/news-releases/anzeige-nsb-unter-medienmitteilungen.msg-id-77446.html>

purchase emission reductions abroad.<sup>6</sup> The compensation mechanism currently allows for one-fourth (25%) to be purchased abroad. However, in the government proposal for a revision of the CO2 Act, the share is larger (33%). The article 6.2 units purchased by the private sector to comply with their requirements under the compensation mechanism are authorized by the Swiss government and used for their fulfilment of its Nationally Determined Contribution (NDC).

Further, Switzerland is not part of the EU Effort Sharing Regulation (ESR) or the EU LULUCF Regulation.

Instead, Switzerland has its own domestic ‘technical measures’ for GHG emission reductions in buildings, passenger cars (and other vehicles) and accounting rules for timber used in construction.<sup>7</sup>

There is also carbon tax (CO2 levy) on those companies that are not part of the Swiss ETS. The CO2 levy was introduced in 2008 and is still a key instrument for achieving statutory CO2 emission targets.<sup>8</sup> It applies to heating oil and natural gas, making fossil fuels more expensive to incentivize a move towards more carbon-neutral or low carbon energy sources.<sup>9</sup> Anyone who purchases fossil thermal fuel automatically pays the CO2 levy, and those exempted can request a refund from the Federal Customs Administration.<sup>10</sup> Companies in individual industries have had the option of avoiding the CO2 levy if they entered into an obligation to reduce their GHG in return. The proposed CO2 Act suggested expanding this exemption to include all companies. In other words, that no CO2 levy is applicable if the company in question is committed to reducing its carbon emissions, and exempt companies are required to formulate specific reduction objectives with the Government.<sup>11</sup>

It is also worth noting that Switzerland has a system of direct democracy, which means that proposals and bills for new legislation (including on climate) will need to be decided in a nationwide referendum if the opposing party(ies) collect sufficient number of signatures refuting the proposed legislation. In June 2021, the Swiss electorate rejected a fraught Parliamentary compromise for a revision of the CO2 Act, delaying the Parliamentary process, which is still ongoing.

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<sup>6</sup> More on this compensation mechanism in part 2, para 2, below.

<sup>7</sup> CO2 Act, articles 9 to 14, see: Swiss Government, “Federal Act on the Reduction of CO2 Emissions” (1 January 2022). Available at <https://www.fedlex.admin.ch/eli/cc/2012/855/en>

<sup>8</sup> CO2 Act, chapter 5 on the CO2 levy. See also Federal Office for the Environment (FOEN), “Co2 levy” (1 February 2021). Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/co2-levy.html>

<sup>9</sup> Ibid. From 2022 it will be set at CHF 120 per tonne of CO2. The CO2 levy is indicated on invoices for purchases of thermal fuels.

<sup>10</sup> Ibid.

<sup>11</sup> More on the CO2 Act below in part 2, para 1.

In short, the new and revised proposal for a revised CO2 Act takes into account the outcomes from the referendum, and pulls back on measures for carbon taxation, introduces greater flexibilities in using article 6.2 units and introduces financial incentives for energy efficiency and emission reductions.

## **2. Key regulations**

### **a) The Climate and Innovation Act**

The Climate and Innovation Act was passed by the Parliament in September 2022 and approved by the Swiss electorate in June 2023.<sup>12</sup> The law sets out the Swiss national net-zero target by 2050.<sup>13</sup> It also stipulates that post-2050, net-negative GHG emission balance must be achieved.

The Climate and Innovation Act introduces measures to reduce energy consumption, and provides financial assistance for replacing oil, gas or electric heating, and for climate-friendly technologies. It does not aim to ban fossil fuels, as was the proposal in the popular Glacier Initiative.<sup>14</sup> The Climate and Innovation Act sets out interim targets for emission reductions for scope 1 and 2 emissions:<sup>15</sup>

- (i) On average over the period 2031-2040: 64%
- (ii) By 2040: 75%
- (iii) On average over the period 2041-2050: 89%

The Climate and Innovation Act will be implemented through the proposed CO2 Act (2024-2030) and future revisions of the CO2 Act (from 2030 and onwards).<sup>16</sup>

All companies are obliged under the Climate and Innovation Act to be net-zero by 2050. Today's voluntary engagements of companies will hence be replaced by compliance engagements. Where carbon units from outside of Switzerland will be used they will likely

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<sup>12</sup> Swiss government, "Climate and Innovation Act" (18 June 2023). Available at <https://www.admin.ch/gov/en/start/documentation/votes/20230618/climate-and-innovation-act.html>

<sup>13</sup> Ibid.

<sup>14</sup> Swiss government, "Presentation: Long-term climate strategy and negative emission technologies" (21 March 2023). Available to download from: <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/emission-reduction/reduction-targets/2050-target/climate-strategy-2050.html>

<sup>15</sup> Please see here for an English unofficial summary of the Climate and Innovation Act (2022): [https://climate-laws.org/document/federal-act-on-climate-protection-goals-innovation-and-strengthening-energy-security\\_d8b9](https://climate-laws.org/document/federal-act-on-climate-protection-goals-innovation-and-strengthening-energy-security_d8b9); for the German language version of the Act, please see: Bundesgesetz über die Ziele im Klimaschutz, die Innovation und die Stärkung der Energiesicherheit (30 September 2022). Available at <https://www.fedlex.admin.ch/eli/fga/2022/2403/de>

<sup>16</sup> English unofficial summary of the Climate and Innovation Act, op. cit., n. 15.

need to be authorized article 6 units.<sup>17</sup> It is not yet determined, however, how this will be incorporated into more specific national legislation.<sup>18</sup>

## **b) The Federal Act on the Reduction of CO<sub>2</sub> Emissions (the CO<sub>2</sub> Act)**

The CO<sub>2</sub> Act sets out the specific requirements for emission reductions under the Swiss ETS, the compensation mechanism for fossil fuel importers and the CO<sub>2</sub> levy on thermal fuels. As such, it is the key instrument for all carbon emission reduction policies (nationally and internationally) and, as we shall see below, often the subject of intense public debate.<sup>19</sup>

The Swiss government has also set out an obligation for supervisory authorities to **report on climate risks**, in particular the effect of more frequent storms and drought periods, and the financial risks arising as a consequence.<sup>20</sup>

## **c) The Swiss NDC**

Switzerland communicated its updated NDC on 19 February 2020, and its latest updated NDC on 17 December 2021.<sup>21</sup> The national measures to achieve the commitments in the NDC were subject to Parliamentary deliberations.<sup>22</sup> The view is to agree on measures in accordance with the NDC objective.

The Swiss NDC states that ‘Switzerland is committed to follow recommendations of science in order to limit warming to 1.5 degrees Celsius. In view of its climate neutrality target by 2050, Switzerland’s NDC is to reduce its greenhouse gas emissions by at least 50 percent by 2030 compared with 1990 levels, corresponding to an average reduction of greenhouse gas emissions by at least 35 percent over the period 2021–2030. By 2025, a reduction of greenhouse gases by at least 35 percent compared with 1990 levels is anticipated. Internationally transferred mitigation outcomes (ITMOs) from cooperation under Article 6 of the Paris Agreement will partly be used.’<sup>23</sup>

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<sup>17</sup> Interview with Swiss national expert

<sup>18</sup> Ibid.

<sup>19</sup> Federal Act on the Reduction of CO<sub>2</sub> Emissions (CO<sub>2</sub> Act) 641.71. (1 January 2022). Available at <https://www.fedlex.admin.ch/eli/cc/2012/855/en>

<sup>20</sup> CO<sub>2</sub> Act proposal, see: Bundesamt für Umwelt, „Klimapolitik: Bundesrat verabschiedet Botschaft zum revidierten CO<sub>2</sub>-Gesetz“ (16 September 2022). Available at <https://www.admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-90389.html>

<sup>21</sup> Switzerland’s NDC, “Switzerland’s information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 of its updated and enhanced nationally determined contribution (NDC) under the Paris Agreement (2021-2030)”. Available at [https://unfccc.int/sites/default/files/NDC/2022-06/Swiss%20NDC%202021-2030%20incl%20ICTU\\_December%202021.pdf](https://unfccc.int/sites/default/files/NDC/2022-06/Swiss%20NDC%202021-2030%20incl%20ICTU_December%202021.pdf)

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

In addition, Switzerland has communicated its long-term target to the Secretariat 28 February 2021, which is: ‘Switzerland aims to reduce its greenhouse gas emissions to net zero by 2050.’

## **PART 2: Trading of carbon credits by Switzerland and policy on using carbon markets under Articles 6.2 and 6.4, for Switzerland**

### ***1. The CO2 Act and the revision proposal***

One of the key instruments in Switzerland for carbon emission reduction, including the use of markets, is the Federal Act on the Reduction of CO2 Emissions, hereafter referred to as the ‘CO2 Act’.<sup>24</sup> The CO2 Act entered into force 1 January 2013, and has been revised four times since then.

The CO2 Act is intended to reduce GHG emissions, and in particular CO2 emissions, that are attributable to the use of fossil fuels. It affects three main sources of CO2: transport, construction and industry. One of its key measures is the introduction of a carbon tax (the CO2 levy). Another increasingly important measure is the introduction of a compensation scheme for importers of fossil fuels. Finally, the CO2 Act also establishes the Swiss Emissions Trading Scheme (ETS). These three pillars are the cornerstones of carbon emission policies in Switzerland.

