

# LINKING FLIGHT AND FORESTS: THE ESSENTIAL ROLE OF FORESTS IN SUPPORTING GLOBAL AVIATION'S RESPONSE TO CLIMATE CHANGE

## An Overview for ICAO Policy Makers

Harnessing the aviation sector's commitment to curb its emissions to help reduce global deforestation is one of the most compelling ways to slow climate change, maintain ecosystems upon which the whole world depends and improve the livelihoods of 1.6 billion people. ICAO and the world should seize this opportunity to meet its climate objectives and the Sustainable Development Goals.

## EXECUTIVE SUMMARY

In October 2016, the International Civil Aviation Organization (ICAO) Assembly will finalize a global market-based measure (MBM) to assist the international aviation industry in achieving its agreed climate change targets—capping aviation greenhouse gas emissions at 2020 levels, delivering “carbon neutral growth from 2020.”

- ▶ Countries are currently developing the components of the MBM, including what types of activities should be eligible.
- ▶ Reducing emissions from deforestation and forest degradation, and sustainable management of forests, conservation of forest carbon stocks and enhancement of forest carbon stocks (collectively referred to as REDD+) is a framework developed under the United Nations Framework Convention on Climate Change (UNFCCC) and was included in Article 5 of the Paris Agreement<sup>1</sup> for addressing deforestation by helping society value forests for their carbon sequestration, storage and other services.
- ▶ REDD+ has many benefits in line with the goals and principles of the ICAO MBM, including:
  - An existing policy framework for reducing deforestation, sustainably managing forests, enhancing forest carbon stocks, and delivering both carbon and non-carbon benefits;
  - Incentives to protect, restore and sustainably manage forests and their natural capital with almost a decade of proven results;
  - Benefits beyond emissions reductions, as REDD+ can also protect biodiversity, support local communities and ensure that vital ecosystem functions remain intact; and
  - Robust and cost-effective REDD+ offsets which can play a key role in filling the emissions gap and supporting the aviation sector to meet its climate goals.

**The ICAO MBM can depend on REDD+ to provide the volume of robust offsets it needs to meet its emission reduction targets as well as a multitude of additional benefits in developing countries—including sustainable development, biodiversity conservation and improved human well-being—and to do so with environmental integrity.**

<sup>1</sup> United Nations Framework Convention on Climate Change (UNFCCC). 2015. Adoption of the Paris Agreement.

