

Cabin cross check: Safety criteria for aviation's market-based measure

Carbon Market Watch Policy Briefing

May 2016



Summary

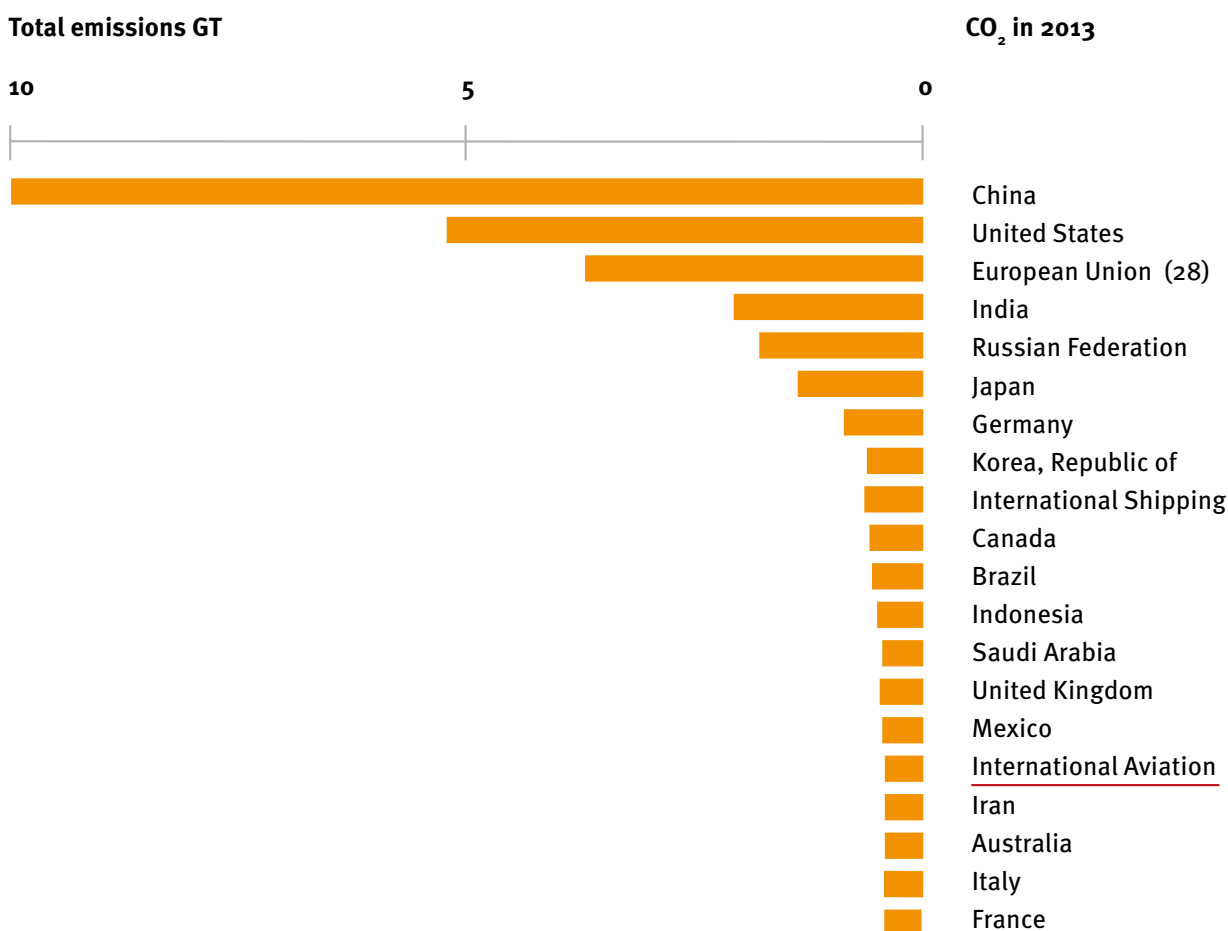
Aviation accounts for approximately 4.9% of all global warming¹ and is projected to grow by up to 300% by 2050 if left unaddressed. In order to limit the global average temperature rise to 1.5°C above preindustrial levels, international aviation must contribute to the global effort to reduce emissions. The International Civil Aviation Organization (ICAO), the international body responsible for regulating international aviation, agreed to an aspirational goal of carbon-neutral growth from 2020 levels (CNG 2020) in 2010.