The NDC of Switzerland is more ambitious than the current policies for domestic emission reductions under the CO2 Act. The NDC of Switzerland foresees a partly use of Article 6 ITMOs and the CO2 Act obliges motor fuels importers to partly compensate for associated emissions while allowing a large share to be achieved through ITMOs.<sup>25</sup>

As part of the system under the CO2 Act it is foreseen that the government will regularly revise the legislation in order to achieve its emission reduction targets. Thus the Swiss government’s planned overhaul of the CO2 Act to strengthen its climate policy with more stringent requirements is part of this systematic revision.<sup>26</sup> The opponents of the revised CO2 Act called for a referendum, citing the additional CO2 taxes to be costly, inefficient and unfair for those without a choice to use a car, but also that Swiss reductions will not make a critical difference.<sup>27</sup> In June 2021, the Swiss electorate voted in a referendum on the revised

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<sup>24</sup> The CO2 Act is available at: Swiss Government, “Federal Act on the Reduction of CO2 Emissions” (1 January 2022). Available at <https://www.fedlex.admin.ch/eli/cc/2012/855/en>

<sup>25</sup> Interview with Swiss national expert

<sup>26</sup> Swiss government, “CO2 Act” (13 June 2021). Available at <https://www.admin.ch/gov/en/start/documentation/votes/20210613/co2-act.html>

<sup>27</sup> Soguel, D., “Swiss CO2 law defeated at the ballot bow” (13 June 2021). Available at <https://www.swissinfo.ch/eng/business/switzerland-votes-on-controversial-co2-law/46695016>

CO2 Act.<sup>28</sup> With a slight majority, the revised CO2 Act was rejected by the Swiss population.<sup>29</sup> In December 2021, the Swiss Parliament approved a transitional regulation. Thus, an amendment of the CO2 Act allows for certain mitigation measures and an extension of the CO2 reduction target until 2024.<sup>30</sup> The formal discussions on concrete measures after 2024 opened shortly thereafter.

In September 2022, the Swiss government (Federal Council) proposed another bill for the revision of the CO2 Act for the time period 2025 to 2030.<sup>31</sup> The proposal is still under Parliamentary debate.

This CO2 Act proposal took the results from the referendum into account and does not impose new CO2 levies/taxes but instead relies on incentives supplemented by targeted subsidies and investments.<sup>32</sup> Financial support is for incentivizing emission reductions and energy efficiency in the building sector as well as infrastructure for electrifying the transportation sector. It also focuses on strengthening Switzerland's energy supply and reducing reliance on oil and gas.<sup>33</sup>

The proposal continues the offset obligation for importers of petrol and diesel ('the compensation scheme').<sup>34</sup> And these importers are still eligible to offset their emissions to a large share with climate projects abroad. These carbon emission purchases must be done in accordance with the bilateral agreements Switzerland has entered into (for cooperation under article 6.2 of the Paris Agreement).<sup>35</sup> This is an increase from the current level established in the CO2 Act, where the reduction allowed to be achieved abroad is 25% (one-fourth).

Further, the CO2 Act proposal sets out that companies committed to reducing GHG emissions will be exempt from the CO2 levy.<sup>36</sup> This levy has previously been applicable to all companies with exceptions for specific industries (usually companies with high emissions). Companies with very high CO2 emissions have not been covered by the CO2 levy as they are part of the Swiss ETS.<sup>37</sup>

## **2. Trade in domestic emission reductions under the compensation scheme**

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<sup>28</sup> Swiss government, op. cit., n. 26.

<sup>29</sup> Bundesgesetz vom 25.09.2020 über die Verminderung von Treibhausgasemissionen (CO2-Gesetz), Volksabstimmung, Vorlage Nr. 644, Resultate in den Kantonen. Available at <https://www.bk.admin.ch/ch/d/pore/va/20210613/can644.html>

<sup>30</sup> Switzerland's NDC, op. cit., n. 21.

<sup>31</sup> Bundesamt für Umwelt, op. cit., n. 20.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

<sup>35</sup> More on this below in para 8

<sup>36</sup> Bundesamt für Umwelt, op. cit., n. 20.

<sup>37</sup> Ibid.



The Swiss Federal Office for the Environment (FOEN) can issue tradeable attestations for domestic projects under the compensation scheme for fuel importers.<sup>38</sup> The projects must have been registered in advance, and the emission reductions achieved must be monitored and documented in an annual report.<sup>39</sup> Attestations are only issued for additional measures that exceed the legal requirements and provided the reduction has not already been claimed.<sup>40</sup>

### **3. Trade in international emission reductions abroad (article 6.2) under the compensation scheme**

The CO2 Act establishes an offset obligation for sellers of motor fuels under what is often referred to as ‘the motor fuel compensation scheme’. Under this scheme, private sector participants are required to offset their emissions with national or international emission reduction projects. The international emission reduction projects allowed are only from authorized Paris Agreement article 6.2 projects.<sup>41</sup> As noted above, the flexibility to use international emission reductions (hereunder article 6.2 ITMOs) is likely to increase with the government proposal for the revised CO2 Act, from 25% to 33% of their offset requirements.

It is worth noting that for 2013 to 2020, the emission reductions purchased by companies in Switzerland for compliance with their offset requirements under national law were only allowed from domestic projects, with a limited exception for companies that were exempt from the CO2 levy (i.e high emitting companies) to purchase emission reductions under the Kyoto Protocol.<sup>42</sup>

Companies that wish to purchase emission reduction certificates abroad for offsetting their compliance targets must do so in compliance with the CO2 Act and the CO2 Ordinance. The CO2 Act and the CO2 Ordinance entered into force simultaneously, on 1<sup>st</sup> January 2013.

### **4. Quality requirements for international emission reductions (article 6.2)**

#### **a) Two key requirements - additionality and sustainable development**

The CO2 Act and Ordinance include quality requirements for emission reductions achieved abroad.<sup>43</sup> Two are discussed here. The first is that reductions may only be counted if they would not have been achieved without support from the Swiss purchaser. This requirement

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<sup>38</sup> Federal Office for the Environment (FOEN), “CO2 compensation” (8 December 2023). Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/compensation.html>

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Interview with Swiss national expert

<sup>42</sup> Federal Office for the Environment (FOEN), “2020 target (for the years 2013 to 2020)” (11 April 2022). Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/emission-reduction/reduction-targets/2020-target.html>

<sup>43</sup> Article 6 of the CO2 Act, op. cit. n. 7.

relates to the additionality of the projects, hereunder that the emission reductions would not have been economically feasible without the prospect of selling certificates and/or without direct or indirect financing by the companies purchasing these certificates in accordance with the CO2 Act.<sup>44</sup> Demonstrating additionality is based on determining the reference scenario (also known as a baseline) and showing that the emission reductions are additional to the reference development. In other words, the project or programme must demonstrate that it provides for measures that lead to additional emission reductions measured against a baseline.<sup>45</sup>

To determine the economic feasibility of a project, an economic feasibility analysis must be undertaken. The FOEN has developed comprehensive guidelines to assist with this analysis.<sup>46</sup> FOEN's guidelines are based on the UNFCCC's tool for demonstration and assessment of additionality used for the Clean Development Mechanism (CDM).<sup>47</sup> In short, the economic feasibility analysis consists of two steps with several additional tools for analyzing the cost, investment and benchmark. The first step compares the project scenario with the reference scenario, or demonstrates by comparison of the benchmarks, that the project's return on investment is insufficient without the revenues from the certificates.<sup>48</sup> However, all other revenues, such as financial assistance under article 9 of the Paris Agreement, development assistance or public funding from any country, need to be taken into account.<sup>49</sup> Then, in the second step, the project scenario without the revenues from the sale of certificates is compared to the project scenario with the revenues from the sale of certificates. The economic feasibility analysis must be based on appropriate and realistic assumptions, with all technical and economic parameters listed and documented in a way that they can be validated.<sup>50</sup> To assist with the two-step approach, the guidance set out a simple cost analysis, an investment comparison analysis, and a benchmark analysis.

Further, to satisfy compliance with the additionality requirement, the guidelines set out other analysis that must be carried out, including a sensitivity analysis, a common practice analysis and a barrier analysis.

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<sup>44</sup> Swiss Government, "CO2 Ordinance" (30 November 2012), article 5.1(b)(1). Available at <https://www.fedlex.admin.ch/eli/cc/2012/856/en>

<sup>45</sup> Ibid., article 5.1(b)(3).

For an in-depth description of the requirements to assess additionality, please see Federal Office for the Environment (FOEN), "Offsetting CO2 emissions: projects and programmes" (January 2024), pp. 41-46. Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/publications-studies/publications/offsetting-co2-emissions-projects-and-programmes.html>

<sup>46</sup> Federal Office of the Environment (FOEN) op cit n.45, page 42

<sup>47</sup> For version 7.0 of the UNFCCC's methodological tool, please see <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

<sup>48</sup> Federal Office of the Environment (FOEN) op cit n.45, page 42

<sup>49</sup> Ibid

<sup>50</sup> Ibid

The second quality requirement is that reductions in developing countries must contribute to sustainable development in those countries and must not have negative social or ecological impacts.<sup>51</sup> The sustainable development contribution must be confirmed by the host State.<sup>52</sup> If the emissions do not meet these requirements, they are not considered emission reductions.<sup>53</sup>

## ***b) Double counting and double claiming***

In close connection with the additionality requirement is the requirement that double counting of emission reductions is not allowed. Article 10.7 of the CO2 Ordinance ensures that issuance of international attestations (i.e., issuance of article 6.2 ITMOs) can only take place if the applicant proves that ‘the responsible public bodies’ have not otherwise claimed the emissions reductions. In other words, the reduction cannot already have been claimed by another country. Attestations are currently only given for activities authorized under bilateral agreements with Switzerland. To issue international attestations, FOEN will check the monitoring report (developed by the applicant), the corresponding verification report (developed by the independent validator and verifier) and also check the recognition of the carry-over of emission reductions or increase in the carbon sink effect by the partner state (the recognition is issued by the host/partner state). Thus, the onus is on the applicant to provide FOEN with the relevant information and data. Switzerland’s bilateral agreements establish communication between the partner states and ensure no double counting and claiming.

Further, double counting occurs where the ‘added ecological value’ of the emission reductions under a project or programme has already been offset, for example by receiving additional payment, counting them towards emission reduction targets or voluntary or legally binding offset targets.<sup>54</sup> In these circumstances, no attestations are issued.<sup>55</sup>

If, however, a project or programme receives non-refundable payments from international or national public donors alongside the expected receipts from attestations, the emission reductions (i.e. the ‘effect’ brought about by the project or programme) must be apportioned to avoid double counting’.<sup>56</sup> In other words, if double counting has taken place and it is not possible to refund the payment received, the emission reductions from the article 6.2 attestation/issuance of ITMOs will have to be reduced.