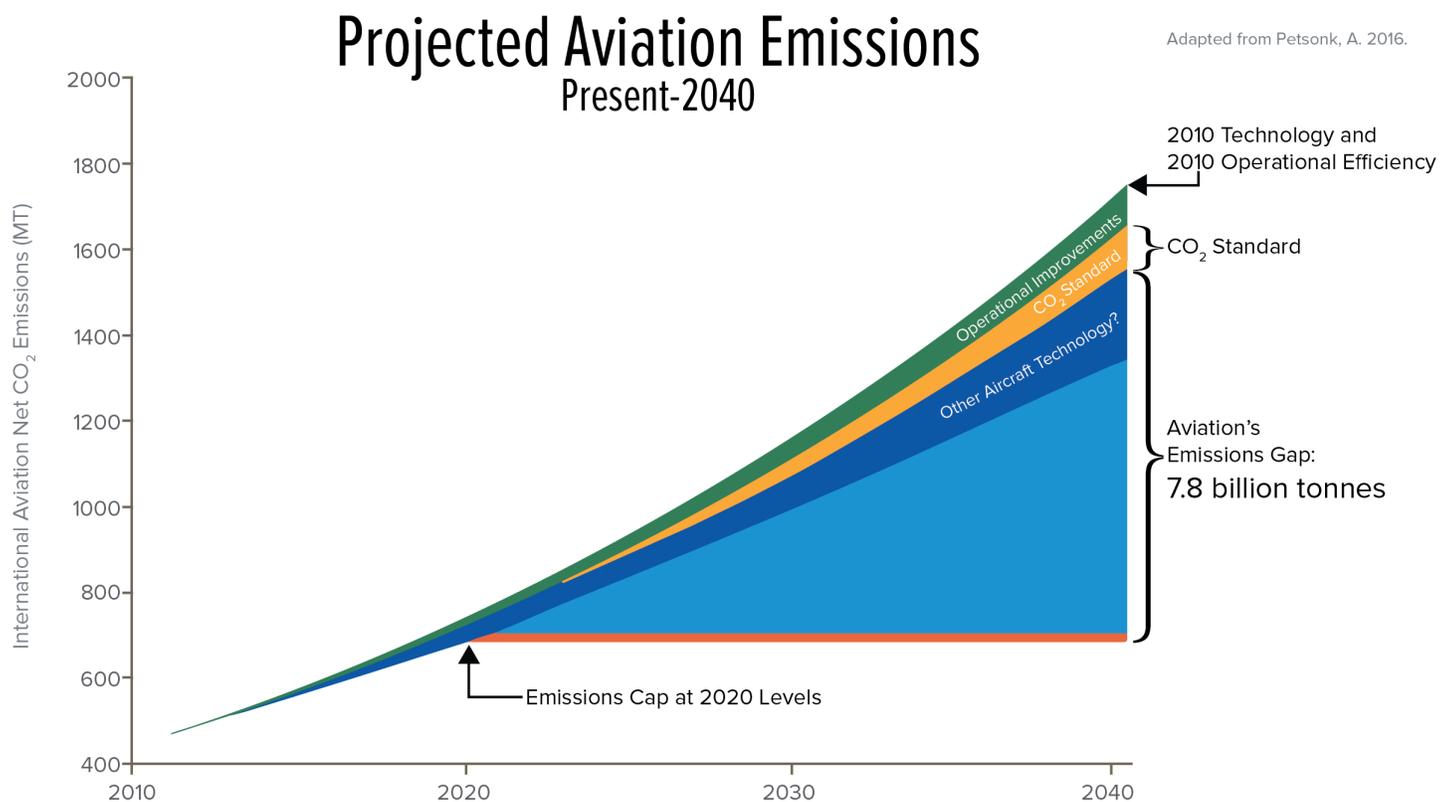


# THE ROLE OF INTERNATIONAL AVIATION IN ADDRESSING CLIMATE CHANGE

If international aviation were its own country, it would be a top-ten emitter of carbon dioxide globally;<sup>2</sup> and because aviation’s pollution is emitted at high altitudes, scientists think it may exert an even more powerful warming effect.<sup>3</sup> However, the sector is not covered by the global climate agreement under the UNFCCC and is not currently bound to emission reduction rules.

As the world’s population continues to grow and becomes more globalized, so does the scale of international aviation. To keep up with projected increases in demand for international air travel, an estimated 56,000 new passenger aircraft will have to take to the sky over the next 25 years.<sup>4</sup> As a result, aviation’s carbon emissions are forecast to skyrocket in coming years and could triple or quadruple by 2040.<sup>5</sup>

To address this risk, ICAO recently proposed the world’s first aircraft carbon dioxide efficiency standard.<sup>6</sup> Improving the operational and technological efficiency of international aviation is vital for addressing the industry’s carbon footprint. However, even with such improvements, **a large emissions gap remains to be addressed by the MBM**, as illustrated in Figure 1.



**Figure 1:** The top of the upward sloping curve shows how international aviation’s emissions are slated to grow in coming years. The horizontal red line toward the bottom, labeled “Emissions Cap at 2020 levels,” shows the ICAO Assembly’s agreed goal of “carbon-neutral growth from 2020.” The area below the top of the curve and above the horizontal red line at 2020 is the total amount of emissions that international aviation must address to meet this goal. Reductions from operational improvements are shown in green and expected emissions reductions from ICAO’s new CO<sub>2</sub> standard are shown in orange. The remaining “emissions gap” of 7.8 billion tonnes is shown in blue, between the orange wedge and the horizontal red “Emissions Cap at 2020 levels” line.<sup>7</sup>

<sup>2</sup> IEA. 2015. CO<sub>2</sub> Emissions from Fuel Combustion Highlights, 2015. <http://www.iea.org/publications/freepublications/publication/co2-emissions-from-fuel-combustion-highlights-2015.html>.

<sup>3</sup> International aviation may be responsible for up to 5 percent of the world’s total anthropogenic warming, according to Lee et al. 2009. *Aviation and global climate change in the 21st century*. Atmospheric Environment (43)22-23. <http://www.sciencedirect.com/science/article/pii/S1352231009003574>.

<sup>4</sup> ICAO Secretariat. 2013. Air Traffic and Fleet Forecasts. 20-21. ICAO Environmental Report 2013. <http://cfapp.icao.int/Environmental-Report-2013/#20/z>.

<sup>5</sup> Fleming and Ziegler, “Environmental Trends in Aviation to 2050.” 24-25. In ICAO Environmental Report 2013, available at <http://cfapp.icao.int/Environmental-Report-2013/#25/z>.

<sup>6</sup> ICAO. 2016. *New ICAO Aircraft CO<sub>2</sub> Standard One Step Closer To Final Adoption*. <http://www.icao.int/Newsroom/Pages/New-ICAO-Aircraft-CO2-Standard-One-Step-Closer-To-Final-Adoption.aspx>.

