

Chapter 7

International and EU Emissions Trading under the Paris Agreement

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Introduction

Article 6 of the Paris Agreement allows for Parties to cooperate in meeting their respective emission reduction targets. It provides three main elements: bilateral or plurilateral cooperation between Parties, known as ‘internationally transferrable mitigation outcomes,’ a new mechanism to replace the CDM and JI of the Kyoto Protocol and non-market-based cooperation. Article 6 of the Paris Agreement was also the final section of the draft Agreement text to be finalised during COP 21 in 2015. It was not until the very early hours of the morning of 12 December that the Parties finally agreed on the language to be put forward to the French Presidency of the COP later that day. The reasons for this section to come in last and for the text to be structured in its specific ways lies in the fact that Article 6 is the culmination of three specific ideologies or types of international cooperation in carbon trading which have been discussed by Parties for the past 10 years. The basis for Article 6 is to allow for Parties to cooperate in addressing climate change mitigation.

The global framework for carbon trading

Article 6 of the Paris Agreement

Article 6 includes three main elements, each of which represent a view of how international carbon markets should operate according to a group of Parties:

- Internationally Transferred Mitigation Outcomes (ITMOs), Article 6.2
- A new market-based mechanism to achieve sustainable development, Article 6.4
- International cooperation with non-market-based approaches, Article 6.8

Internationally Transferred Mitigation Outcomes (ITMOs), Article 6.2

Article 6.2 allows for bilateral transfers of mitigation outcomes between two or more Parties, known as ITMOs. Mitigation outcomes must represent real, measurable and verifiable emission reductions with high environmental integrity and absolutely cannot be counted by more than one Party for compliance. The concept behind Article 6.2 is that one or more Parties can purchase emission reductions from another Party at a lower cost than they would otherwise be able to achieve with emission reductions that would occur solely domestically. This would enable Parties to agree on deeper emissions cuts. This could in practice occur when two Parties link-up their cap and trade systems (hence the Art 6.2. text speaks of ‘transferred’ ITMOs). Alternatively, it could involve cooperation by two Parties on the ground of the transferring country Party. These emission reductions will be used to either fulfil or increase the ambition of the NDC target(s) of a Party. The actual emissions reductions will most likely be determined by the host Party where the reductions take place, with input from the transferring Party. Both Parties will have to perform a corresponding adjustment of their emissions inventories once the transfer has taken place. The corresponding adjustment will be ‘compensated’, if you wish, by the payment for the reduction purchase.

This type of international cooperation on carbon markets was largely supported by the Umbrella Group of Parties, led by Canada and New Zealand, together with the EU and the EIG, led by Switzerland in the UNFCCC negotiations leading up to and during COP 21. Several of these Parties, most notably Canada and the United States, pushed for a decentralised and more flexible structure to also govern international carbon market cooperation.

A new market-based mechanism to achieve sustainable development, Article 6.4

Article 6.4 creates a new market-based mechanism to achieve sustainable development. However, other than with the CDM mechanism, that leads globally to a zero-sum-game result, this mechanism should “deliver an overall mitigation in global emissions”, as this Article requires. This can, for example, be operationalised by an ambitious, hence lower credit baseline, requiring more reductions or to apply a discount at supply or demand side. Emission reduction activities located in the host Party can issue units that can be used by one or more transferring Parties. This mechanism will have a centralised structure with specific emission reduction and emission saving methodologies and the issuance of units to be governed by the COP. Units generated by the Article 6.4 mechanism will also have to represent real, measurable and verifiable emissions reductions that represent high environmental integrity. Unlike the mechanisms under the Kyoto Protocol, any Party can transfer and receive emission reduction units under the Article 6.4 mechanism.

The G77 and China pushed for a centralised market-based mechanism in the negotiations leading up to the Paris Agreement. They see this as a ‘bottom-up’ instrument, while OECD countries would like to see more mandatory standards and guidance besides a centralised mechanism.

International cooperation with non-market-based approaches, Article 6.8

Article 6.8 allows for international cooperation with non-market-based approaches. In contrast to Articles 6.2 and 6.4, Article 6.8 focuses on areas where

countries can cooperate on climate change mitigation and adaptation without using market approaches. Potential examples of such cooperation include programmes that directly phase out short-lived climate pollutants, policy and knowledge sharing, and scientific research.

