

# 3. MARKET-BASED MEASURES

## AVIATION, OFFSETS AND THE PARIS AGREEMENT

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After many years of intense negotiations, the 195 parties to the United Nations Framework Convention on Climate Change (UNFCCC) adopted on 12 December 2015 in Paris a new global agreement on how all countries collectively will tackle climate change. The Paris Agreement is widely recognized as the most significant environmental treaty ever adopted, with strong positive implications on development, international cooperation and, of course, for the climate. The ambition is to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C.

One of the fundamental aspects of the Paris Agreement is that it is entirely inclusive. For the case of aviation, however, there is a long standing understanding that the effort to address greenhouse gas emissions from international air traffic, which does not fall under any national jurisdiction, is under the authority of the International Civil Aviation Organization (ICAO). ICAO also regularly updates the UNFCCC's Subsidiary Body for Scientific and Technological Advice on its climate change related work, thereby ensuring consistency between the two processes. It is therefore very timely that ICAO's 39th General Assembly will convene already in September 2016, and at that time will be in a position to decide on the aviation sector's contribution to the global response to climate change. The Paris Agreement clearly sets a baseline for the ambition for such considerations.

ICAO has actively addressed climate change in aviation since several years. In 2013, the 38th ICAO Assembly decided that ICAO would develop a global market-based measure (MBM) scheme for international aviation, with a final decision expected to be taken at the 39th ICAO Assembly, to allow the scheme to be fully operational from 2020 onwards. MBM is one of the measures in the "Basket of Measures" to reduce emissions from civil aviation that ICAO is working to develop, with MBM allowing the aviation sector to use offsets as one of several ways to address its climate footprint.

The fundamental idea with offsets is that while it is clearly the responsibility of all parts of society to reduce their emissions as much as possible, the technology and economics of today do not always allow them to achieve more significant emission reductions immediately. In that situation offsets represent a way for the emitters to invest in emissions reductions elsewhere,

and to count the achieved emission reductions, represented as offset certificates, as part of their contribution to global emission reductions. From the perspective of the atmosphere, it does not matter where emission reductions are achieved as long as they happen in addition to in-house emission reductions, not instead of in-house emission reductions. By cancelling (tearing up) the offset certificates, they cannot be transferred onwards, and thereby the corresponding emission reductions are permanently counted to the stakeholder who invested in, and cancelled, the offsets.

Offsets are not a new approach, but were introduced at a global level already in 1997 with the adoption of the UNFCCC Kyoto Protocol. Among other tools conceived by the Kyoto Protocol was the Clean Development Mechanism (CDM), which became fully operational in 2004. CDM generates offsets by enabling investments in emission reduction projects in developing countries, partly being financed through the sale of CDM offsets (Certified Emission Reductions - CER). Each CER represents one ton of reduced greenhouse gas emissions, which are rigorously verified and validated by both UNFCCC and independent third-party verifiers before they are issued by UNFCCC. From an initially shaky start, CDM has evolved, improved and strengthened its functions and environmental integrity to become the mechanism it is today. With close to 8000 registered projects in 103 countries and almost 300 "programme of Activities" (large scale CDM project clusters), and with a current potential offset generation capability of close to 5 billion CERs up to 2020, it represents the largest mechanism of its kind in the world.

**CDM encompasses 8000 registered projects in 103 countries with a current potential offset generation capability of close to 5 billion CERs up to 2020**

Originally, the CDM offsets were intended to be used by developed countries to meet their Kyoto Protocol emission reduction targets that they may not be able to achieve only through domestic measures. Over time, however, the quality and environmental integrity of CERs have also made them popular for voluntary use in the corporate sector or by countries outside the Kyoto Protocol. This use is labeled "voluntary" since their use is not counted under any Kyoto protocol obligation.

The Paris Agreement, through Article 6, confirmed that the use of market mechanisms will continue to play an important role in the global effort to address climate change. Cooperative Approaches, generating as well as a new mechanism contributing to mitigation and sustainable development, were introduced by Article 6, as was the concept of non-market approaches. Both the Cooperative Approaches and the new mechanism represent ways in which offsets or other forms of emission reductions units may be recognized in the new climate architecture created by the Paris Agreement. The accompanying COP decision further clarifies a number of principles for how the new mechanism should be designed, including that it should be based on lessons learned from mechanisms previously created under UNFCCC, such as CDM. It is noteworthy that Article 6 is inclusive, not exclusive, in the sense that it indicates that Cooperative Approaches under the UNFCCC process need to be consistent with guidance to be adopted by the parties, but do not prescribe any unique mechanism for generating the ITMOs.

When CDM several years ago took the step to also allow the use of CERs outside the Kyoto Protocol it became evident that a system originally created for country-to-country level cooperation was not always easily accessible for users in corporate and voluntary sectors. UNFCCC therefore launched in September 2015 an on-line platform ([www.offset.climateneutralnow.org](http://www.offset.climateneutralnow.org)) that allows anybody with an internet connection to simply select, pay, and cancel the CERs they wish to use.