Main imperatives:

- Recognize the need to limit global average temperature rise to 1.5°C above preindustrial levels in line with the Paris Agreement
- Set the 2020 climate neutral goal as a legally binding floor for the entire sector as a whole, with reviews every 3 years to rapidly and substantially increase ambition over time
- Ensure environmental and social integrity of carbon credits used for compliance in the GMBM, mandate strict MRV, and prevent double counting so as to not compromise efforts
- Consult relevant stakeholders while fostering transparency through public access to information

Aviation should work towards this goal with a basket of measures, such as operational improvements and sustainable, alternative fuels. The bulk of the emissions growth through 2040, up to 7.8 billion tonnes of GHG, is to be addressed by a global market-based measure (GMBM) to be adopted at the 39th triennial assembly in October 2016. Because the GMBM is the main element in the basket in the short to medium term, its effective design is critical to address emission reductions successfully in the aviation sector. This policy briefing outlines criteria for an effective and credible GMBM and how such a measure should be designed to effectively address aviation's contribution to climate change and enhance ambition.

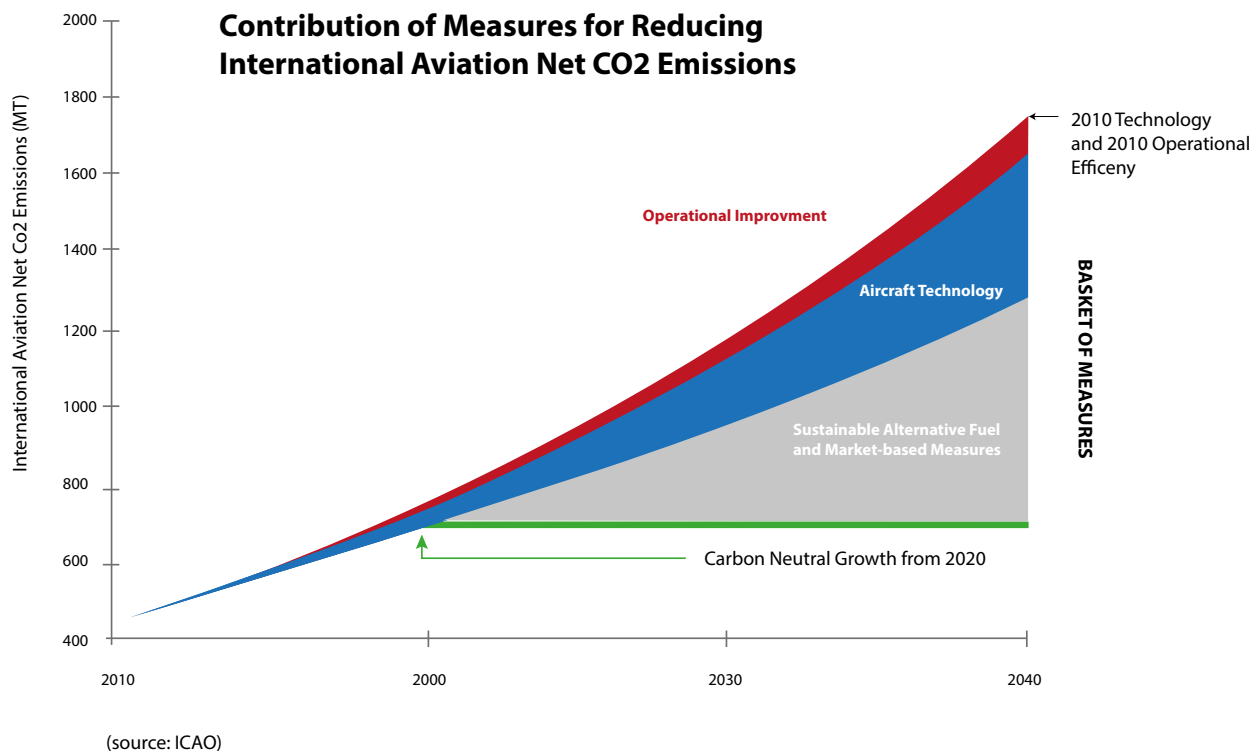
Total aviation emissions compared to top emitting countries