The Bolivarian Alliance for the Peoples of Our America (ALBA) Group of Countries, led notably by Bolivia and Venezuela, advocated for a non-market-based approach in the negotiations leading up to the Paris Agreement.

Approaches towards elaboration of Article 6

It is understandable that since there are three fundamental elements under Article 6, that there will also be different approaches to its implementation. Reflecting on the Party submissions to the Subsidiary Body for Scientific and Technological Advice (SBSTA) (one of two permanent subsidiary bodies to the Convention established by the COP/CMP) from 2016 to the present, there are three main approaches to how Article 6 should be implemented. These include:

- A ‘minimalistic approach’, which offers minimum guidance on accounting, oversight, methodologies, governance, etc.
- A ‘centralised approach’ which offers a strong supervisory and enforcement role for the UNFCCC when it comes to overseeing the implementation and procedures of Article 6.
- A ‘restrictive approach’: to spur more ambition, higher environmental integrity: ‘no ITMO transfer, unless’.

A **minimalistic approach** would be favoured by Parties who envision a bottom-up world of international cooperation on carbon markets where Parties are in clear control over what types of emissions transfers they will allow to export and transfer, how such units will be used towards their NDC targets and whom they plan on cooperating with. This would substantially reduce the role of the UNFCCC in the process of issuing emission reduction units. The role of the UNFCCC would be to issue guidance on how accounting of ITMO’s should

take place, to oversee a tracking system of unit flows and other methodological support. The UNFCCC could also provide technical support for bilateral and plurilateral emissions transfers amongst Parties.

A **centralised approach** would be favoured by Parties who wish to have a strong centralised role for the UNFCCC. This approach would build on the carbon market roles the UNFCCC maintained under the Kyoto Protocol: issuing emission reduction units, having an executive board to oversee mechanisms, register projects, approve methodologies and unit issuance, a unit registry and tracking system and issuing methodological guidance. This approach would likely result in a top-down structure where eligibility criteria could be set over how units would be transferred, issued and used amongst Parties. It would also have a strong role for the UNFCCC to provide support to countries in the use of Article 6 to fulfil or increase their NDC targets.

A **restrictive approach** would, in our view, be pushed by Parties that want to judge the NDC first and require increased NDC targets, before ‘allowing’ the use of transferred ITMOs. This includes several environmental prerequisites to be met and thresholds to be passed before any cooperation under Article 6 can occur.

EU’s Approach towards elaboration of Art 6.2

We believe the EU, since it has the EU ETS, would in general favour maximum sovereignty over its system. However, in the future, the EU ETS may be linked to other ETS (see Table 7.1). As international linking of emissions systems implicate the international transfer of allowances, it is important that the buyer of an internationally transferred allowance can use the allowance for compliance. That means the selling country has to ensure it is in compliance too and is not, for example, ‘overselling’. To facilitate this, before 2020, transferring nations could at the end of the year transfer ample Kyoto units to the buying country. After 2020 we believe that should be done with ITMOs. That means rules on ITMO transfers will play a role and the guidance for Parties how to avoid double counting.

Table 7.1 | Development of EU emissions trading and potential linking over time

Development of EU emissions trading and potential linking over time	
2003	National ETS: UK ETS, Denmark ETS, Norway carbon tax
2005	EU ETS-1, Pilot Phase EU 25
2008	EU ETS-2, EU 27
2012	EU ETS-3: 31 nations: EU 28 plus EFTA Norway, Iceland, and Liechtenstein - Iceland and EU agreed to jointly fulfil the Kyoto-2 targets
2020	EU ETS-4: 32 nations: EU + EFTA - plus Linked to Switzerland, requires transfer of AAUs to back up the allowances - After Brexit: UK ETS linked, mutually acknowledged, via ITMO or Carbon Clubs - Norway's non ETS sector also linked to EU via PA Bubble
>2020	Bilateral links with Canada, New Zealand, South Korea, California? - EU said it wanted to develop an OECD wide carbon market
>2020	Bilateral links to Kazakhstan, Mexico, China?
>2020	Carbon Clubs: this could become a 'modus operandi' for nations that wish to organise a more robustly linked carbon market, when good rules are still lacking and nations already want to additionally apply rigid rules on themselves e.g., on avoiding double counting and secure an accounting balance ¹⁴⁷
>2020	Linked via ITMOs: this could be seen as transferring while surplus allowances are transferred in the form of ITMOs