The online platform provides direct access to CERs so that the user can identify the CDM project that the CERs come from, the host country, the type of emission reduction technology, or the associated sustainable development benefits. The cost for a CER is set by each CDM project and is today typically in the range of half a USD to five USD per CER. The user can thus select the type and number of CER they wish to purchase by putting them in the “shopping basket”. At the online check out, they pay with a credit card or PayPal. Immediately when this is done, the ownership of the CERs are transferred to the buyer and they are automatically cancelled in UNFCCC’s CDM Registry, which holds all CERs available at the on-line platform. The user receives confirmation on-screen and via e-mail that the transaction is complete, and normally within two working days the user also receives an official certificate from UNFCCC confirming the cancellation of the CERs. The certificate states the number of CERs cancelled, the name of the canceller as well as the purpose for which the CERs have been cancelled, as indicated by the user.

The experience from purchasing/cancelling CERs at the online platform is thus similar to many other online transactions, e.g. booking of hotels, reservation of flight tickets or purchasing of merchandise online.

Following the successful launch of the online platform in late 2015 it will be further developed and strengthened. Significant new features planned include:

- additional means of payment, such as through bank transfer;
- improved access to information about sustainable development benefits associated with the CERs on offer;
- business-to-business capabilities to allow companies to integrate the online platform into their business systems, thereby enabling automatic cancelling of CERs, e.g. every time a ticket is issued.
- increased supply of CERs to encompass the wider supply from all registered CDM projects.
- an express option that allows users to only indicate the number of CERs to be cancelled, without having to select from what projects they come from.

**In September 2015, the UNFCCC launched its first on-line offsetting platform.**

The advantage for stakeholders in the aviation sector, or really any other sector wishing to offset their climate footprint, is that the cancellation is easy, quick and comes with virtually no costs apart from those paid for the CERs<sup>1</sup>. The system also allows for selecting the country, technology, or the sustainable development benefits that are associated with the CERs, so that the CERs selected may have some link with e.g. the country of the user. In addition the environmental integrity of the offsets is guaranteed by UNFCCC.

So what challenges and opportunities lie ahead for CDM and the online platform? A fundamental uncertainty, which was resolved through the Paris Agreement, was whether offsets would be recognized at all in the new climate regime. Article 6 confirms that offsets will continue to be recognized well beyond 2020. The nuts and bolts of what criteria these offsets or ITMOs need to meet, and how they will be counted for so as to ensure that there is no double counting of emission reductions is now in the hands of parties to develop. CDM will continue at least until the end of the second commitment period of the Kyoto protocol (2023) but it seems that it will gradually be replaced by the Paris Agreement as it comes into force.

Since CDM effectively already today operates outside the compliance markets defined by the Kyoto Protocol, and since the mechanism is financially self-sufficient, CDM is well equipped to continue to operate also in the new climate architecture. This, of course, requires that CDM will evolve as needed to respond to the criteria to be established for ITMOs. This is the same requirement that will be put on any other mechanism generating ITMOs. That CDM will evolve as needed is not a farfetched assumption considering the tremendous investments and efforts that has gone into CDM over the past decade and the flexibility it has shown in responding to lessons learned and new requirements.

## CHAPTER 4

### GLOBAL EMISSIONS

A clear difference between CDM in the Kyoto protocol and the CDM in the post-2015 world is that it will no longer be “the only game in town”. The new mechanism defined by Article 6 in the Paris Agreement, and any other mechanism (or “cooperative approaches” in the Paris Agreement language) that may aspire to generate ITMO’s will in reality offer alternatives to CDM. However, in this universe CDM has comparative advantages that put the mechanism in a good position to continue to evolve and support mitigation action globally. This includes its rigorous UNFCCC approved standards, its extensive infrastructure, and its readily available supply of CDM offsets.

From the perspective of international aviation, it is clear that the Paris Agreement has provided significant clarification about the context within which a MBM would operate. The expectations on ICAO from stakeholders and parties alike are clearly conveyed through the overarching well-below-2°C target with the aim of 1.5°C of the Agreement. The conditions for building a MBM that is aligned with the international climate architecture under UNFCCC have never been so favorable. With high quality, easily accessible offsets immediately available under UNFCCC, and with a clear direction for the future development of offsets under the Paris Agreement, there should be nothing stopping ICAO from taking an ambitious, yet realistic and practical, decision on how aviation will be part of the solution to climate change.

### References:

1. The operation of the Online platform is funded by CDM itself (see reference<sup>2</sup>). This, however, does not include the nominal fees that PayPal or credit cards charge for any transaction.
2. CDM’s operations are funded through a small fee (share of proceeds) that is charged for every CER that is issued.