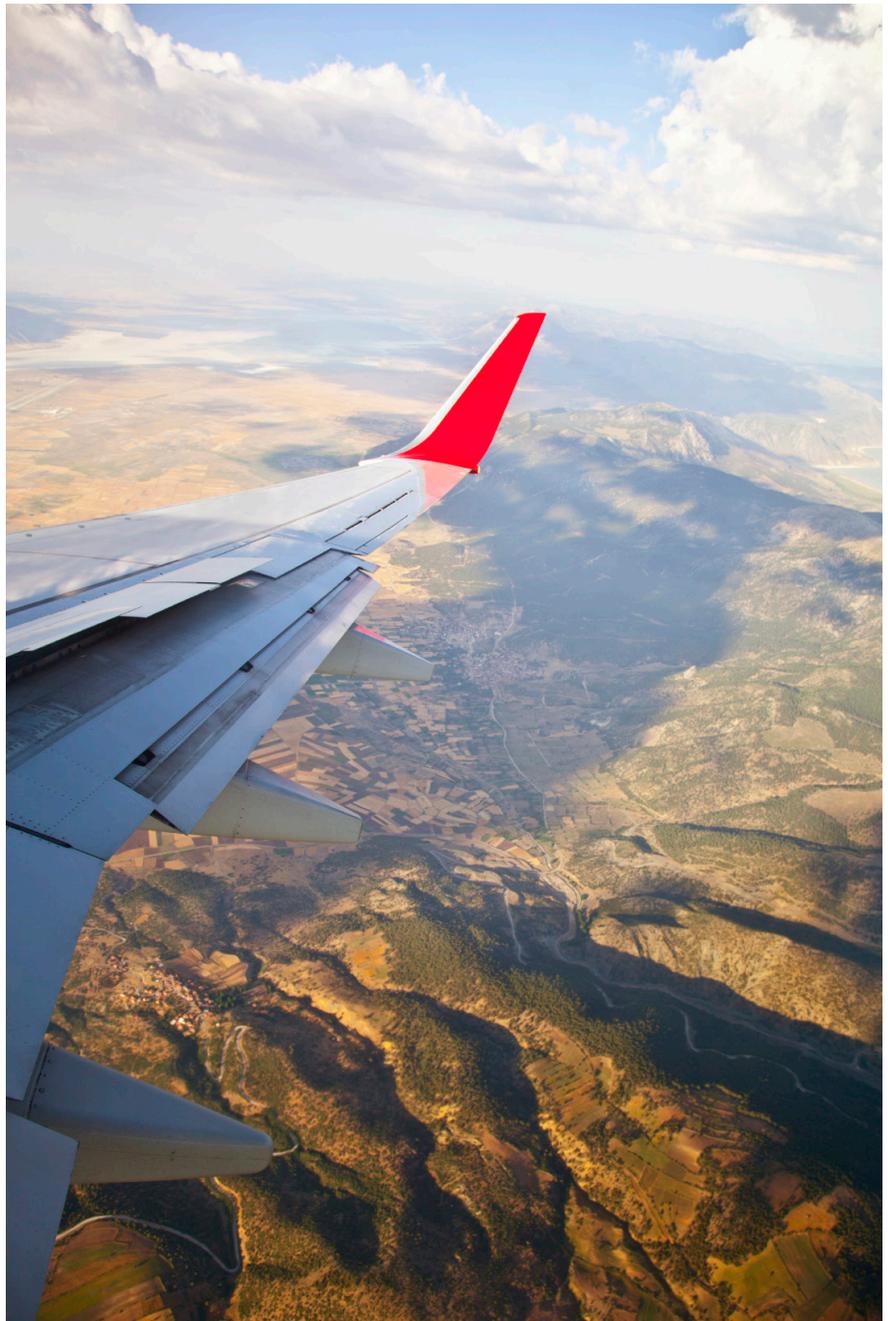
<sup>7</sup> For the source of the “emissions gap” graph, see Petsonk, A. 2016. To understand airplanes’ climate pollution, a picture is worth a thousand words. [http://blogs.edf.org/climatetalks/2016/02/12/to-understand-airplanes-climate-pollution-a-picture-is-worth-a-thousand-words/?\\_ga=1.245391884.948298676.145408906](http://blogs.edf.org/climatetalks/2016/02/12/to-understand-airplanes-climate-pollution-a-picture-is-worth-a-thousand-words/?_ga=1.245391884.948298676.145408906). This graph has been adapted from ICAO. 2015. Overview of ICAO’s Environmental Work. [http://www.icao.int/Meetings/GLADs-2015/Documents/Presentations/Singapore/20150423\\_GLADs\\_P1\\_V36\\_SINGAPORE.pdf](http://www.icao.int/Meetings/GLADs-2015/Documents/Presentations/Singapore/20150423_GLADs_P1_V36_SINGAPORE.pdf).

# ICAO MBM: AN OPPORTUNITY TO SUPPORT FOREST CONSERVATION AND ADDRESS CLIMATE CHANGE

To address climate change, it is critically important to protect the world's forests, which currently store more carbon than is in the world's atmosphere.<sup>8</sup> Tropical forests alone absorb almost a fifth of all carbon dioxide released each year from the burning of fossil fuels, thus playing a significant role in slowing the rate of climate change.<sup>9</sup> Yet the destruction of these same tropical forests contributes 10 to 15 percent of global annual carbon emissions.<sup>10</sup> Scientists warn that the goal of limiting global warming to 1.5 °C or even 2 °C will be impossible to achieve if the world does not change how it uses its land-based resources, particularly tropical forests.