In its submission for the November 2017 UNFCCC meeting, the EU proposed that the guidance under Article 6(2) “should allow for higher ambition (Article 6(1), that each Party’s successive NDC represent a progression and reflect its highest possible ambition”.¹⁴⁷ This may indicate that the EU believes any use of ITMOs will have to go hand-in-hand with an improvement of the NDC. At the November 2017 UNFCCC Roundtable on Article 6 the EU said that they would like to see that “Parties do a timely corresponding adjustment in their accounting balance when ITMOs are transferred and used”.¹⁴⁸ These proposals show a preference for a centralised and somewhat restrictive approach, because increasing of ambition when using carbon markets is essential for the EU. This will work for the EU if it intends to meet its current NDC with domestic measures. However, EU Climate Commissioner Miguel Arias Cañete stated at the COP in 2015 and 2016 that if the EU needs to increase its NDC and if others do that as

¹⁴⁶ Keohane N., Petsonk A., & Hanafi A.,(2017).

¹⁴⁷ EU submission (2017).

¹⁴⁸ EU submission (2017).

well, the “EU would use international credits”.¹⁴⁹ Currently, there is no indication of the use of the global carbon market yet or using ITMOs. That does not mean that the EU will not make use of it in the future, but the EU’s focus is currently on increasing domestic reductions. The EU Council asked the European Commission in March to present a long-term strategy for increased targets for 2030 in 2050.¹⁵⁰ That may also show the room for the global carbon market.

Similarities and differences of Article 6 compared to the Kyoto Protocol

In 1997, when the Kyoto Protocol was written, there existed a clear list of Parties that were willing to take on the responsibility of a quantified emission limitation reduction obligation, as the Kyoto Protocol emissions targets were defined. The mechanisms designed for achieving emission reductions under the Kyoto Protocol reflected the fact that there would be Parties which would be buying emission reductions and countries who would only be in a selling position. By the time Article 6 of the Paris Agreement was written, it was clear that all Parties would be putting forward a plan for addressing either or both climate change mitigation and adaptation. The ‘old’ approach of only one list of Parties taking on a mitigation commitment would not apply under the Paris Agreement. Articles 6.2 and 6.4 both reflect this new dynamic; however, they do maintain some similarities with the design of international cooperation on carbon markets under the Kyoto Protocol.

Table 7.2 | Comparison between Paris Agreement and Kyoto Protocol elements

Paris Agreement Element	Kyoto Protocol Element
Article 6.2: Transferred ITMO	Article 17: International Emissions Trading (IET)
Article 6.4: A new mechanism to support sustainable development: ‘global mitigation’	Article 6: Joint Implementation (JI/ GIS) and Article 12: Clean Development Mechanism: ‘zero-sum-game’

¹⁴⁹ EU Climate Commissioner Miguel Arias Cañete, EU Press briefing, CoP-20, December 2014.

¹⁵⁰ European Council (2018).

Looking to the Future: how could the global carbon market look in 2030 and 2050?

In 2018, there are approximately 21 countries or jurisdictions with a carbon market, representing approximately 15 percent of global carbon emissions.¹⁵¹ The average carbon price across these different systems is approximately €14 per tonne.¹⁵² Most economists and peer-reviewed research on carbon pricing suggest that carbon prices need to be above €30 for companies to meaningfully transition away from fossil fuels and towards low-carbon investments. There are a few jurisdictions where carbon prices are above this level: Sweden's carbon tax is approximately €120 and Switzerland's carbon tax that is now nearly €80. In both countries, emissions are declining, and many industries have shifted away from local fossil-fuel investments. However, the same industries and companies which are no longer incentivised to invest in fossil fuels in Sweden and Switzerland can continue to invest in fossil fuels in other parts of the world where carbon pricing instruments do not currently exist. While it is encouraging that more and more countries are exploring the use of carbon pricing as a policy tool to help reduce emissions and meet their respective targets under the Paris Agreement, the world is still a far way off from having an international carbon pricing system that affects the global economy. In the meantime, as said, the coverage of carbon markets is increasing.