Introduction

Emissions from aviation represent approximately 2% of global greenhouse gas emissions, comparable to more than the emissions of the 129 least emitting countries combined. The rapid growth of aviation emissions pose a major challenge to global efforts to limit global warming – according to projections, emissions from aviation may treble between 2005 and 2050.

While the United Nations Framework Convention on Climate Change (UNFCCC) is the main global body addressing emissions in the UN system, UNFCCC Parties passed the mandate to address international emissions from aviation to ICAO in 1997.



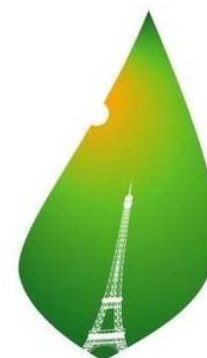
After little progress for years, in 2010, the ICAO Assembly agreed to an aspirational goal of carbon neutral growth from 2020 levels to be achieved through a number of measures including technical, operational, and infrastructure improvements; sustainable, alternative fuels; a CO₂ standard; and a global market-based measure (GMBM). In 2013, after prompting from important stakeholders and emerging regional measures, the ICAO Assembly agreed to develop a global market based mechanism to be adopted by the Assembly in 2016².

In the wake of the Paris Agreement, in order to contribute to limiting average global temperature increases to 1.5°C above preindustrial levels, emissions from international aviation must be addressed and ultimately dramatically reduced.

Ambition

Aspire to the 1.5°C warming limit. At the 21st UN climate change conference in Paris in December 2015, countries agreed to the goal to limit the global average temperature increase to 1.5°C above preindustrial levels. The aviation industry, through the Air Transport Action Group (ATAG) set itself the long term goal to reduce net aviation carbon emissions by 50% by 2050 relative to 2005 levels. ICAO's carbon neutral goal 2020 and the effort to develop a global market based measure represent first steps. However, to be effective these steps must be taken within the larger context of fast growing aviation emissions, the larger challenge of climate change, and the need for further action and ambition in the future.

Set the 2020 carbon neutral goal as a legally binding floor for the entire sector with regular review for increased ambition. In the future, progress made in the wider basket of measures, including the GMBM, to address aviation emissions should be critically reviewed to take stock of progress and technological progress including with regard to



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scope for increased ambition. To contribute to the 1.5°C goal, ambition must ratchet up over time and not be diluted.

Limit exceptions and provide for broad participation to strengthen the target integrity. The 2020 climate neutral goal is only meaningful if it provides a strong signal for the aviation industry and mandates broad participation. Several measures are important to ensure participation:

- **Compensate for developing country exemptions with increased effort by others** in order to not undermine the 2020 carbon neutral goal.
- **Provide developing countries the ability to opt-in.** Developing countries are often the most vulnerable to climate change and many have committed to ambitious, progressive contributions under the Paris Agreement. Their participation in the GMBM should not be precluded, but rather if granted an exception, they should have the ability to opt in from the beginning if they so choose.
- **Limit exceptions for new entrants and adjust the overall obligation accordingly.** Provisions for new entrants must equally not be allowed to compromise the comprehensive basis for the climate neutral goal. New subsidiaries of existing airlines and corporate inversions giving a new airline a new corporate body must not be granted exceptions from the GMBM. Further, exemptions for new airlines must be compensated by increased effort by others.

Limit banking of excess credit supply from before 2020. While early action of airlines and offset developers may be commendable, provisions must be found to reward such leadership without undermining longer term efforts by picking off only the low hanging fruit or by buying from oversupplied offsetting programs in the period to 2020. UNFCCC Parties established a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development, the 'sustainable development mechanism' in Paris in December 2015. The crediting periods of many CDM projects extend after 2020. To the extent that the CDM is used during a transition period until the SDM is fully functional, the GMBM should monitor and coordinate with the UNFCCC regarding the establishment of a suitable market mechanism with international oversight.