## ***c) Blacklisted activities***

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<sup>51</sup> Article 6 of the CO2 Act, op. cit. n. 7.

<sup>52</sup> Swiss Government, op. cit. n. 44.

<sup>53</sup> Article 6 of the CO2 Act, op. cit. n. 7.

<sup>54</sup> Federal Office for the Environment (FOEN), op. cit. n. 45, p. 16.

<sup>55</sup> Swiss Government, op. cit. n. 44, article 10.8

<sup>56</sup> Federal Office for the Environment (FOEN), op. cit. n. 45, p. 52

The CO2 Ordinance sets out further quality requirements. Importantly, there are two lists of activities for emission reductions that are excluded from being eligible for attestation.<sup>57</sup> One list is for activities in Switzerland, and the other list is for activities outside of Switzerland. The “black list” for emission reductions or increases in carbon sinks outside of Switzerland includes activities that: avoid fossil fuel extraction; investments in extraction of fossil energy sources or use of fossil fuel (unless it leads to energy efficiency); activities for emission reductions achieved through using nuclear energy; activities in the waste sector without material energy use or waste reduction; land-use and forestry projects (hereunder the reduction of deforestation, degradation of forests and biological CO2 sequestration projects ); emission reductions from geological carbon capture and sequestration ; projects using hydro-power plants with an installed production capacity of over 20 MW; and projects with large industrial plants that are not aligned with state of the art.<sup>58</sup> In addition, the black list includes activities that are in conflict with Switzerland’s environmental and human rights obligations or that have considerable negative social or ecological effects.<sup>59</sup> It is also worth noting that activities that contravene Swiss foreign and development policy are also blacklisted.

Thus, in general, forestry and land-use, large scale hydro-power and large industrial plant projects are not allowed when offsetting its obligations through emission reductions abroad. In other words, these activities are not allowed for article 6.2 projects under the Swiss compliance mechanism. However, removals with mineralization as storage method are eligible.

Another requirement-list is applicable to the domestic emission reduction projects allowed under the compensation mechanism.<sup>60</sup> It follows that domestic forestry projects are allowed for domestic emission reductions under the scheme. The reasoning is that it is easier to ensure permanence within your own jurisdiction.<sup>61</sup>

#### ***d) Baselines/reference scenario***

As noted above, additionality of the emission reductions from the project is measured against a reference scenario. A reference scenario is defined as ‘the hypothetical progression of greenhouse gas emissions if the measures in the project or programme for reducing emissions or increasing the carbon sink effect had not been taken’.<sup>62</sup> The reference scenario is determined by the project/programme applicant at the time of the project/programme authorization application. To apply for attestation from FOEN, validation of the reference scenario must be included. The validation of the reference scenario must

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<sup>57</sup> Swiss Government, op. cit. n. 44., articles 5 para 1 (a) and 146/ letter b (pp. 83-85).

<sup>58</sup> Ibid., Annex 2a.

<sup>59</sup> Ibid., Annex 2a, para 1, letters j and k.

<sup>60</sup> Swiss national expert

<sup>61</sup> Ibid.

<sup>62</sup> Swiss Government, op. cit. n. 44, article 6.2 (d)

be by a FOEN-approved validator. The Clean Development Mechanism (CDM) or Gold Standard can be used as a basis for validation. The reference scenario must also reflect the legislation of the host State.<sup>63</sup> Finally, FOEN will assess the entire submitted activity, including compliance of the reference scenario, in accordance with the CO<sub>2</sub> Ordinance before authorization can take place.

## **e) MRV**

The aim of monitoring is to demonstrate that the expected emission reductions have indeed been achieved, to determine the quantity of the reductions and to establish that there has been no double counting.

In order to apply for attestation of the emission reductions, it is necessary to have a validated monitoring plan in which the start date of the monitoring is defined and the methods for accounting for emission reductions or the increase in the carbon sink effect are described.<sup>64</sup> The data shall be collected in accordance with the monitoring plan and recorded in a monitoring report.<sup>65</sup> The monitoring report shall be verified by a FOEN-approved verifier. The verification may not be done by the same entity that validated the project or programme on the previous occasion.<sup>66</sup>

## **f) Authorisation**

The Federal office for the environment (FOEN) is the entity of the Swiss government that is the regulator for emission reduction projects in the Swiss compliance market.<sup>67</sup> It is running the compensation office (CO) together with the federal office of energy (SFOE). Mitigation activities under article 6.2 have to be authorized by FOEN and the host country of the emission reduction activity. FOEN will not issue any international attestation without the consent of the partner country.<sup>68</sup>

## **g) Co-benefits**

Co-benefits, referred to as ‘added ecological value’, of the emission reductions are included in the issuance of attestation (i.e. in the issuance of article 6.2 ITMOs).<sup>69</sup> Further, no

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<sup>63</sup> Federal Office for the Environment (FOEN), op. cit. n. 45, p. 38.

<sup>64</sup> Swiss Government, op. cit. n. 44, article 6.2 (i)

<sup>65</sup> Ibid., article 9.1.

<sup>66</sup> Ibid., article 9.2.

<sup>67</sup> Federal Office for the Environment (FOEN), “Process description for authorization and Monitoring, Reporting and Verification of mitigation activities under Art. 6 of the Paris Agreement” (January 2023). Available at: <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/compensation/abroad.html>

<sup>68</sup> Ibid.

<sup>69</sup> Swiss Government, op. cit. n. 44., article 10.8.

attestations are issued for emission reductions for which the added ecological value has already been offset. This is to avoid double counting.

## ***h) The Emission Trading Registry***

All trades in the Swiss ETS and the fossil fuel compliance mechanism must be recorded in the Swiss Emissions Trading Registry (EHR).<sup>70</sup> The EHR is an online accounting system that ensures the issuance, holding, transfer, acquisition, cancellation and surrender of units are accurately recorded.<sup>71</sup> The Swiss authorities (FOEN) use the EHR to find out whether companies have complied with their statutory obligations and to ensure that the national reduction target is being met. Those companies that are not part of the EU ETS but still have offset obligations under the CO<sub>2</sub> Act, hereunder the Swiss motor fuel importers, are organized through the Klik Foundation. The Klik Foundation arranges the purchase of domestic and international emission reductions for these companies, estimated to be around 10% of Swiss emissions.<sup>72</sup> It is mandated under the CO<sub>2</sub> Act to undertake these purchases. The Klik Foundation then transfers the certificates to FOEN, which subsequently enters them into the EHR.

Switzerland also uses the EHR for tracking article 6.2 ITMOs, also known as ‘international attestations’, derived from partner countries. In Switzerland’s Initial Report information on the EHR is further clarified: EHR will be used to track the holder of the units, transfers between accounts, use towards NDC (i.e surrendering under the Swiss CO<sub>2</sub> Act and Ordinance), as well as cancellations. Further, the EHR will serve as a central database with access to the underlying information for each international attestation (i.e each article 6.2 ITMOs) such as the authorizations given by the partner countries/host countries and Switzerland and its cooperative approach.

The domestic reductions for attestation under the Emissions Trading Registry are not internationally recognized and cannot be traded outside of Switzerland.<sup>73</sup>

## ***5. The NDC and use of article 6.2 and CCS***

The Swiss NDC highlights that Switzerland’s emission reductions by 2030 will mainly be achieved domestically and partly by use of ITMOs from article 6.2 cooperation.<sup>74</sup> The reason Switzerland is singling out article 6.2 (as opposed to including 6.4 cooperation) is simply

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<sup>70</sup> Federal Office for the Environment (FOEN), “The Swiss Emissions Trading Registry (EHR)” (12 January 2024). Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/ets/registry.html>

<sup>71</sup> Ibid.

<sup>72</sup> Foundation for Climate Protection and Carbon Offset (Klik): <https://www.klik.ch/en>

<sup>73</sup> Federal Office for the Environment (FOEN), “Compensation projects in Switzerland” (28 February 2024). Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/compensation/in-switzerland.html>

<sup>74</sup> Switzerland’s NDC, op. cit., n. 21., p. 13.

because article 6.4 is not operationalized yet.<sup>75</sup> As such, it is likely that once article 6.4 is up and running, Switzerland will include the option to utilize this mechanism as well.<sup>76</sup>

In using the article 6.2 cooperation, Switzerland informed that it would implement the guidance adopted at COP26 in Glasgow as well as the San José principles for high ambition and integrity in international carbon markets.<sup>77</sup> In particular, it stated that it would “apply robust rules that avoid any form of double counting, ensure environmental integrity and promote sustainable development, including the protection of human rights, and not to use pre-2020 units towards the achievement of its NDC.”<sup>78</sup>

The Swiss NDC clarifies that the 2050 net-zero target ‘lays the foundations for Switzerland’s 2050 climate strategy’.<sup>79</sup> And to reach net zero emissions, ‘technologies that permanently remove greenhouse gases from the atmosphere and store them are to be used in the future to some extent.’<sup>80</sup> Thus, Switzerland reveals the need to rely on greenhouse gas removals technologies for achieving the 2050 target. In fact, Switzerland will need to balance out around 10% of the remaining emissions in 2050 with negative emission technologies.<sup>81</sup> This is around 11.8 million tonnes CO<sub>2</sub>e that will have to be stored annually.<sup>82</sup>

Finally, it is worth noting that there is no reference to cooperation with the EU in achieving the NDC, as is the case in the EEC country Norway.