The years 2025 and 2030 will mark an important point for global efforts to reduce emissions and price carbon as it will be the end of the first round of NDC's under the Paris Agreement; those NDCs may, of course, have been improved. By the end of the decade, all countries should have not only met their respective NDC targets but also improved them in some capacity as well as set more aggressive targets for the post-2030 period. Carbon markets will surely also be operating at a greater scale nationally and internationally under Article 6. At the national level, carbon markets will hopefully be in place in all G20 countries, and regional or inter-regional carbon markets or 'clubs' should be in place. Currently, not every G20 country openly supports carbon markets or carbon pricing instruments, but it is imperative that all the world's major economies

¹⁵¹ ICAP (2018).

¹⁵² Carbon Brief (2016).

apply a price on carbon by 2030 if we are to meet the 2-degree temperature target under the Paris Agreement.¹⁵³ However, domestic carbon markets or carbon pricing instruments will not be enough to achieve the Paris goal. Countries will need to work on efforts to link their respective carbon markets or form carbon market clubs, which will allow emitters to reduce their emissions at lower costs as there will be greater opportunities for emissions abatement beyond national borders. As compliance costs are reduced, governments will have greater ability to increase their respective national emission reduction goals.

Ideally, by 2030, Article 6 will have become an integral tool most governments would have used to fulfil their Paris goals. Hopefully, it will have comfortably demonstrated its policy utility by helping to reduce and finance more than ten billion tonnes of emissions and scaled up to a size where it performed a ‘searchlight’ function for financing any emission reduction opportunity in any economy in the world and verify the results. Its policy utility will have demonstrated that countries used Article 6 as a way to top-up their existing NDC commitments and to finance countless low-carbon investments in every type of national economy and region. Article 6 will be scaled up so that it can operate without either or both delays in ITMO unit issuance and transfer through a sophisticated international tracking system that uses the most modern digital technology and the activities that generate ITMO’s will be monitored using real-time data that can be easily accessed by anyone connected to the internet systems of 2030. ITMO’s will be generated from all types of technologies: from well-integrated carbon capture reuse and storage programmes in heavily industrialised countries to electric grids with integrated energy storage, made up entirely of renewable energy in nations as diverse as Haiti and Hungary. Additionally, in the land use and forest sectors emissions reductions will not only help domestic NDCs but also generate ITMO’s.

We predict that the 20 years from 2030 to 2050 will further accelerate the application of carbon pricing across the global economy during a critical period in which the first countries will start to achieve a net zero emissions scenario. This will occur in the countries which had applied a carbon price earliest or set

¹⁵³ Environmental Defense Fund & IETA (2016).

their price at a high level (above €30) before 2030. During this period, carbon markets will start to or be completely phased out, as being superfluous, in economies where fossil fuels are no longer used as an energy source and begin to wind down in other countries which had set up a carbon pricing instrument after 2020. The EU ETS may continue, but only for a minimal number of the remaining gas-fired power plants and emissions intensive installations which have stayed in operation for geopolitical reasons. The EU will need additional emissions reductions from abroad to compensate for the remaining emissions. Europe will ideally be close to emissions-free by 2050 and continuing to serve a role as a climate leader by demonstrating to other economies that achieving net zero emissions is possible.

The carbon clubs and linked carbon market arrangements that were set up in the period to 2030 may continue but will include newer members that may have replaced previous members who no longer need to rely on carbon markets to reduce their remaining sources of emissions. Article 6 will exist in a new iteration where it is financing the most difficult emission reduction opportunities in the last remaining countries where low-carbon or zero-carbon technologies are still difficult to finance. Moreover, this will be important to end tropical deforestation by this time. Either or both these emission reductions and ITMO's will easily be financed by the international community as they will represent the very last remaining large sources of emissions.

The EU ETS in the global framework for carbon trading

Phases of the EU ETS in the framework of the Kyoto Protocol up to 2020 and the Paris Agreement thereafter

The upcoming COP in December 2018 is expected to deliver the Rulebook for the implementation of the Paris Agreement. This Rulebook will include the Guidance for Art 6.2. Parties submitted proposals; those are now included in the joint reflections note by the presiding officers including on matters relating to

Article 6 of the Paris Agreement, Oct 15, 2018.¹⁵⁴ One of the questions we would like to address here is what rules or concepts are needed in the framework of the Paris Agreement for the EU to maintain the EU ETS as a tool to meet more or less half of EUs NDC target and for the EU to make use of transferred ITMOs in the future.

