

TEPSA Pont Working Europe Seminar on EU climate, energy, and environmental policy: Policy Brief
**The challenge of emission reduction in the civil aviation sector –
The ETS and potential alternatives**

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Aviation has become essential to the functioning of our economy and society, but is at the same time linked to an enormous problem: high emissions. Emissions caused by the transport sector, including aviation, are still considerably higher than in 1990, which makes the sector the only one not having seen a decline in emissions over the past two decades. A slow decline can be observed from 2007 onwards, but this was also caused by the economic slowdown, and other sectors such as residential and services have achieved a stronger reduction (European Commission, 2017a). This might be linked to the fact that the transport and especially aviation sector might have less scope for emission reduction than other sectors, where zero emissions are conceivable in the long run. While road transport is already transitioning towards low-emission models, technology is not advanced enough yet to make zero emission air travelling viable on a commercial scale in the medium run. Despite accounting for only 13% of total transport emissions in 2014, aviation emission already account for more than 2% of global emissions (European Commission, 2017a). Finally, an extremely important fact to consider is that the emissions of the sector are expected to rise by 300-700% by 2050 according to the United Nation's International Civil Aviation Organisation (ICAO) (European Commission, 2017b).

The aviation sector in the EU's Emission Trading Scheme

The European Union recognized the problem early and started acting. However, when the Emissions Trading Scheme (ETS) was launched in 2005, the aviation sector was at first not included. When it was added in 2012, the initial plan provided for all flights departing from or arriving at an airport in the European Economic Area (EEA, consisting of the 28 member states as well as Liechtenstein, Norway and Iceland) to be subject to the Emission Trading Scheme (Directive 2008/101/EC). However, this proposal was met by fierce opposition from third countries such as China, India or the US, whose airlines complained of the excessive costs caused by the scheme. In the end, the EU gave in and limited its measure to intra-EEA flights despite the measure being compatible with international law according to the European Court of Justice (The Economist, 2012). At first, this approach was planned to apply until 2016, but is now prolonged until 2020. Concerning the intra-EEA emissions, the troubles of the ETS also have an impact. After an initial surplus of allowances, the price dropped strongly which caused impediments to the mechanism (European Commission, 2017b).

Aviation emission regulation on a global level

When the EU forewent applying its regulation to flights leaving and entering the EEA, it argued that regulating airline emissions in the medium run will be the ICAO's task, which would also lead to international agreements that are accepted by all the member states (European Commission, 2017b). Such agreements however also incur the risk of being more vague and less strict in order to obtain the approval of members with diverging objectives.

The current EU strategy is to keep the intra-EEA flights subject to the ETS scheme while all other flights will in the future be subject to the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which will be implemented in 2021. This scheme requires carriers to offset additional increases in emissions above the 2020 level by buying permits generated by projects that reduce emissions in other sectors. The implementation however will be affected to a large extent by what happens on national levels to actually enforce the regulation. Indeed, participation by member states will be voluntary in a first phase until 2027, and then only apply to countries fulfilling certain criteria. This model shows again that there is less scope to reduce emissions in the airline sector than elsewhere by allowing the sector to compensate for its emissions in other sectors (ICAO, 2017).

Looking ahead

To sum up, there are several problems with the current situation: First, the aviation sector produces a lot of emissions and despite some scope for reductions and more efficiency, a global decrease cannot be expected in the near future. Secondly, the ETS, which is also applied to part of the aviation sector is grappling with some difficulties. Finally, the international coordination on aviation emission reduction is only slowly being put into place and might not be strict enough to cause the needed decrease in emissions. There is however scope for improvement and several possible tools to tackle the problem:

- Switching to alternative modes of transport whenever possible offers a great scope for reduction in emissions. Especially in the European Union, this is possible by switching to trains, which can run on green energy. The Netherlands for example are a member state that has shown that this is possible. Moreover, synergies with already running EU projects such as the Marco Polo program are possible.
- When emissions cannot be reduced, carbon offsetting should be used to mitigate the impact of the emissions caused. This is what will be imposed by the ICAO's agreement, but only for any additional increases in emissions beyond the 2020 level. Since the sector currently has a level of emissions similar to those of the most polluting countries in the world, emissions need to be curbed even more to achieve the targets needed to limit global warming.

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