## 6. Long-term strategy on NET and CCS

The Swiss government (Federal Council) addressed negative emission technologies (NET), including the possible role of carbon capture and storage (CCS), in Switzerland’s long-term climate policy for the first time in detail in autumn 2020 and outlined possible courses for action.<sup>83</sup> In January 2021, the government (Federal Council) adopted the Long-Term Climate Strategy, which clarifies the needs that are likely to arise for NET and CCS. It clarifies that NET/CCS should not be a substitute for emission reductions in sectors where emissions-free alternatives are already available. It points at NET/CCS as a possible solution in Switzerland for non-energy-related greenhouse gas emissions in agriculture, in the waste

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<sup>75</sup> Interview with Swiss expert

<sup>76</sup> Ibid.

<sup>77</sup> The San José principles was formed in 2019 by a group of 36 countries that worked together to achieve an ambitious outcome on article 6 at COP26 in Glasgow. For more information, please see: Ministerio Ambiente y Energía, Costa Rica: <https://cambioclimatico.go.cr/sanjoseprinciples/about-the-san-jose-principles/>

<sup>78</sup> Switzerland’s NDC, op. cit., n. 21., p. 12.

<sup>79</sup> Ibid., p. 1, final paragraph.

<sup>80</sup> Ibid., p. 16.

<sup>81</sup> Swiss government, op. cit., n. 14.

<sup>82</sup> Ibid., p. 49.

<sup>83</sup> Ibid.



sector, from cement production and from the use of solvents and refrigerants should be reduced as far as possible.<sup>84</sup>

The long-term strategy highlights the different options for negative emission approaches in Switzerland, and notes the limited role (re)forestation is likely to play due to the limited space available, and that bio-CCS (BECCS) and machine-based CO<sub>2</sub> air filtration and storage (DACCS) are limited due to Switzerland's geological storage potential.<sup>85</sup> As such, Switzerland would like to utilize its limited storage capacity nationally for domestic point sources, such as emissions from cement factories, incinerators or other large plants.<sup>86</sup> Thus, CCS and BECCS are likely to be used at facilities *in* Switzerland. For the remaining emissions, Switzerland is likely to depend on access to storage sites abroad for depositing CO<sub>2</sub> such as geological storage, or other permanent solutions.<sup>87</sup>

CCS and bio-CCS activities are not covered by the blacklist of activities *in* Switzerland under the CO<sub>2</sub> Ordinance. However, *reduction* activities, including “biological carbon sequestration” or “geological carbon capture and sequestration” activities, *outside* of Switzerland are blacklisted and as such will not be counted towards meeting the offset obligation, and subsequently the Swiss NDC. Furthermore, biological carbon sequestration projects will not be eligible for international attestations (i.e the issuance of article 6 ITMOs)). However, emission *removals* (as opposed to reductions) are not blacklisted.

Capture and storage activities abroad foresee a focus on removals. As noted above, permanent *removal* activities, including bio-CCS, are not blacklisted. As such, carbon removal activities will be counted and eligible for issuance of article 6 ITMOs. It is also worth noting that fossil or biogenic CO<sub>2</sub> *captured in* Switzerland and *stored abroad* is intended to be counted towards the Swiss NDC.

There are quite a few Swiss private sector buyers of direct air capture carbon removal (CDR) from the voluntary carbon market. These buyers are willing to pay a very high price for these CDR units. Private sector buyers and project developers of these CDR projects are calling upon the Swiss government to ensure that these CDRs can be purchased as ITMOs under the Paris Agreement, even if they are used for voluntary climate targets.<sup>88</sup> As a consequence, the Swiss government is seeking to establish Article 6 partnerships with partner countries and is also considering whether to become a host of article 6 credits.<sup>89</sup>

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<sup>84</sup> Ibid., p. 47.

<sup>85</sup> Ibid., p. 48. However, please note that the storage potential is largely untested, and there is ongoing national pilot projects to ascertain this potential further, such as the Trüllikon borehole. See also: ETH Zürich, “What should be done with all the carbon dioxide?” (6 December 2023). Available at <https://ethz.ch/en/news-and-events/eth-news/news/2023/12/what-should-be-done-with-all-the-co2.html>

<sup>86</sup> Swiss government, op. cit., n. 14, p. 51.

<sup>87</sup> Ibid., and interview with Swiss national expert.

<sup>88</sup> Interview with Swiss national expert

<sup>89</sup> Ibid.

As Switzerland is dependent on capacity abroad for depositing CO<sub>2</sub>, it discusses several options for how this can be undertaken. One option is for the transfer of CO<sub>2</sub> in the North Sea, where geological storage projects are already underway. However, it notes the issues with transportation, which in itself could generate additional emissions.<sup>90</sup> It also notes the option of utilizing transportation via rail, or through a Europe-wide CO<sub>2</sub> pipeline transport network.<sup>91</sup> Finally, it notes the option of implementing DACCS partly or exclusively directly at geologically suitable locations abroad.<sup>92</sup> In other words, to arrange for direct air capture technologies with the host country, which then will be counted (wholly or partly) towards Switzerland's national and international GHG emission reduction targets.

Switzerland is currently in what it describe as 'a pioneering phase' running until 2030, in which the legal framework is being developed.<sup>93</sup> The subsequent 'targeted scaling phase' will then run from 2030 till 2050.<sup>94</sup> As part of this phase, Switzerland has entered into two separate memoranda of understandings (MOU) with Sweden and the Netherlands, as well as a joint declaration of intent with Iceland.<sup>95</sup>

The MOU with Sweden was entered into at COP28 in Dubai in 2023 and clarifies that the two governments intend to cooperate in the field of carbon removal technologies in the context of implementing article 6, and to pilot international transfer and reporting of industrial carbon removals at small scale.<sup>96</sup> They also intend to cooperate with private stakeholders and to enhance the understanding of the necessary frameworks at international and national levels. Part of this understanding is how industrial removal technologies can contribute to implement the NDCs or Other International Mitigation Purposes, including national mitigation goals or voluntary climate objectives.<sup>97</sup>

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<sup>90</sup> Please note that the strategy does not go into detail on the issue of transportation, and does not seem to reflect on the findings from one of the Swiss government-supported test projects for CO<sub>2</sub> storage in geological reservoirs in Iceland (DemoUpCARMA), which finds that 'although additional emissions are generated during transport, the CO<sub>2</sub> balance is still positive in the end.' See ETH Zürich, "DemoUpCARMA in brief". Available at [https://www.demoupcarma.ethz.ch/export/sites/demoupcarma/.galleries/documents/project\\_summary\\_DemoUpCARMA\\_EN.pdf\\_2063069299.pdf](https://www.demoupcarma.ethz.ch/export/sites/demoupcarma/.galleries/documents/project_summary_DemoUpCARMA_EN.pdf_2063069299.pdf)

<sup>91</sup> Swiss government, op. cit., n. 14, p. 51.

<sup>92</sup> Ibid.

<sup>93</sup> Federal Office for the Environment (FOEN), "CO<sub>2</sub> capture, removal and storage" (8 December 2023). Available at <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/co2-capture-removal-storage.html>

<sup>94</sup> Ibid.

<sup>95</sup> For the MOUs and declaration see: Federal Office for the Environment (FOEN), "Bilateral climate agreements" (11 December 2023). <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/climate--international-affairs/staatsvertraege-umsetzung-klimauebereinkommen-von-paris-artikel6.html>

<sup>96</sup> The MOU with Sweden available to download at: Ibid.

<sup>97</sup> Ibid.

Another example is the Swiss government funded pilot project DemoUpCARMA with industries in Iceland for storage in geological reservoirs.<sup>98</sup> The findings from the test pilot are not yet finalised, however, one of the preliminary findings were that “the costs calculated in the project amount to several hundred Swiss francs per tonne of stored CO<sub>2</sub>. However, it must be noted that this cost calculation was done for a pilot project, where the associated challenges are likely to have increased costs. Costs could be brought down in the future by economies of scale, an established regulatory framework and more experience in transport management.”<sup>99</sup> With regards to regulatory framework, the CO<sub>2</sub> transportation across several countries as a form of waste (as opposed to CO<sub>2</sub> transport related to food production industry which is labelled as chemicals) is unclear.<sup>100</sup> Going forward, therefore, it will be necessary to cooperate with other European countries to agree on clear regulations.

Specific proposals for how to develop the regulation will be considered by the Swiss government at the end of 2024.<sup>101</sup> The Swiss government is awaiting legal clarification by the EU Commission on how CO<sub>2</sub> from the non-EU-ETS installations will be governed by the EU ETS. The Swiss government’s current understanding is that the EU CCS Directive and regulations for carbon storage will apply to Swiss emissions once they have crossed the border.

## **7. The NDC on LULUCF removals**

Switzerland is not part of the EU LULUCF Regulation or the EU ESR. As such, the accounting rules for the emissions/removals from LULUCF are nationally determined. The NDC clarifies that it will be reported and accounted for on a land-based approach.<sup>102</sup> It is only the net change in emissions compared with the reference level/period that is accounted for in the land use sector.<sup>103</sup>

The NDC clarifies that managed forest land will be accounted for by comparing emissions/removals to a forest reference level (FRL).<sup>104</sup> Further, emissions and removals resulting from afforested and deforested land will be accounted for as being the total emissions and total removals for each of the years (gross net). The FRL will include living and dead biomass and harvested wood products (HWP). In calculating the FRL, Switzerland will utilize the model Massimo, the model Yasso07 and a methodology for harvested wood products (HWP).<sup>105</sup>

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<sup>98</sup> ETH Zürich, „DemoUpCARMA“ (Homepage). Available at <https://www.demoupcarma.ethz.ch/en/home/>

<sup>99</sup> ETH Zürich, op. cit., n. 90, p. 3.

<sup>100</sup> ETH Zürich, op. cit., n. 85.

<sup>101</sup> Federal Office for the Environment (FOEN), op. cit. n. 93.

<sup>102</sup> Switzerland’s NDC, op. cit., n. 21, p. 3.

<sup>103</sup> Ibid.

<sup>104</sup> Switzerland’s NDC, op. cit., n. 21, p. 10.

<sup>105</sup> Ibid.