A preliminary question is: what is the relationship between ITMOs and the EU ETS? That is not an easy question to answer since the nature of the ITMOs is not defined: is it any tonne transferred amongst Paris Agreement Parties? Is it surplus reductions transferred? Or do ITMOs get only clearer in the true-up phase, when we know which Party is ultimately in compliance and which Party isn't and we know what is left to transfer?

Table 7.3 | Phases of the EU ETS in the framework of the Kyoto Protocol (KP) up to 2020 and the Paris Agreement (PA) thereafter

EU ETS Phase	Approach
ETS-1 2005-2007 pilot phase	Allowances in NAP, approved by European Commission; national allocation, bottom-up, using grandfathering. No credits used.
ETS-2: 2008-2012 KP-1	Allowances, allocation EU Centralised backed-up by AAUs, 10 percent use of CERs/ ERUs (Certified Emission Reductions, based on the CDM in developing countries, resp. Emissions Reduction Units, based on so called Joint Implementation amongst industrialised countries)
ETS-3: 2013-2020 KP-2	Allowances not backed-up by AAUs; CERs/ ERUs exchanged for EUAs. Limited to current projects. Only new CDM project allowed in Least Developed Countries /Alliance of Small Island States. No more CDM projects that reduce N2O and HFC emissions as they are seen as not additional.
ETS-4: 2020-2030 (2025?) PA-1	Allowances allocation will need to reflect NDC to meet Paris Agreement. - Option may be that EUAs are backed-up by ITMOs or a budget of ITMOs that are set-aside for that purpose - EU link to Switzerland: transfer of allowances requires transfer of net commensurate AAUs transfer by Parties involved

¹⁵⁴ APA, SBSTA & SBI (2018).

During 2005 and 2007 the ETS allocated allowances on the basis of submitted NAPs, approved and streamlined by the European Commission. This was the pilot phase to prepare the ETS to help meet the Kyoto Protocol targets after 2008.

During the first phase of the ETS, the Pilot Phase, the EU allocated half of the AAUs to the ETS sectors. For every allowance a company surrendered to cover its emissions under the ETS, the EU surrendered an AAU into the UNFCCC Registry. Every allowance was backed-up in the UNFCCC Registry with an AAU.

This concept of an assigned budget approach still exists in concept. The Conference of the Parties in Doha in 2012 agreed on an amendment to the Kyoto Protocol. The Doha Amendment establishes a second commitment period (2013–20), adds nitrogen trifluoride to the list of GHGs covered and facilitates the unilateral strengthening of commitments by individual parties. For the EU and its Member States, ratification of the Doha amendment does not entail any new commitments beyond those set out in the 2009 climate and energy package a 20 percent reduction in GHG emissions compared to 1990 levels. So, for the third phase of the ETS allowances are in principle backed-up by AAUs but not explicitly, as the Doha amendment has not entered into force yet. We believe that a cap and trade system should reflect a Parties' cumulative budget, so it is clear the system helps meet the overall target. So, to ensure that the amount of allowances allocated should be similar to the number of available AAUs.

Linked EU and Swiss ETS: to be backed-up by ITMOs after 2020

Moreover, also in the Agreement¹⁵⁵ between the EU and Switzerland to link their ETS, it is agreed that the Parties shall transfer the net amount of AAUs, commensurate to the allowances transferred. The Agreement says: “*Upon entry into force of the second commitment period of the Kyoto Protocol, the Parties **shall transfer or acquire a sufficient number of AAUs** valid for the second commitment period of the Kyoto Protocol at an agreed interval and in case of termination in accordance with Article 16 to account for net flows of allowances between the Parties to the extent that such allowances have been surrendered by ETS operators for compliance and to*

¹⁵⁵ European Commission (2017).

the extent that such allowances represent emissions included in Annex A of the Kyoto Protocol.” In our view, this means that any net transfer of allowances between the EU and Switzerland should be backed-up by ITMO transfer after 2020 in the Paris regime.

To make the cap and trade system and linking reflect the Paris Agreement regime, the amount of allowances should fit in the allowed budget for the NDC. Surplus allowances – over performance – can be transferred abroad if the transferred amount of allowances is the same as the generated ITMO.