REDD+ is an important framework for reducing emissions from deforestation and forest degradation, sustainably managing forests, enhancing forest carbon stocks and delivering both carbon and non-carbon benefits. It was first established and defined as a mitigation option by the 197 Parties of the UNFCCC in Decision 1/CP.13 in 2007, and was further elaborated upon in subsequent decisions.<sup>11</sup>

The benefits of REDD+ reach well beyond its contributions to emission reduction efforts, providing additional environmental and social benefits not found in the mitigation activities of other sectors. For example, tropical forests provide food, water, fuel and medicine to 1.6 billion people.<sup>12</sup> These forests also house much of the world's biodiversity and help mitigate flooding, reduce soil erosion and conserve water resources critical to local communities. Existing safeguards and multiple-benefit standards specifically promote and enhance the provision of these additional social and environmental benefits.<sup>13,14</sup> Through the inclusion of REDD+ in ICAO's MBM, airlines will provide REDD+ with an important source of financing, thereby helping to ensure REDD+ effectiveness not only in terms of mitigating climate change, but also, by adopting appropriate safeguards, providing additional benefits for local communities and ecosystems worldwide.



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<sup>8</sup> The atmosphere contains ~720 gigatonnes of carbon (Falkowski, P. et al. 2000. The Global Carbon Cycle: A Test of Our Knowledge of Earth as a System. *Science* 290:291- 296.); Forests contain 861 +/- 66 gigatonnes of carbon (Pan, Y. et al. 2011. A Large and Persistent Carbon Sink in the World's Forests. *Science* 333:988-993.).

<sup>9</sup> Lewis, S.L. et al. 2009. Increasing Carbon Storage in Intact African Tropical Forests. *Nature*, Vol 457.

<sup>10</sup> Busch, Jonah and Kalifi Ferretti-Gallon. 2014. Stopping Deforestation: What Works and What Doesn't. Center for Global Development, Washington, DC.

<sup>11</sup> UNFCCC Decisions 1/CP.16 paragraphs 70 and 71, 12/CP.17, 9/CP.19, and 10/CP.19 <http://unfccc.int/documentation/decisions/items/3597.php>.

<sup>12</sup> UNEP. 2014. Building Natural Capital: How REDD+ can Support a Green Economy, Report of the International Resource Panel, United Nations Environment Programme, Nairobi, Kenya.

<sup>13</sup> United Nations Framework Convention on Climate Change (UNFCCC). 2011. Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010. FCCC/ CP/2010/7/Add.1. <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>.

<sup>14</sup> REDD+ Social & Environmental Standards (REDD+ SES). 2014. <http://www.redd-standards.org/>.

<sup>15</sup> International Civil Aviation Organization. 2013. Assembly Resolutions in Force. Doc 10022. Resolution A38-18. <http://www.icao.int/Meetings/GLADs-2015/Documents/A38-18.pdf>. For the full list of guiding principles and additional details, see the Technical Overview associated with this briefing paper.

# REDD+: A WELL-ESTABLISHED OPPORTUNITY TO FILL THE AVIATION EMISSIONS GAP

The ICAO Assembly has identified sixteen high-level principles<sup>15</sup> for designing the MBM, agreeing that these activities should, *inter alia*:

1. Support the mitigation of greenhouse gas emissions;
2. Be transparent;
3. Be cost-effective;
4. Ensure no double counting/double claiming of emissions reductions; and
5. Minimize leakage and market distortions.

Over the last decade, the REDD+ sector has matured considerably, demonstrating credible approaches to ensuring environmental integrity, and is therefore well-positioned to address all of the MBM's guiding principles. For example:

1. **Mitigation of greenhouse gas emissions:** As outlined in the previous section, REDD+ has established itself as a well-accepted approach to reduce emissions;
2. **Transparent:** Robust approaches for the accounting, monitoring, reporting and independent verification of REDD+ activities have been developed and implemented around the world;<sup>16</sup>
3. **Cost-effective:** Many governments at the national and subnational levels, international financial institutions and non-state actors have already undertaken the necessary groundwork to ensure the effective implementation of REDD+, making REDD+ a highly sought after offset type by both the public and private sectors;
4. **No double counting/double claiming of emissions reductions:** All REDD+ activities, which need to be tracked in transparent registries, would be subject to strict no double counting/double claiming requirements, such as requiring host countries to account for REDD+ tonnes in their national accounts. These requirements would need to be applied to all credits, REDD+ or otherwise, being used by the aviation sector; and
5. **Minimize leakage and market distortions:** Tools and methods have been created to account for and manage non-permanence and leakage to other areas, ensuring that credited forest emission reductions are real and permanent.<sup>17</sup> Well-established methods have also been developed to determine additionality and ensure credible baselines (or reference levels) for calculating reductions based on historical deforestation.

All of the provisions outlined above have been developed through transparent processes and are demonstrated in REDD+ activities throughout the world.