Switzerland anticipates that the net accountable emissions/removals from managed forest land will be around zero given the same levels of forest management practices and when including the application of natural disturbance provisions where they arise.<sup>106</sup>

For non-forest land, Switzerland will account for it by comparing emissions/removals to a reference period that presents a long-term historic average, for example 1990-2020.<sup>107</sup> Its modelling for soil carbon was first introduced in 2019, and is continuously improved.<sup>108</sup> Also the methodologies for estimating land-uses and land-use change were under development in 2020 when the NDC was communicated.<sup>109</sup>

Finally, as already mentioned, Switzerland does not allow for authorized article 6.2 units from forestry projects abroad (as opposed to domestic projects).

## **8. Bilateral agreements for the use of article 6.2**

Switzerland is relying on climate projects abroad to achieve its emission reduction targets set out in its NDC, as envisaged under the Paris Agreement's article 6.2. To this end, Switzerland has entered into bilateral agreements to provide the framework and legal basis for commercial contracts between buyers and sellers of emission reductions. The CO2 Ordinance requires a bilateral agreement to be in place for authorization and/or attestation to be issued. As of March 2024, Switzerland signed bilateral agreements with Peru, Ghana, Senegal, Georgia, Vanuatu, Dominica, Thailand, Ukraine, Morocco, Malawi, Uruguay, Chile, Kenya and Tunisia, creating the necessary frameworks for cooperative approaches under Article 6.2 of the Paris Agreement.<sup>110</sup> These bilateral agreements are often referred to as 'implementing agreements', and govern the transfers of mitigation outcomes and their use towards NDC achievement or other international mitigation purposes in line with the Paris Agreement's article 6.2. Other international mitigation purposes could include voluntary climate neutrality targets by private or sub-state actors, which would not be counted towards Switzerland's emissions reductions objectives.

It is worth noting that the transactions of article 6 units (also known as ITMOs) under the bilateral agreements need to be 'authorized' by each party regardless of whether the article 6.2 units/ITMOs are used for NDC fulfilment or not (for example for voluntary climate targets by non-state actors). Authorization is a formal statement with the official recognition that the article 6.2 units/ITMOs fulfil the requirements related to monitoring, verification and examination, including requirements related to environmental integrity and sustainable development and that no double *claiming* has taken place under other national or international systems or aims. The host country (referred to as the 'transferor') is obliged to

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<sup>106</sup> Ibid., p. 11.

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid,

<sup>110</sup> Federal Office for the Environment (FOEN), op. cit. n. 95.

examine that no double claiming has taken place within 90 days from the submission of the verification and monitoring reports by the independent third-party verifier. Further, double *counting* is avoided through the requirement to apply corresponding adjustments to each international transfer of ITMOs, as set out in the bilateral agreements.

These implementing agreements also aim to ensure sustainable development (including the protection of human rights), environmental integrity and transparency (including governance) and robust accounting (including avoidance of double counting).

### ***a) Specifically on corresponding adjustments and accounting in bilateral agreements***

The bilateral Implementing Agreement with Peru sets out how the two countries will ensure that the emission reductions sold/bought are in accordance with the Paris Agreement's article 6.2. It sets out that corresponding adjustments shall be made to emissions and removals covered by the NDC; through additions and subtractions for mitigation outcomes used towards the NDC of each party.<sup>111</sup>

The Implementing Agreement with Peru was entered into prior to the adoption of the Guidance on cooperative approaches referred to in Article 6.2 of the Paris Agreement ('the COP26 Guidance'). However, the Implementing Agreement allowed for it to be amended to ensure alignment with further guidance adopted under the CMA of the Paris Agreement.<sup>112</sup> Shortly after the COP26 Guidance was adopted, Switzerland clarified that there was no need to amend the Implementing Agreement in a letter to the Peruvian authorities.<sup>113</sup> In the same letter, it also clarified which accounting method Switzerland intends to use for communication on its 2030-target. As this target is communicated as both a single-year and a multi-year target in the NDC, Switzerland was able to choose between two different accounting methods for undertaking the corresponding adjustment. However, in accordance with para 7 of the Annex to the COP26 Guidance, one accounting method must be chosen. As such, Switzerland chose to account for its 2030-target by using the trajectory method.<sup>114</sup>

The Bilateral Implementing Agreement with Chile was entered into in December 2023, and is further aligned with the COP26 Guidance. The agreement requires both countries to apply corresponding adjustments for each ITMO (ie. each article 6.2 emission reduction unit) in accordance with article 6 of the Paris Agreement.<sup>115</sup> The Bilateral Agreement also clarifies that the finance used for the acquisition of ITMOs authorized under the agreement shall not

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<sup>111</sup> Implementing Agreement with Peru, article 10. Available to download at: Federal Office for the Environment (FOEN), op. cit., n. 95.

<sup>112</sup> Implementing Agreement with Peru, preamble, *ibid.*

<sup>113</sup> The letter to the Peruvian authorities is available to download at: *Ibid.*

<sup>114</sup> *Ibid.* Also see Annex to the COP26 Guidance, para 7(a) (i) and (b). Available to download at: [https://unfccc.int/sites/default/files/resource/cma3\\_auv\\_12a\\_PA\\_6.2.pdf](https://unfccc.int/sites/default/files/resource/cma3_auv_12a_PA_6.2.pdf)

<sup>115</sup> Bilateral Agreement with Chile, article 9. Available to download at: Federal Office for the Environment (FOEN), op. cit., n. 95.

be reported and counted as ‘international climate finance’ as defined in the Paris Agreement.<sup>116</sup>

Finally, it is also worth noting that the bilateral agreements include provisions on how the partner country (i.e the country with a bilateral implementing agreement with Switzerland) and Switzerland shall define and use a registry that is publicly available and recognize the issuance, transfers and tracking of article 6.2 units/ITMOs. The registry shall include unique identifiers for all article 6.2 units/ITMOs recognized under the bilateral agreement in question. Information regarding the vintage year (ie the year in which the ITMO was created), a reference to the government authorizations and documents required for the transfer of these units. The partner country and Switzerland may define a registry jointly used for issuance, transfer and tracking of international units representing ITMOs.

Under the current bilateral agreements, issuance of international units (ITMOs) is only possible if a jointly used registry has been defined. This so far has not been done. It is envisaged to use the international registry under the PA for this purpose. As registry for tracking the ITMOs from its bilateral agreement, Switzerland currently has defined its national registry. In that national registry, attestations (national units) representing ITMOs are issued and tracked between the various account holders in that registry.

### **PART 3: Policy on voluntary carbon markets**

The requirements and encouragement in relation to carbon offsetting from statutory obligations have been described in detail above.

The bilateral agreements between Switzerland and host countries (described above in para 8) provide the framework for both compliance and non-compliance trade in article 6.2 emission reductions. In fact, the Swiss government does not divide between the voluntary carbon market (VCM) and the compliance carbon market, as there are no clear-cut division for these markets. Instead, the Swiss government makes a distinction between State recognized carbon emission reductions and those that are not State recognized.

In short, the bilateral agreements for article 6.2 cooperation also cover voluntary purchases by private or public sector participants. As such, these voluntary purchases of article 6.2 units will have been authorized and recognized by Switzerland, and as such therefore of the same quality as those units used for NDC fulfillment.

In addition, the Swiss government (Federal Council), or another competent department, can issue documents attesting reductions in GHG emissions achieved voluntarily in

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<sup>116</sup> Ibid., article 12

Switzerland.<sup>117</sup> These documents will specify the extent to which these attestations are considered equivalent to emission allowances or emission reduction certificates.<sup>118</sup> Emission allowances are tradeable rights to emit GHGs allocated or auctioned under the ETS, whereas emission reduction certificates are the tradeable documents under the Kyoto Protocol.<sup>119</sup> Although it could be envisioned that VCM projects in Switzerland could be utilized by ETS participants if the Swiss government attests to it, it is not clear whether this is the case.

Further, the CO2 Act states that voluntary measures also include undertakings by consumers of fossil thermal and motor fuels voluntarily to limit their CO2 emissions.<sup>120</sup> It clarifies that the Swiss government (Federal Council) may assign suitable organizations to support and carry out voluntary measures.<sup>121</sup>

It is worth noting that if private companies undertake voluntary purchases that are not used for compliance under article 6.2, the host country still needs to undertake corresponding adjustment where such activities are authorized under the bilateral agreements.<sup>122</sup> Therefore, the voluntary purchaser is the only entity that claims those emission reductions. Thus, the voluntary purchaser is helping to close the global emission gap.<sup>123</sup> In other words, it is only for article 6.2 units/ITMOs that are surrendered to the Swiss government that the Swiss government will undertake a corresponding adjustment. Voluntary buyers can decide themselves whether or not to surrender to the government for Swiss NDC fulfilment.<sup>124</sup>

Further, many cities and cantons in Switzerland have emission reduction targets they regulate themselves. Thus, it cannot be excluded that these have developed requirements for the use of article 6.2 or the VCM in fulfilling these targets.

Apart from the consumer protection regulation and the rules related to article 6.2, there are no other policies or legal requirements regarding the integrity of the units under the VCM.

Finally, the Swiss government is only involved in the national registry for emission reduction units and the international infrastructure under the Paris Agreement, and is not involved in a bilateral marketplace or exchange beyond this.

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<sup>117</sup> Article 7 of the CO2 Act, op. cit. n. 7.

<sup>118</sup> Ibid.

<sup>119</sup> Ibid., article 2.

<sup>120</sup> Ibid., article 4.

<sup>121</sup> Ibid.

<sup>122</sup> Interview with Swiss national expert

<sup>123</sup> Ibid.

<sup>124</sup> Ibid.