Phase 4 of the EU ETS reflecting the Paris Agreement

Phase 4 of the EU ETS, which will commence in 2021, must be implemented together with Europe’s implementation of the Paris Agreement. As is becoming increasingly evident, the EU’s 2030 target is not consistent with its 2050 emissions reduction pathway. Current political discussions in Brussels and many EU capitals are yet to consider the fact that Europe will face renewed pressure at home and abroad to increase the 2030 target so that it reflects the realities of new and upcoming IPCC climate data and ahead of the first global stocktake in 2023. Europe could achieve any increase in its target through Article 6 or by linking its ETS to other carbon markets. The EU ETS Directive does include in Article 25 clauses on linking arrangements. The initial agreement to link-up with Australia was cancelled. The only other carbon market which Europe has successfully negotiated a linking arrangement is Switzerland. The Swiss ETS is much smaller than the EU ETS; it covers less than 60 installations compared to the more than 11,000 in the EU.

If the desire is to use any ETS linking arrangement to meet its Paris targets, the provisions will have to be compatible with the accounting guidance that is to be set under Article 6.2. Hence, the transferring ETS partner has, so to speak, to adjust its emissions inventory: add the transferred allowances back again as emissions. The provisions in Article 6.2 state that any emission reduction unit that crosses an international border will have to also fulfil a corresponding adjustment on the inventories of both Parties engaged in the transfer. This means that any unit transferred into the EU ETS or any EUA transferred out

of it during Phase 4 will be marked as an ITMO and will need to adhere to the accounting frameworks of Article 6. The EU calls this arrangement to “*establish an ‘accounting balance’ to facilitate robust accounting by enabling corresponding adjustments to a parties’ accounting balances for emissions and removals covered by the NDCs*”.¹⁵⁶

The European Commission and the relevant EU Member State involved in the transfer will have to perform a corresponding adjustment of their inventory together with the other transferring Party or Parties. Practically, the can EU choose, like under the Kyoto Regime’s AAUs (see under 7.6.), that backed-up EUA’s, that ITMOs will back-up EUAs in Phase 4 of the EU ETS. That would make the ITMO transfer easier. As said above, it may be that ITMOs can only be defined *after* a Party complies with the NDC (‘outcome’) so that the transferring Party is ‘eligible’. A pragmatic way to avoid hurdles when carbon trading, is that Parties set-aside a certain amount of ITMOs available for allowance transfer. Also, the EU will have to compensate for reductions if it needs to meet the NDC afterward. This setting aside is like the provision under the Kyoto Protocol that committed Parties to leave 90 percent of the AAUs as commitment reserve in its registry to prevent overselling.

Interlinkage with CORSIA

The ICAO CORSIA mechanism to reduce emissions from the international aviation sector will also involve additional emission reduction units that will need to be properly addressed by the EU. Although the eligibility unit criteria for CORSIA units has yet to be approved by ICAO members, these units will likely come from a variety of different offset programmes (voluntary standards, the CDM, Reduction of Emissions of Deforestation and Forest Degradation in Developing Countries (REDD), the Article 6.4 mechanism, and national standards) and perhaps also ETS allowances. It is interesting to realise that for the international aviation sector, ICAO/CORSIA offsets from outside the sector and from another regime, the UNFCCC. These CORSIA eligible units may also be marked as ITMO’s once they are involved in an international transfer between Parties.

¹⁵⁶ EU submission (2017).

It is unknown whether CORSIA will actually be involved in ITMO transfers, as the ICAO commitments are not part of the NDCs and ITMOs serve to meet NDCs. Aircraft operators in Europe can purchase emission reduction units from standards and methodology types approved by the ICAO process and use these to fulfil their requirements under CORSIA. These reductions will have to be stored on a CORSIA approved registry. European governments will need to properly administer their registries so that the different types of emission reductions used by aircraft operators under CORSIA are properly tracked and corresponding adjustments are performed following the Art 6.2. guidance, once a unit is transferred. As long as that guidance is not clear, Parties risk that reductions are counting for compliance twice: for CORSIA and their NDC! The UNFCCC is in the lead, and it shows that EU has with CORSIA an extra interest in a good Article 6 System.

Article 6 Opportunities for the EU ETS

Europe must prepare itself for the ever-increasing possibility that it can and should increase its 2030 emissions reduction target. Some EU Member States, such as Sweden and The Netherlands, have already taken unilateral measures for a more ambitious 2030 target and to advocate a more ambitious EU target. While the EU ETS will be instrumental in helping Europe meet its 2030 target, there will be challenges in reducing emissions in sectors outside the EU ETS.