Over the past decade, several airlines have demonstrated climate leadership as early supporters for REDD+ and other forest conservation activities. For example, leading airlines such as Air Canada, Delta Air Lines, Kenya Airways, Qantas and United Airlines enable their passengers to voluntarily offset emissions from their flights via forest conservation and restoration activities.<sup>18</sup> REDD+ has also garnered support from over 70 countries around the world, including REDD+ donors and implementing countries.<sup>19</sup> Further, REDD+ was specifically recognized by all member states of the UNFCCC as a valuable mitigation strategy and financial incentive in the 2015 Paris Agreement, sending a strong global signal about the importance of REDD+ and its role in addressing climate change.<sup>20</sup>

## CONCLUSION

REDD+ is a proven, efficient and effective way to achieve emission reductions at scale, as well as additional benefits for society and the environment. It is in line with the goals and principles of the ICAO MBM, and the supply of robust and cost-effective REDD+ offsets can play a key role in filling the emissions gap and supporting the aviation sector to meet its climate goals. The window in which we can ensure this mutually beneficial partnership between forests and flight is between now and the ICAO Assembly in September-October 2016.

**We call on ICAO to include REDD+ credits as an eligible mitigation option for the MBM in October.**

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<sup>16</sup> These include approaches such as the Methodological Framework (MF) of the Forest Carbon Partnership Facility (FCPF) and the VCS Jurisdictional and Nested REDD+ (JNR) framework.

<sup>17</sup> Best-practice standards frameworks ensure the permanence of credited emission reductions from REDD+ activities through the use of a diversified buffer reserve, which covers any potential losses or reversals that may occur.

<sup>18</sup> Air Canada. 2016. Travel carbon neutral. <http://www.aircanada.com/en/travelinfo/traveller/zfp.html>; Delta Air Lines. 2016. Carbon Calculator. [https://www.delta.com/content/www/en\\_US/about-delta/corporate-responsibility/carbon-emissions-calculator-https.html#calc](https://www.delta.com/content/www/en_US/about-delta/corporate-responsibility/carbon-emissions-calculator-https.html#calc); Kenya Airways. 2016. Carbon Offset Program. [https://www.kenya-airways.com/global/Other\\_Services/Carbon\\_Offset\\_Project/](https://www.kenya-airways.com/global/Other_Services/Carbon_Offset_Project/); Qantas. 2016. Fly Carbon Neutral Program Overview. <http://www.qantas.com/travel/airlines/fly-carbon-neutral/global/en>; United Airlines. 2016. CarbonChoice carbon offset program. <https://www.united.com/web/en-US/content/company/globalcitizenship/environment/carbon-offset-program.aspx>.

<sup>19</sup> UN-REDD Programme. 2016. Regions and Countries Overview. [http://www.unredd.net/index.php?option=com\\_unregions&view=overview&Itemid=495](http://www.unredd.net/index.php?option=com_unregions&view=overview&Itemid=495).

<sup>20</sup> United Nations Framework Convention on Climate Change (UNFCCC). 2015. Adoption of the Paris Agreement. FCCC/CP/2015/L.9. <https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf>.

# TECHNICAL OVERVIEW

## BACKGROUND ON THE INTERNATIONAL CIVIL AVIATION ORGANIZATION AND ITS PROCESSES

### SUMMARY

In 2013, the International Civil Aviation Organization (ICAO), the UN body responsible for setting standards for international flights, pledged to cap aviation greenhouse gas emissions at 2020 levels, delivering “carbon neutral growth from 2020.”<sup>1</sup> The industry has gone even further, committing to reduce their net carbon emissions to half of their 2005 levels by 2050 and improve fuel efficiency by 1.5 percent per year through to 2020.<sup>2</sup> Even with anticipated advances in fuel efficiency and other technologies, civil aviation will need to ensure an additional 7.8 billion tonnes of carbon dioxide emission reductions between 2020 and 2040.<sup>3</sup> The industry will therefore have to supplement technological and operational improvements to reduce emissions with the use of carbon offsets. **In October 2016, the ICAO Assembly will finalize a global market-based measure (MBM) to assist the international aviation industry in achieving its agreed targets.**

Countries are currently developing the components of the MBM, including what types of activities should be eligible. Reducing emissions from deforestation and forest degradation, and sustainable management of forests, conservation of forest carbon stocks and enhancement of forest carbon stocks (collectively referred to as REDD+) is a framework developed under the United Nations Framework Convention on Climate Change (UNFCCC) and included in Article 5 of the Paris Agreement<sup>4</sup> for addressing deforestation by helping society value forests for their carbon sequestration, storage and other services. REDD+ offers incentives to protect, restore and sustainably manage forests and their natural capital, and has almost a decade of proven results. Unlike mitigation activities in other sectors, each REDD+ credit not only avoids one metric tonne of carbon dioxide from being emitted to the atmosphere, but can also protect biodiversity, support local communities and ensure that vital ecosystem functions remain intact. These benefits are bolstered by a comprehensive set of safeguards and standards that ensure conservation and human development outcomes on the ground. **The ICAO MBM can depend on REDD+ to provide the volume of robust offsets it needs to meet its emission reduction targets as well as a multitude of additional benefits in developing countries—including sustainable development, biodiversity conservation and improved human well-being—and to do so with environmental integrity.**

### THE ICAO MARKET-BASED MEASURE

In 2010, the 37th ICAO Assembly agreed on high-level principles and aspirational goals to guide the establishment of the MBM, which were further elaborated and revised by the 38th Assembly in 2013. One of the fundamental objectives of the MBM is to support the mitigation of greenhouse gas emissions from international aviation and to advance the sustainable development of the sector. The MBM aims to support the sector in reaching its mitigation targets in a realistic and cost-effective way. Therefore, it is important that the forthcoming MBM ensure the fair treatment of international aviation in relation to other sectors by not imposing inappropriate economic burdens on the sector. The MBM should also promote transparency and simplicity and facilitate appropriate access to all carbon markets.