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Interview with Swiss national expert Veronica Elgart, Swiss Federal Office of the Environment (FOEN), 27 February 2024

To: Iceland's Ministry of Environment, Energy and Climate *Working Group on Carbon Markets*

From: Wenger Law  
Cathrine Wenger, Managing Partner

Date: 8. March 2024

## Woodland and Peatland VCMs in the UK

### Executive Summary

- The UK government has endorsed two key standards for establishing high-quality guidelines for private sector participation in the domestic, voluntary carbon market (often also referred to as the nature market) for woodland creation and peatland restoration, the Woodland Carbon Code and the Peatland Code.
- It is only companies with emissions within the UK border that are allowed to participate in these two domestic voluntary carbon markets.
- There are no legal requirements for companies to purchase the carbon units from the Woodland Carbon Code or the Peatland Code. However, the government views the two codes in connection with the obligations/recommendations for company reporting on GHG emissions. In addition, the UK government *encourages* companies to purchase emission reductions from the VCM to be aligned with their voluntary carbon emission targets, including units from the Woodland Carbon Code and the Peatland Code.
- The UK relies upon UK endorsed, globally recognized independent verification bodies to undertake the validation and verification of the emission reduction units created under these two codes.
- There are ongoing governmental discussions on whether to include forests in the UK Emissions Trading Scheme (UK ETS). If so, it is likely that the Woodland Carbon Code will be relevant to assess due to its high standard and alignment with UK laws and regulations.

## **PART 1: What role does the domestic carbon standards in place for woodland creation and peatland restoration in the UK have?**

UK is one of few countries to have domestic carbon standards in place for woodland creation and peatland restoration.<sup>1</sup>

The role of domestic carbon standards for woodland creation and peatland restoration in the UK is key to drive private sector engagement, reduce reliance on public funding and bridge the emission gap derived from the government's Net Zero Strategy.<sup>2</sup> The carbon emission reductions deriving from projects undertaken in accordance with these standards are used to comply with UK's 2050 climate goal as well as the Nationally Determined Contributions under the Paris Agreement. In addition, these domestic standards can be used by private sector parties to comply with their voluntary emission reduction targets, which they report on in their company reports in accordance with the UK Government's Environmental Reporting Guidelines.

There are several policies in place that make up the regulatory framework for the creation of certified carbon credits from woodland creation and peatland restoration. However, the key instruments are the Woodland Carbon Code (WCC) and the Peatland Code (PC). These codes adhere to global standards but are tailored to the UK (reflecting UK's specific biophysical features and legal frameworks).<sup>3</sup> The WCC and PC therefore reflect research specific to woodlands and peatlands in the UK. They are also tailored to ensure compliance with UK regulations, including the UK Forestry Standard (UKFS) which sets out the UK government's approach to sustainable forestry, including standards and requirements, regulations and monitoring, and reporting.<sup>4</sup> UKFS applies to all woodlands, regardless of who owns or manages it.<sup>5</sup>

Each country within the UK has its own programs for woodland and peatland restoration. These policies will make a contribution to the wider UK emission reduction target.<sup>6</sup> For

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<sup>1</sup> Forest Carbon. "Carbon Credits and Offsetting". Available at <https://www.forestcarbon.co.uk/knowledge-base/carbon-credits-and-offsetting>

<sup>2</sup> IUCN UK Peatland Programme, see: <https://www.iucn-uk-peatlandprogramme.org/peatland-code-0>

<sup>3</sup> Op. cit. n.1. Forest Carbon.

<sup>4</sup> Woodland Carbon Code (WCC), version 2.2 (April 2022), para 1.5. Available at [https://woodlandcarboncode.org.uk/images/PDFs/Woodland\\_Carbon\\_Code\\_V2.2\\_April\\_2022.pdf](https://woodlandcarboncode.org.uk/images/PDFs/Woodland_Carbon_Code_V2.2_April_2022.pdf)

<sup>5</sup> UK Forestry Standard: Forestry Commission, "The UK Forestry Standard" (21 December 2017). Available at <https://www.gov.uk/government/publications/the-uk-forestry-standard>

<sup>6</sup> Interview with Helen Finney, UK government's International Climate Negotiator lead on Article 6, and her colleagues Robert Moore, Bethany Parker, Dexter Lee, Shivani Kaytal, Matti Henderson, Simon Petley, Jay

example, the England Trees Action Plan 2021 to 2024, which was developed in response to a consultation, sets out long-term vision for trees, woodlands and forests in England by 2050 and beyond.<sup>7</sup> The plan provides a strategic framework for nature-based solutions and for implementing the Nature for Climate Fund and outlines policy actions to be taken by the government. It sits alongside the England Peat Action Plan, which does the same but for peatland.<sup>8</sup>

The current market for verified carbon units under the WCC is very small, with around 780 units, equivalent to 780 tonnes CO<sub>2</sub>e currently (per 5 March 2024) available for purchase.<sup>9</sup> The availability of not-yet-verified units under the WCC, however, are much larger. These units are not guaranteed, but can be purchased for future vintages.<sup>10</sup> There are, however, ongoing discussions on whether to include forest sequestration in the UK Emissions Trading Scheme (ETS), and if so, the WCC is likely to be included due to its high quality standard.<sup>11</sup> This could open up for companies with legal obligations to comply with emission reduction requirements, and as such, potentially increase the demand for WCC units.

It seems that the Environmental Reporting Guidelines, which gave guidance on how companies can voluntarily compensate for their UK-based emissions have been withdrawn on 16 March 2022.<sup>12</sup>

## **PART 2: Assessment of policy relevant for the voluntary carbon market for forestry, such as the Woodland Carbon Code (WCC) and Peatland Code (PC) and others**

### **1. The Woodland Carbon Code**

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Shah, and Chris Shipley – with expertise on the VCM, the Woodland Carbon Code, Peatland Code and carbon markets in the UK, 4 March 2024.

<sup>7</sup> Department for Environment, Food & Rural Affairs, “England Trees Action Plan 2021 to 2024” (18 May 2021). Available at <https://www.gov.uk/government/publications/england-trees-action-plan-2021-to-2024>

<sup>8</sup> Department for Environment, Food & Rural Affairs, “England Peat Action Plan” (18 May 2021). Available at <https://www.gov.uk/government/publications/england-peat-action-plan>

<sup>9</sup> WCC web page. “Where to buy carbon from Woodland Carbon Code projects” (undated). Available at: <https://woodlandcarboncode.org.uk/buy-carbon/woodland-carbon-projects>

<sup>10</sup> Ibid.

<sup>11</sup> Please see discussions below under para 1b, Private Sector Use of the WCC

<sup>12</sup> Department for Environment, Food & Rural Affairs, “Measuring and reporting environmental impacts: guidance for businesses” (9 April 2013). Available at <https://www.gov.uk/guidance/measuring-and-reporting-environmental-impacts-guidance-for-businesses>

The Woodland Carbon Code (WCC) is one of key two instruments that guides the use of domestic voluntary carbon markets in the UK, the other being the Peatland Code (PC). It is also known as an instrument for the nascent “nature market” in the UK.<sup>13</sup>

It is a government-led scheme/standard used for ensuring the quality of woodland creation projects in the UK.<sup>14</sup> More specifically, it covers forest sequestration through ‘woodland creation’, hereunder new, planted forests and not existing forest covers.<sup>15</sup> It does not account for carbon stored in forest products even if these wood products save carbon by substituting other products with a larger footprint.<sup>16</sup>

The WCC supports the creation of high integrity, independently verified carbon units, also known as ‘Woodland Carbon Units’. One Woodland Carbon Unit represent one tonne of CO2 sequestered.

The WCC is endorsed by international bodies such as the Integrity Council for Voluntary Carbon Markets (ICVCM) or International Carbon Reduction and Offset Alliance (ICROA) as well as the UK government.<sup>17</sup>

#### **a. Key elements of the WCC**

Under follows a short list of the key elements of the WCC and how it deals with issues such as permanence, carbon leakage and baselines etc.

#### ***Project registration, validation, verification, issuance and retirement***

The WCC is managed by Scottish Forestry on behalf of the Forestry Commission, Welsh Government and the Northern Ireland Forest Service.<sup>18</sup> Scottish Forestry is responsible for ensuring that projects are independently validated/verified and represented in the UK Land Carbon Registry.<sup>19</sup>

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<sup>13</sup> Op cit. n 6. Interview with UK experts

<sup>14</sup> Forestry Commission, “The Woodland Carbon Code scheme for buyers and landowners” (9 July 2018). Available at <https://www.gov.uk/guidance/the-woodland-carbon-code-scheme-for-buyers-and-landowners>

<sup>15</sup> Op cit. n 6. Interview with UK experts

<sup>16</sup> Op cit. n 4. WCC, p. 1.

<sup>17</sup> Op cit. n 6. Interview with UK experts

<sup>18</sup> WCC web page. “UK Woodland Carbon Code” (undated). Available at: <https://woodlandcarboncode.org.uk/#:~:text=The%20Woodland%20Carbon%20Code%20is,right%20here%20in%20the%20UK>

<sup>19</sup> Op cit n. 9. WCC web page



All WCC projects should be *registered* on the UK Land Carbon Registry before work begins onsite.<sup>20</sup> In order to register the project developer/landowner should first set up an account on the register and add their project(s) to their account.<sup>21</sup>

Once the registration has been completed, the WCC projects must, within three years, be *validated* by an independent validation/verification body accredited by the UK Accreditation Service to ensure that the project is undertaken in accordance with the standards of the WCC.<sup>22</sup> Validation is an initial evaluation of the project. Validation can only be completed once trees are planted, or fencing is in place for natural colonization/regeneration.<sup>23</sup>

Once validated, units representing future potential Woodland Carbon Units, called Pending Issuance Units, will be *issued* on the UK Land Carbon Registry.<sup>24</sup>

*Verification* is an ongoing evaluation/monitoring of the project to ensure that it is undertaken in accordance with the WCC. At year five, and then every 10 years (15 for smaller projects), a project progress report and a monitoring report with supporting evidence must be submitted to the validation/verification body.<sup>25</sup> This body will then check the statements about predicted or actual carbon sequestration are materially correct, with a reasonable level of assurance (limited level of assurance at year 5) before deciding whether to verify any Pending Issuance Units.