Article 6 can help Europe meet its 2030 target by providing methodologies and a certification process through the Article 6.4 mechanism to identify emission reduction opportunities in non-EU ETS sectors. Some EU Member States, such as the Netherlands, have already passed arrangements to create a pilot domestic carbon offset system to help find emissions reductions in non-EU ETS sectors which is responsible for approximately 60 percent of Dutch GHG emissions¹⁵⁷. The Article 6.4 mechanism could help the Dutch government-and other European governments-with an internationally approved system that can identify and certify emissions reductions. After these reductions take place, European governments are not required to transfer them as ITMO's but can use

¹⁵⁷ Cozijnsen, J. (2017).

them to help fulfil their 2030 targets.

Article 6 can also be a useful and quick fix solution for Europe to achieve any increase in its 2030 target. If the EU and its Member States were to agree on an increase in the EU's 2030 target to 55 percent, for example, these additional reductions could be fulfilled through ITMO's from bilateral approaches between Europe and other countries under Article 6.2, or through the Article 6.4 mechanism.

As it currently stands, there are no opportunities for ITMO's to be utilised under the EU's 2030 target. However, if Europe wanted to take on a more ambitious target, provide more international climate finance and increase its climate diplomacy, Article 6 is the preferable solution. Moreover, as discussed above, in our view, the mere linking of ETS with Switzerland already involves Article 6.2 ITMO transfers. If the EU is indeed a net seller to Switzerland, that can under the Paris Agreement regime only be done through ITMO transfers. Linking and the use of credits was also discussed more broadly in Chapter 6.

Conclusions

Article 6 of the Paris Agreement represents a new and unparalleled opportunity to identify, finance and certify emission reduction outcomes which can help countries meet their respective NDC targets and give perspective to increase ambition over time. It goes beyond the instruments created under the Kyoto Protocol as it encourages bilateral and plurilateral cooperation between countries to finance emissions reductions (Article 6.2) and creates a new mechanism that is to contribute to global mitigation to achieve sustainable development (Article 6.4) which can be used by any Party to the Paris Agreement. Its utility as a policy tool will undoubtedly be used for many years to come by a wide number of countries who wish to provide sources of international climate finance and to meet or increase their respective NDC targets. On the supply side, we see ample nations offer their mitigation potential under the condition of carbon finance.

Policy recommendations

Although the EU has long been a supporter of international carbon markets, its current 2030 emissions reduction target precludes it from using international market mechanisms as all reductions will take place within its borders. Europe can and will be affected by Article 6 even though it might not immediately use it to meet its current target. For example, the methodologies from the Article 6.4 mechanism can be used to certify domestic EU carbon offsets which can be used to reduce emissions in non-EU ETS sectors. Europe can also use ITMO's from Article 6 (either Article 6.2 approaches or the Article 6.4 mechanism) to fulfil any increase in its 2030 target. Moreover, if Europe chooses to link the EU ETS with another carbon market, any unit transfer in or out will be marked as an ITMO and will need to have a corresponding adjustment performed.

Europe will also have to closely account and track the ITMO's which its aircraft operators may use towards the fulfilment of their obligations under CORSIA. If that involves the use of EU EUAs, then this certainly must be done. While the current negotiations at the UNFCCC show that we are just at the beginning of a new era of international carbon markets, Europe has many future opportunities to use Article 6 to fulfil any increase in its emission reduction target as well as to support international climate finance throughout the world.

The EU's experience with cap and trade, the lessons learned with linking CDM with the EU, the appetite to link-up with other ETS's, to begin with OECD nations, the focus on ambition and environmental integrity, the well thought out pragmatic proposals, like the "*establishment of an accounting balance to facilitate robust accounting*¹⁵⁸", makes us hopeful that EU will be interested in and capable of contributing to the development of a robust Article 6 regime. If rules are not set, the EU may want to elaborate this within a carbon club. The European Commission initiated several years ago, the so-called 'Florenz Dialogue'. This is an annual high-level meeting of countries with emissions trading systems, from EU, to China and California. That could become the forum to discuss carbon clubs.

A carbon club may also be the hub to elaborate arrangements to set-aside

¹⁵⁸ EU submission (2017).

ITMOs and to translate NDCs into emissions budgets for pragmatic reasons on a voluntary basis. If this is done, carbon markets can certainly reach the overall emissions targets, hence the Paris Agreements' overall temperature stabilisation targets.