The accounting and reporting of emissions reductions are crucial for ensuring the environmental integrity of actions taken under the MBM. To prevent the duplication of emissions claimed, the guiding principles call for countries to reflect reductions achieved through MBMs in their national emissions reporting. It is imperative that emissions claimed are not accounted for more than once, as double counting or claiming would artificially inflate reported progress toward the mitigation target and compromise the achievement of the MBM’s objectives. Reductions claimed should also minimize leakage of greenhouse gas emissions—wherein reductions in one geography lead to an increase in another geography, resulting in fewer reductions than what is recorded.

The updated MBM guiding principles in 2013 called for common but differentiated responsibilities and respective capabilities to be considered in the development of the MBM, meaning that all countries would be working toward a common goal but may contribute differently or to varying levels, depending on their respective capacities and capabilities.

<sup>1</sup> See ICAO Assembly Resolution A/38-18, Consolidated statement of continuing ICAO policies and practices related to environmental protection — Climate change, available at <http://www.icao.int/Meetings/GLADs-2015/Documents/A38-18.pdf>.

<sup>2</sup> Air Transportation Action Group. 2013. Reducing Emissions from Aviation through Carbon-Neutral Growth from 2020. <https://www.iata.org/policy/environment/Documents/atag-paper-on-cng2020-july2013.pdf>.

<sup>3</sup> See Figure 1 of the “Linking Flights and Forest: An Overview for ICAO Policy Makers.” For more information, see Peterson, A. 2016. To understand airplanes’ climate pollution, a picture is worth a thousand words. [http://blogs.edf.org/climatetalks/2016/02/12/to-understand-airplanes-climate-pollution-a-picture-is-worth-a-thousand-words/?\\_ga=1.245391884.948298676.1454089063](http://blogs.edf.org/climatetalks/2016/02/12/to-understand-airplanes-climate-pollution-a-picture-is-worth-a-thousand-words/?_ga=1.245391884.948298676.1454089063).

<sup>4</sup> United Nations Framework Convention on Climate Change (UNFCCC). 2015. Adoption of the Paris Agreement. FCCC/CP/2015/L.9. <https://unfccc.int/resource/docs/2015/cop21/eng/109.pdf>.

For a full list of guiding principles, please see the table below, as well as ICAO’s document titled Assembly Resolutions in Force (as of 4 October 2013)<sup>5</sup> and the Report of the Executive Committee on Agenda Item 17 (Section on Climate Change).<sup>6</sup>

Guiding Principles of the MBM (38th Assembly) <sup>7</sup>	
MBMs should support sustainable development of the international aviation sector;	MBMs should recognize past and future achievements and investments in aviation fuel efficiency and in other measures to reduce aviation emissions;
MBMs should support the mitigation of greenhouse gas emissions from international aviation;	MBMs should not impose inappropriate economic burden on international aviation;
MBMs should contribute towards achieving global aspirational goals;	MBMs should facilitate appropriate access to all carbon markets;
MBMs should be transparent and administratively simple;	MBMs should be assessed in relation to various measures on the basis of performance measured in terms of CO2 emissions reductions or avoidance, where appropriate;
MBMs should be cost-effective;	MBMs should include de minimis provisions;
MBMs should not be duplicative and international aviation CO2 emissions should be accounted for only once;	Where revenues are generated from MBMs, it is strongly recommended that they should be applied in the first instance to mitigating the environmental impact of aircraft engine emissions, including mitigation and adaptation, as well as assistance to and support for developing States;
MBMs should minimize carbon leakage and market distortions;	Where emissions reductions are achieved through MBMs, they should be identified in States’ emissions reporting; and
MBMs should ensure the fair treatment of the international aviation sector in relation to other sectors;	MBMs should take into account the principle of common but differentiated responsibilities and respective capabilities, the special circumstances and respective capabilities, and the principle of non-discrimination and equal and fair opportunities.