Environmental and social integrity with robust accounting

Ensure environmental and social integrity of the GMBM with mandatory rules. The principle of offsetting does not reduce emissions, but only compensates for them elsewhere. The quality of offset credits is vital, otherwise actual emissions are actually increased. It is therefore essential that offset credits are real, permanent, quantifiable, verifiable, and additional. Such criteria should not be given as mere guidance, but must rather be mandatory for all operators and include a negative list (see below) to exclude project types which cause environmental or social harm. Projects should also actively contribute to host countries' sustainable development through a variety of co-benefits and not only 'do no harm'. Permanence rules must be defined such that projects removing emissions through sinks cannot be reversed, a provision that cannot be guaranteed for many land use and forestry projects.

Exclude false solutions with a negative list.

The development of the GMBM is an opportunity to improve on previous market based mechanisms while not having to completely reinvent the wheel. The CDM for example is an example of an offsetting mechanism that despite some ongoing issues, has made important progress and fostered important debates in a forum with multilateral oversight. Regardless of the program selected for eligibility, one important step to ensure that false solutions are excluded is to compile a negative list of project types that are not eligible for use in the GMBM. This will provide clarity to project developers, as well as those buying credits. All compulsory systems where emitters have the option of using offsets for compliance have established negative lists to exclude certain project types.



A negative list for aviation should include:

- fossil fuel power plants
- nuclear facilities
- hydroelectric power production projects larger than 20MW
- projects in the land use, land-use change and forestry (LULUCF) sectors, including REDD+
- projects involving the destruction of HFC-23 and nitrous oxide (N₂O) from adipic acid production
- projects for geological CO₂ capture and sequestration
- projects that do not actively foster sustainable development or do harm

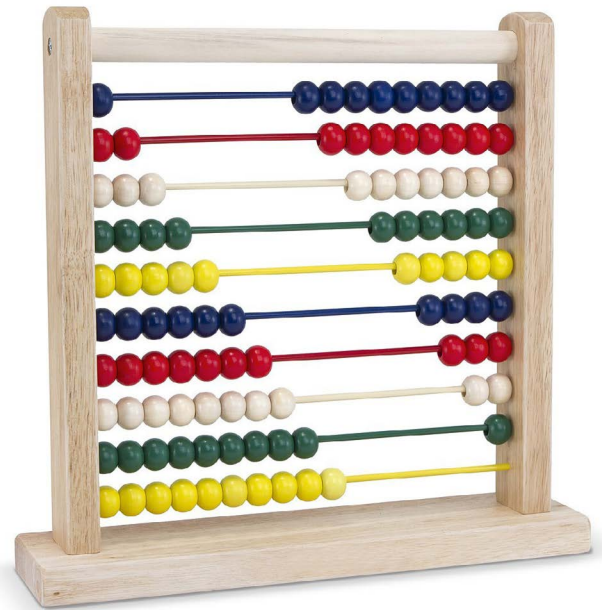
Institute strict monitoring, reporting, verification (MRV) and robust accounting provisions to accurately reflect effort.

Harmonized emission reporting procedures must be mandatory and applied to all operators equally. Accounting procedures and registries must preclude double counting of effort either with regard to different aircraft operators, countries' Nationally Determined Contributions, or other obligations. There are currently no measures to properly account for and reconcile voluntary offset programs within the UN system. ICAO should closely follow the development of accounting provisions under the UNFCCC to ensure that the GMBM is coherent with new accounting procedures and that all efforts are properly reflected in terms of progress towards reaching the long term overall 1.5°C limit.

Good Governance

Consult relevant stakeholders while fostering transparency through public access to information.