Once verified, the Pending Issuance Units will be converted into Woodland Carbon Units.<sup>26</sup>

Although companies are allowed to purchase both Pending Issuance Units and Woodland Carbon Units, it is only the latter that can be used in its company reporting (also known as ex-post reporting). This is because, prior to using Woodland Carbon Units in any reports, they shall be *retired* from the UK Land Carbon Registry.<sup>27</sup>

### **Baselines**

The WCC relies on establishing baselines (ie business-as-usual scenarios) for the projected emissions on the site as if the project would not have happened.<sup>28</sup> It uses a monitoring and

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<sup>20</sup> Op cit n. 4. WCC. p. 1.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid p. 2.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid., p. 13.

<sup>28</sup> Ibid., p. 21.

verification system in which only verified Woodland Carbon Units can be used to compensate/offset current emissions.<sup>29</sup>

### ***Carbon leakage***

Para 3.2 of the WCC establishes the requirements, means of validation and verification for assessing the risk of carbon leakage. Leakage is defined as “any GHG emissions outside the project boundary as a result of the project (e.g. displacement of agricultural activities might result in deforestation or intensification of use of non-wooded land elsewhere).”<sup>30</sup> The land manager has an obligation to confirm whether leakage will occur on the holding (i.e the land manager’s land), and if significant (equal to or more than 5% increase) of GHG emissions occur they shall be accounted for (i.e deducted from the total) in the net carbon sequestration calculation.<sup>31</sup>

### ***Permanence***

As woodland projects carry a risk of reversibility, safeguards must be in place to minimize this risk and to guarantee replacement or alternative woodland should a reversal occur.<sup>32</sup> In other words, removal or avoidance from these projects must be managed in a way to ‘demonstrate a commitment to permanence’.<sup>33</sup>

Permanence of woodland creation is safeguarded by a risk buffer of carbon credits, the Woodland Carbon Code Buffer (WCC Buffer), held by the Woodland Carbon Code’s administrators. In addition, forests in these projects are protected from being felled by UK legislation such as the Environmental Impact Assessment Regulations (1999) and The Forestry Act (1967).<sup>34</sup>

The landowner shall demonstrate a commitment to permanence by undertaking several actions, including a contribution of 20% of the project to the WCC Buffer.<sup>35</sup> In addition, any loss must be submitted to the WCC Secretariat and will be publicly available at the UK Land Carbon Registry.

### ***Additionality***

Additionality is one of the key principles of the WCC, and is defined as “the carbon sequestration over and above that which would have happened anyway in the absence of a

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<sup>29</sup> Ibid.

<sup>30</sup> Ibid., p. 22.

<sup>31</sup> Ibid., para 3.2

<sup>32</sup> Ibid., p. 22.

<sup>33</sup> Ibid., para 2.3

<sup>34</sup> Op. cit n. 1 Forest Carbon

<sup>35</sup> Op cit. n 4. WCC, para 2.3

given project or activity.”<sup>36</sup> As such, it is only ‘additional’ if it turns a project from being not financially viable to one which is financially viable.<sup>37</sup> To demonstrate additionality, both a legal and an investment test shall be passed. To pass the legal test, it must be demonstrated that there are no legal requirements to create the woodlands. Whereas to pass the investment test, the project shall demonstrate that it is not the most economically or financially attractive use for that plot of land, or that it is not economically or financially viable on that land at all.<sup>38</sup>

### ***Corresponding adjustments***

As this is a purely domestic market, the Woodland Carbon Units under the WCC do not require the UK to make any corresponding adjustments.

### ***Double counting and double claiming***

Projects and carbon units are only to be registered at the UK Land Carbon Registry, and not at any other registry.<sup>39</sup> The UK Land Carbon Registry gives details of projects, Pending Issuance Unit listings, Woodland Carbon Unit issuances, transfers, assignments and retirement.<sup>40</sup> This service is provided by S&P Global. Only the verified Woodland Carbon Units that are retired on the UK Land Carbon Registry are eligible to be used in the companies’ reports.<sup>41</sup>

### ***Compensatory planting***

Please also note that if windfarms or urban development leads to lost woodlands and requirements for ‘compensatory planting’ elsewhere, this new forest will not be eligible under the WCC.<sup>42</sup>

### ***Accounting rules***

The WCC sets out a principle that projects should follow best practice in carbon accounting, including on site description and baseline calculations.<sup>43</sup>

### ***Marketplace***

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<sup>36</sup> Ibid. p. 22.

<sup>37</sup> Ibid

<sup>38</sup> Ibid. para 1.6

<sup>39</sup> Ibid., para 2.6

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid. p. 21 and para 1.6

<sup>43</sup> Ibid., para 3

There is not one central marketplace for the sale and purchasing of the Woodland Carbon Units. However, the Scottish Forestry provides a web page in which all project developers and projects are listed with links.<sup>44</sup>

### ***b. Private sector uses of the WCC***

The carbon units under the WCC can be used by companies and other private sector entities to:<sup>45</sup>

- i) Reduce net emissions by undertaking voluntary compensation its gross UK-based emissions;
- ii) Demonstrate carbon neutrality in accordance with Publicly Available Specification 2060:2014 for the Demonstration of Carbon Neutrality (PAS 2060:2014);
- iii) Assist with its pathway to net zero by 2050 by paying for sequestration in advance.

### ***Voluntary compensation***

The voluntary compensation for companies in the UK is closely connected with the mandatory requirements for companies to report on climate-related disclosures.<sup>46</sup>

In the UK Government’s Environmental Reporting Guidelines, UK companies are given guidance on how to report on their global energy use and GHG emissions in their company reports, including their annual Director’s Report.<sup>47</sup> The requirement to report on annual emissions was first established in 2013 under the Companies Act 2006 (Strategic Directors’ Report) Regulations 2013.<sup>48</sup> Quoted companies, large unquoted companies and limited liability partnerships have legal requirements to report on these issues, whereas other

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<sup>44</sup> Op cit. n.9. WCC web page

<sup>45</sup> Op cit n. 19. WCC web page

<sup>46</sup> Please note that the UK was amongst the first G20 country movers to require mandatory climate-risk reporting for companies aligned with the Task Force for Climate-related Financial Disclosures (TCFD). There is currently a draft regulation, the Companies (Strategic Report) Climate-Related Financial Disclosure Regulations 2021, for review in the Parliament. More information: Department for Business, Energy and Industrial Strategy, “The companies (strategic report) (climate-related financial disclosure) regulations 2021 (no date). Available at [https://www.legislation.gov.uk/ukdsi/2021/9780348228519/pdfs/ukdsiem\\_9780348228519\\_en.pdf](https://www.legislation.gov.uk/ukdsi/2021/9780348228519/pdfs/ukdsiem_9780348228519_en.pdf)

<sup>47</sup> Department for Energy Security and Net Zero et al., “Guidance – Environmental reporting guidelines: including Streamlined Energy and Carbon Reporting requirements” (29 March 2019). Available at <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>

<sup>48</sup> Ibid., p. 49.

companies are encouraged to do so on a voluntary basis.<sup>49</sup> The Environmental Reporting Guidelines also encourage organizations to compensate for their emissions.<sup>50</sup>

In addition, the UK Government has urged businesses to take action to reduce emissions to contribute to the UK-wide net zero by 2050 target.<sup>51</sup>

The voluntary compensation for emissions can take the form of voluntary purchasing of carbon credits, including credits under the WCC or the PCC. Thus, trade under the WCC is voluntary compensation and not legally required offsets. However, please note that there are ongoing discussions within the UK government on whether to include forestry within the UK Emissions Trading Systems (UK ETS).<sup>52</sup> And if sequestration from forestry will be included, the WCC represents a very high standard that can be used in terms of MRV and regulations around it.<sup>53</sup> If this happens, the WCC will also be possible to use for companies with regulatory requirements to offset emissions under the UK ETS.

The ability to compensate through the WCC is limited to UK-based emissions, and not allowed for emissions overseas or emissions from international aviation or shipping.<sup>54</sup>

According to the UK carbon market experts, the WCC is intended to be a domestic scheme, and there is no intention of widening its scope to allow for foreign companies to invest in purchasing Woodland Carbon Units under the WCC.<sup>55</sup>

### ***Demonstrate carbon neutrality***

PAS 2060:2014 is a rapidly-developed standard that assists with demonstrating the quality and credibility of a carbon neutrality claim.<sup>56</sup> More specifically, it shows how verified Woodland Carbon Units can be used in claims of carbon neutrality in products, organizations, communities, travel, events, projects and buildings.<sup>57</sup> As such, it aims of carbon neutrality claims. The PAS 2060 sets out the requirements for claiming carbon neutrality, including the use of offsetting. PAS was sponsored by the Taiwan Ministry of Environment, its development was facilitated by the BSI Standards Limited and it was

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<sup>49</sup> WCC Web page. "Context". (undated). Available at: <https://woodlandcarboncode.org.uk/about/context>

<sup>50</sup> Ibid.

<sup>51</sup> Office for National Statistics, "UK business action on net zero and historical energy use". Available at: <https://www.ons.gov.uk/economy/environmentalaccounts/articles/ukbusinessactiononnetzeroandhistoricalenergyuse/2021-11-08>

<sup>52</sup> Op cit. n 6. Interview with UK experts

<sup>53</sup> Op cit. n 6. Interview with UK experts

<sup>54</sup> Op cit. n. 19. WCC web page

<sup>55</sup> Op cit. n 6. Interview with UK experts

<sup>56</sup> PAS 2060:2014, "Specification for the demonstration of carbon neutrality" (30 Apr 2014). Available at <https://knowledge.bsigroup.com/products/specification-for-the-demonstration-of-carbon-neutrality-1?version=standard>

<sup>57</sup> Op cit. n.19. WCC web page

published under license from The British Standards Institution, which has ownership of the specification.<sup>58</sup>

### ***Advance payment for 2050 targets***

The carbon units under the WCC that can be sold include the Pending Issuance Unit (PIU) and the Woodland Carbon Unit (WCU).

Companies can purchase WCUs today to use for their fulfilment of their net-zero targets at a later date.