## STRUCTURE OF ICAO

The **International Civil Aviation Organization (ICAO)** is a United Nations (UN) body established in 1944 to manage the administration and the governance of the Chicago Convention delineating guidelines and standards around international civil aviation member states are expected to follow.<sup>8</sup> According to the terms of the Chicago Convention, ICAO is made up of an **Assembly**, a **Council**, and a **Secretariat**.<sup>9</sup> Particularly relevant to the decision-making process around the Market-Based Measure (MBM) are the Assembly and the Council:

- ▶ The **Assembly** is composed of 191 member states, and normally meets once every three years. At this time, it reviews the work undertaken in ICAO and sets future policy as well as the budget for the subsequent three years. It is during the Assembly’s triennial meeting that the MBM, in its near-final form, would be put to a vote. The Assembly tries to make decisions by consensus, but failing this, can pass resolutions via a simple majority.
- ▶ The **Council** is elected by the Assembly for three-year terms and is composed of 36 member states. The Council meets several times a year, providing ongoing direction to ICAO’s work. It is responsible for adopting and incorporating Standards and Recommended Practices (SARPs) as Annexes into the Chicago Convention. It is in the ICAO Council meetings leading up to the Assembly that the structure of the MBM will be molded, reshaped and refined, before the near-final form is approved as a draft resolution and put forth to the Assembly for voting.

The Council is assisted in its decision-making by many technical committees comprising experts from member states as well as experts from observer organizations representing industry and civil society. Relevant to the MBM is the **Committee on Aviation Environmental Protection (CAEP)**, established in 1983 to assist the Council in formulating new policies and SARPs related to aircraft noise and emissions and aviation environmental impact more generally. CAEP is made up of 28 member states and 10 observer organizations, including the International Coalition for Sustainable Aviation, which represents its civil society members.<sup>10</sup>

<sup>5</sup> International Civil Aviation Organization. 2013. Assembly Resolutions in Force. Doc 10022. Resolution A38-18. <http://www.icao.int/Meetings/GLADs-2015/Documents/A38-18.pdf>.

<sup>6</sup> International Civil Aviation Organization. 2013. Report of the Executive Committee on Agenda Item 17. A38-WP/430. [http://www.icao.int/Meetings/a38/Documents/WP/wp430\\_en.pdf](http://www.icao.int/Meetings/a38/Documents/WP/wp430_en.pdf).

<sup>7</sup> International Civil Aviation Organization. 2013. Assembly Resolutions in Force. Doc 10022. Resolution A38-18. <http://www.icao.int/Meetings/GLADs-2015/Documents/A38-18.pdf>.

<sup>8</sup> International Civil Aviation Organization. 2016. *About ICAO*. <http://www.icao.int/about-icao/Pages/default.aspx>.

<sup>9</sup> For more information, see International Civil Aviation Organization. 2016. *How It Works*. <http://www.icao.int/about-icao/pages/how-it-works.aspx>.

<sup>10</sup> For more information, including a list of members, see International Civil Aviation Organization. 2016. *Committee on Aviation Environmental Protection (CAEP)*. <http://www.icao.int/environmental-protection/Pages/Caep.aspx#Members>.

In January 2014, the ICAO Council established the **Global MBM Technical Task Force (GMTF)** within CAEP to support the technical and analytical work around the MBM.<sup>11</sup> It is divided into two main sub-groups:

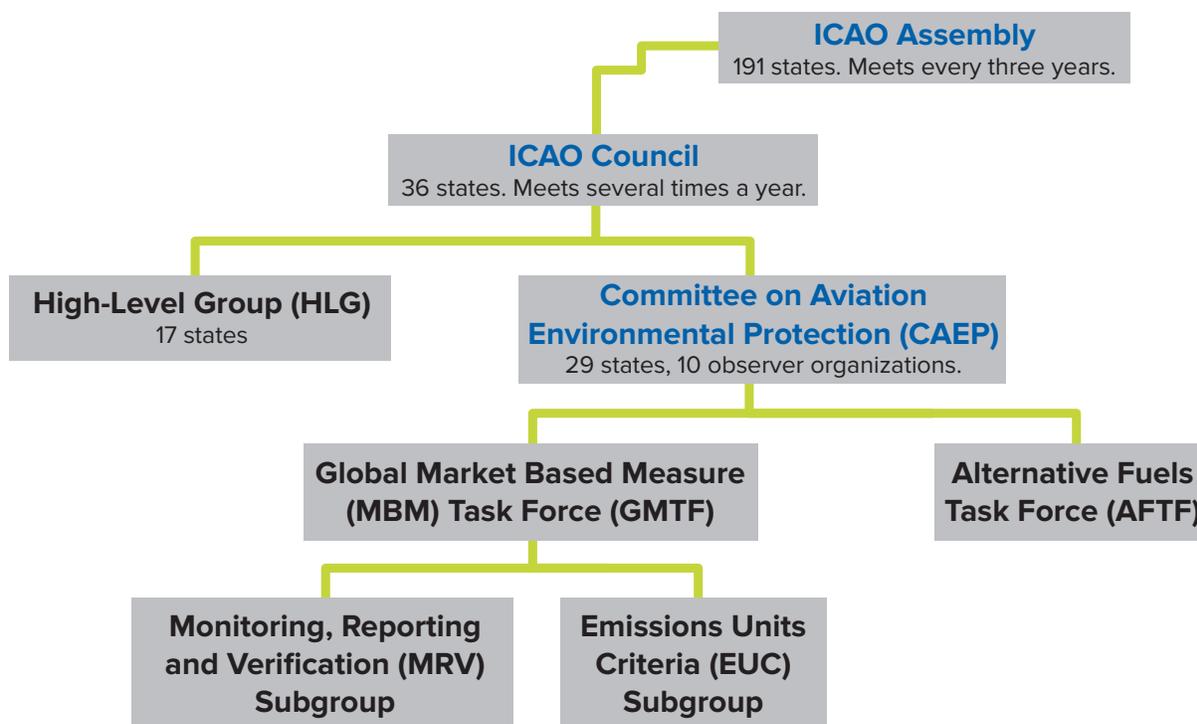
- ▶ The **Emissions Units Criteria (EUC)** subgroup evaluates and recommends eligibility criteria for emissions units, be it offsets and/or allowances. It also assesses the availability of emissions units to satisfy the needs of the aviation sector, and the impact this may have on carbon market supply, demand and price.
- ▶ The **Monitoring, Reporting and Verification (MRV)** subgroup makes recommendations on the requirements and procedures for MRV of global carbon emissions from international civil aviation.
- ▶ Additionally, the GMTF is pursuing work around emissions unit **registries**, looking at how to keep track of emissions units used to satisfy aviation demand.