To achieve not only the 2020 CNG, but also to address emissions from aviation in the longer term, all stakeholders including governments, industry, and civil society must work together to successfully address the challenge. Work conducted in the Global Aviation Dialogues has provided valuable input, but future information and decision making must be made transparent and publicly available to ensure fair and effective action. Therefore, appropriate provisions must ensure that relevant decision makers are free from conflicts of interest including commercial concerns. Transparency and stakeholder participation can be promoted by: establishing participatory processes and regulatory frameworks; guaranteeing effective engagement by all stakeholders; and ensuring that a great number of participants can contribute to the discussions. This should furthermore address who should be consulted and how a consultation is done. Moreover, access to information should be made publicly available.



Opportunity to generate climate finance for developing countries

In December 2010, the UN General Secretary Ban Ki-Moon's High-Level Advisory Group on Climate Change Financing recommended generating revenue for climate finance for developing countries from the international aviation and maritime transport sectors³. The 38th ICAO Assembly Resolution echoed this statement with a recommendation that any revenues generated from an MBM should be used to mitigate aircraft engine emissions and to provide assistance and support for developing states. Under the Paris Agreement, a share of the proceeds from the new Sustainable Development Mechanism will be used "to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation", as is currently the case for the CDM. Policy makers now have an opportunity to follow through on these recommendations and design the GMBM to help generate revenue for climate finance by using the new Sustainable Development Mechanism, for example for the Green Climate Fund (GCF).

Conclusions and Recommendations

In the medium term, the mechanism should become a cap-and-trade scheme with a stringent cap and a declining limit on the use of offsets to address emissions reductions that are still not being made in-sector through technical and operational improvements. These latter measures will need to be combined with an ambitious set of technological and operational goals, rigorously implemented, to deliver the actual emission reductions needed in the sector. In the future, measures to address sources of climate interference, in addition to CO₂, will need to be developed.

As for the ongoing discussion on the mechanism, the current draft Assembly Resolution remains silent on the UNFCCC goal of keeping warming well under 2°C, and the objective of CNG2020 is still non-binding. An effective starting point for the GMBM requires a strong political signal that participants will actively participate in the market and effectively contribute to the measure's long term success.

A functioning market also requires environmental standards to ensure that climate objectives are achieved. Beyond ensuring an ambitious target, this requires mandatory quality criteria for credits to avoid the use of dangerous or ineffective offsets. Standards can be reinforced through the establishment of a negative list banning harmful activities. Similarly, robust accounting rules that avoid double counting credits will improve the reliability of ICAO's measure. Both binding quality criteria for both emissions units and robust accounting are essential for a functional climate measure.

Finally, effective markets are transparent. All stakeholders, including public, private and civil society groups, should have access to information concerning the review and implementation of the GMBM. Only by responding to necessary requirements for ambition, binding environmental and social rules, and transparent governance will ICAO deliver a functional market measure.

To address these essential elements, the following measures should be pursued:

Ambition:

- Aspire to the 1.5°C warming limit
- Set the 2020 carbon neutral goal as a legally binding floor for the entire sector with regular review for increased ambition
- Limit exceptions and provide for broad participation to strengthen the target integrity by:
 - ◊ Compensating for developing country exemptions with increased effort by others
 - ◊ Providing developing countries the ability to opt-in
 - ◊ Limiting exceptions for new entrants and adjust the overall obligation accordingly
- Limit banking of excess credit supply from before 2020

Environmental and social integrity with robust accounting

- Ensure environmental and social integrity of the GMBM with mandatory rules.
- Exclude false solutions with a negative list
- Institute strict monitoring, reporting, verification (MRV) and robust accounting provisions to accurately reflect effort

Good governance

- Consult relevant stakeholders while fostering transparency through public access to information

1. Lee, D. et al (2009). Aviation and global climate change in the 21st Century. Atmospheric Environment 43 (2009) 3520-3537.
2. See ICAO Assembly Resolution A38-18 on Climate Change: www.icao.int/Meetings/a38/Documents/Resolutions/a38_res_prov_en.pdf
3. Report of the Secretary - General's High-level Advisory Group on climate change financing http://www.un.org/wcm/webdav/site/climatechange/shared/Documents/AGF_reports/AGF%20Report.pdf



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