However, it is only the WCU that can be retired or used by companies in their reporting. As such, the PIU's are available for companies to prepare for adhering to their 2050 targets or any other future emission targets. However, these units come with greater risks, as PIUs are advance purchases and are not guaranteed.<sup>59</sup> PIUs will also help to keep track of up-front sales/purchases from the UK government's side.<sup>60</sup>

### ***c. WCC project developers***

Forest Carbon is one of the key project developer of woodland creation and peatland restoration projects for carbon capture and ecosystem services in the UK (across Scotland, England, Wales and Ireland). Since 2006 they have planted more than 10 million trees in around 200 areas, removing around 2.1 million tonnes CO<sub>2</sub>e.<sup>61</sup> The removals are supported by the UK government, certified by the WCC, and internationally recognized by ICROA.

The Forest Carbon's peatland projects are found in Scotland and Wales. These are certified by the PC which is supported by the IUCN.

### ***d. WCC purchasers***

There are over 400 different UK based companies that have purchased carbon units from WCC projects from sectors including financial, retail, travel, paper and fuel distribution.<sup>62</sup>

For example, Allstar Business Solutions, the UK based fuel card service provider, purchases units from WCC due to its strong integrity and wide range of co-benefits.<sup>63</sup> Its emission

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<sup>58</sup> Although the PAS is now under the ownership of the British Standards Institution, it is not regarded as a British Standard and will be withdrawn in the event a British, European or International Standard is created.

<sup>59</sup> WCC web page. "How to buy woodland carbon units" (undated). Available at: <https://woodlandcarboncode.org.uk/buy-carbon/how-to-buy>

<sup>60</sup> Op cit. n.4 . WCC. p. 22

<sup>61</sup> Op cit. n.1. Forest Carbon

<sup>62</sup> WCC web page. "Who is buying carbon from Woodland Carbon Code projects?" (undated). Available at: <https://www.woodlandcarboncode.org.uk/buy-carbon/what-other-companies-say>

<sup>63</sup> WCC web page. "Allstar Business Solutions» (undated). Available at: <https://www.woodlandcarboncode.org.uk/buy-carbon/what-other-companies-say/allstar-business-solutions>

reduction scheme offers Woodland Carbon Units to its car owning customers that “would want to take some action on their environmental impacts, but would lack the resource to look into and administer an internal programme.”<sup>64</sup>

#### **e. UK government’s use of Woodland Carbon Units**

##### ***Towards national targets and international commitments***

The carbon validated and verified sequestration resulting from projects under the WCC will, in common with other woodland creation, contribute directly to the UK’s/Scotland’s national GHG emissions reduction targets.<sup>65</sup> These targets are set out in the UK Climate Change Act, 2008, and the Climate Change (Scotland) Act, 2009.

Sequestration from these projects will also contribute to the UK’s international commitments, including the UK’s Nationally Determined Contribution under the Paris Agreement).<sup>66</sup>

Corresponding Adjustments, described in Article 6 of the Paris Agreement, are not made for Woodland Carbon Units as it derives from projects that are purely domestic and that are not allowed to be sold outside of the UK.<sup>67</sup>

In the Clean Growth Plan (2018) the UK government commits to create a stronger and more attractive domestic carbon offset market, but Woodland Carbon Units cannot yet be used in regulatory carbon reduction mechanisms (e.g. the UK Emissions Trading System) or in CORSIA.<sup>68</sup> However, there are ongoing discussions within the government on whether, and if so, how to include forestry in the UK ETS.

## **2. The UK Peatland Code**

There is currently a large public funding gap for peatland restoration in the UK, and more than 80% of peatland is in dire condition.<sup>69</sup> To attract private sector finance for restoration of peatland is the key reason for the UK government-backed Peatland Code (PC).<sup>70</sup> The PC is a domestic voluntary carbon market standard for developing tradable carbon units from restored peatlands, in accordance with a set of requirements.

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<sup>64</sup> Ibid.

<sup>65</sup> Op cit n. 4. WCC, p. 5.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid., and Op cit. n 6. Interview with UK experts

<sup>68</sup> Op cit. n.4. WCC, p. 5.

<sup>69</sup> IUCN UK Peatland Programme. Available at <https://www.iucn-uk-peatlandprogramme.org/peatland-code-0>

<sup>70</sup> Ibid.



In other words, the PC is a voluntary national GHG programme. It covers emissions and sequestration of peatland projects, but does not account for carbon already stored within the peatland or the carbon saved when substituting peat products for products with lower carbon footprint.

The PC establishes the framework in which the GHG emission reductions from the peatland projects are monitored, reviewed, validated, verified and registered as either Pending Issuance Units or verified Peatland Code Units on the UK Land Carbon Registry.<sup>71</sup> The PC also establishes a Peatland Code Risk Buffer (PCRB) to cover unforeseeable losses that may occur as a result of restoration reversals. As such, the framework is very similar to the WCC, and this paper will not flesh out the details of the PC as such.

However, there are some key differences. First, it is the IUCN peatland programme that oversees the PC including the PCRB, and not the Scottish Forestry as is the case with the WCC.

Secondly, as many peatlands in the UK are in bad condition, they are generally a source of carbon emissions as opposed to a sink, as is the case with forests. Thus, the PC measures both carbon emissions and carbon sequestration from the projects.<sup>72</sup>

Finally, the two codes differ in terms of MRV and measurement.<sup>73</sup> Where the WCC measures sequestration through conventional mensuration techniques, the emission reductions under the PC are measured by proxies such as water dept, habitat condition and state of restoration.<sup>74</sup> The reason for the use of proxies is that it is too expensive to put a flux power onto every peatland restoration project.<sup>75</sup>

### **3. Bonus information**

#### **a. UK ETS**

The UK ETS was launched in 2021 to replace the UK's participation in the EU ETS and puts a limit on the total amount of GHG emissions domestic aviation, power sector and other energy intensive industries can emit. In July 2023 it was announced that UK ETS would expand to cover other sectors, including domestic maritime transport, waste and

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<sup>71</sup> Peatland Code V2. Available at [https://www.iucn-uk-peatlandprogramme.org/sites/default/files/2023-03/Peatland%20Code%20V2%20-%20FINAL%20-%20WEB\\_2.pdf](https://www.iucn-uk-peatlandprogramme.org/sites/default/files/2023-03/Peatland%20Code%20V2%20-%20FINAL%20-%20WEB_2.pdf)

<sup>72</sup> Op cit. n 6. Interview with UK experts

<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid. Forest flux techniques often include high resolution maps of forest carbon fluxes, storage and development over time.

greenhouse gas removal (GGR) technologies such as Direct Air Capture.<sup>76</sup> The UK government is also considering using the UK ETS as a long-term market for “high-quality nature-based GGRs, subject to further consideration.”<sup>77</sup> The government is interested in finding out how to use the carbon pricing mechanism they have today to drive investment in negative carbon emission technologies at a large scale, and are currently undertaking a consultation on this topic.<sup>78</sup>

#### ***b. UK’s view on international credits for NDC achievement***

The UK does not intend to use international credits from the VCM nor article 6 credits in achieving its NDC.<sup>79</sup> However, it reserves the right to do so.<sup>80</sup> The UK’s involvement in the Paris Agreement’s negotiations on article 6 is to take part in shaping a high-integrity market.<sup>81</sup>

The UK’s NDC states that ‘while the UK intends to meet its NDC target through reducing emissions domestically, it reserves the right to use voluntary cooperation under Article 6 of the Paris Agreement. Such use could occur through the linking of the UK emissions trading scheme to another emissions trading system or through the use of emissions reductions or removals units.’<sup>82</sup>

#### ***c. Overarching on the VCM in the UK***

The UK government is currently working on a consultation that will set out next steps and potential interventions to support the VCM and nature markets.<sup>83</sup> This is building on the progress made by two integrity initiatives, the VCM and ICVCM. The UK government is currently consulting on whether to officially endorse the VCM Integrity Initiative code of practice and the ICVCM core carbon principles and their assessment framework.<sup>84</sup> The consultation is due in Q2 2024.

The domestic VCM in the UK is regulated through its environment agency, DEFRA, with its key instruments the Woodland Carbon Code and the Peatland Carbon Code.

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<sup>76</sup> Department for Energy Security and Net Zero, “Tighter limit on industrial, power and aviation emissions, as UK leads the way to net zero” (3 July 2023). Available at <https://www.gov.uk/government/news/tighter-limit-on-industrial-power-and-aviation-emissions-as-uk-leads-the-way-to-net-zero>

<sup>77</sup> Ibid.

<sup>78</sup> Op cit. n 6. Interview with UK experts

<sup>79</sup> Ibid.

<sup>80</sup> Ibid.

<sup>81</sup> Ibid.

<sup>82</sup> United Kingdom of Great Britain and Northern Ireland’s Nationally Determined Contribution (September 2022). Available at <https://unfccc.int/sites/default/files/NDC/2022-09/UK%20NDC%20ICTU%202022.pdf>

<sup>83</sup> Op cit. n 6. Interview with UK experts

<sup>84</sup> Op cit. n 6. Interview with UK experts

In addition, the VCM is regulated by consumer facing regulation, including the Competition and Markets Authority as well as the Advertising Standards Agency who operates according to a Green Claims Code.<sup>85</sup>

***d. ESR and LULUCF Regulation***

Due to Brexit, the UK is no longer part of the ESR or the LULUCF Regulation.<sup>86</sup>

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<sup>85</sup> Op cit. n 6. Interview with UK experts

<sup>86</sup> Ibid.

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### **3. Interview with UK experts:**

Interview with Helen Finney, UK government's International Climate Negotiator lead on Article 6, and her colleagues Robert Moore, Bethany Parker, Dexter Lee, Shivani Kaytal, Matti Henderson, Simon Petley, Jay Shah, and Chris Shipley – with expertise on the VCM, the Woodland Carbon Code, Peatland Code and carbon markets in the UK, 4 March 2024.