In addition to the GMTF and its subgroups, two other groups are relevant to the MBM decision-making process.

The **Alternative Fuels Task Force (AFTF)** was set up in November 2013 to “evaluate the range of potential greenhouse gas emissions reductions (GHG) that could result from the use of alternative fuels in aviation to 2050” by looking at projected alternative fuel production and the life cycle emissions reductions these could provide.<sup>12</sup> The results of the work by the AFTF could influence the magnitude of aviation’s emissions post-2020 that would need to be dealt with under the MBM.

Various policy bodies, including the **Environmental Advisory Group (EAG)** comprised of 17 Council Representatives and one observer organization (the International Air Transport Association, IATA); a **High-Level Group (HLG)** of 17 governments represented by officers from capitals; and various other bodies including the Council itself – have been engaged in various parts of the MBM development.<sup>13</sup>

Please see the graphic below for a visual overview of the decision-making and analytical process surrounding the ICAO MBM.



**Figure 1:** The relevant bodies involved in structuring and approving the MBM.

<sup>11</sup> For more information, see International Civil Aviation Organization. 2016. *Market-Based Measures*. <http://www.icao.int/environmental-protection/Pages/market-based-measures.aspx> and GreenAirOnline.com. 2014. *ICAO groups start work on developing a global market-based measure for international aviation emissions*. <http://www.greenaironline.com/news.php?viewStory=1836>.

<sup>12</sup> For more information, see International Civil Aviation Organization. n.d. *AFTF-large.png*. <http://www.icao.int/environmental-protection/Documents/CAEP/Images/AFTF-Large.png>.

<sup>13</sup> For more information, see International Civil Aviation Organization. 2016. *Market-Based Measures*. <http://www.icao.int/environmental-protection/Pages/market-based-measures.aspx> and GreenAirOnline.com. 2014. *ICAO groups start work on developing a global market-based measure for international aviation emissions*. <http://www.greenaironline.com/news.php?viewStory=1836>.

# TIMELINE

The ICAO Council, the primary decision-making body, and its working groups will meet between now and June to further develop the emission reductions package, including the market-based measure.

- ▶ **March-April:** Between 20 March and 8 April, the Council will host regional dialogues to inform and update negotiators on recent developments for creating and defining a global MBM scheme. Participation in these meetings will support negotiators in preparing for the High-level Meeting on a global MBM scheme (May), ICAO Council Meeting (June) and, subsequently, the 39th Session of the ICAO Assembly (September-October).<sup>14</sup>
- ▶ **May:** From 11-13 May 2016, ICAO will host a High-level Meeting on a Global Market-Based Measure (MBM) Scheme. At this meeting, countries will review and discussion the draft Assembly Resolution text on a global MBM scheme and make recommendations to the ICAO Council's June Session.<sup>15</sup>
- ▶ **June:** The ICAO Council will meet in June to discuss and approve the draft resolution on the MBM scheme to be sent to the 39th Session of the ICAO Assembly in September-October for consideration and adoption.
- ▶ **September-October:** The 39th Session of the ICAO Assembly will convene in Montreal, Canada from 27 September to 7 October to consider and adopt key resolutions on environmental actions, including, *inter alia*, the draft resolution on the MBM scheme.<sup>16</sup>

## ICAO 2016 Key Meetings and Milestones



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<sup>14</sup> International Civil Aviation Organization. 2016. *Upcoming Meetings & Events*. <http://www.icao.int/Meetings/Pages/Home.aspx?tab=upcoming>. For more information on the GLADs, see *2016 Global Aviation Dialogues (GLADs)*. <http://www.icao.int/Meetings/GLADs-2016/Pages/default.aspx>.

<sup>15</sup> Ibid.

<sup>16</sup> For more information, see International Civil Aviation Organization. 2016. *Assembly — 39th Session*. <http://www.icao.int/Meetings/a39/Pages/default.aspx>.