



## ASSEMBLY — 39TH SESSION

### EXECUTIVE COMMITTEE

**Agenda Item 22: Environmental Protection – International Aviation and Climate Change – Policy, Standardization and Implementation Support**  
**29: United Nations 2030 Agenda - Sustainable Developments Goals (SDGs)**

### ICAO'S CLIMATE CHANGE MEASURES AND THE SUSTAINABLE DEVELOPMENT GOALS

(Presented by the International Coalition for Sustainable Aviation)

#### EXECUTIVE SUMMARY

This information paper presents the views of the International Coalition for Sustainable Aviation (ICSA) on the interactions between the Sustainable Development Goals (SDGs), and ICAO's "basket of measures" to address climate change, particularly market-based measures (MBMs) and alternative fuels.

Measures to tackle climate change should also promote sustainable development. In this paper, ICSA offers recommendations on how carbon offsets and alternative fuels can contribute to the SDGs, while highlighting the need for safeguards to avoid undermining progress towards the SDGs in other sectors.

This paper also highlights the need for additional measures to secure sustainable development in the long-term. Beyond 2035, additional market or non-market measures will be needed to ensure the delivery of both sustainable development and (necessarily more ambitious) climate change objectives.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective E – <i>Environmental Protection</i>
<i>Financial implications:</i>	None.
<i>References:</i>	A39-WP/25 A39-WP/52 A39-WP/55 A39-WP/56 A39-WP/206 A39-WP/207 A39-WP/209 <i>A/RES/70/1 – Transforming our World: The 2030 Agenda for Sustainable Development</i> <i>FCCC/CP/2015/10/Add.1 – Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015</i>

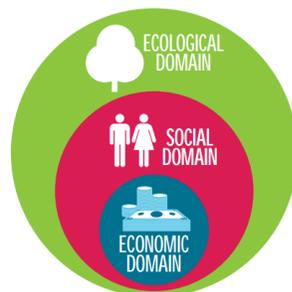
## 1. INTRODUCTION

1.1 Both ICAO (<http://www.icao.int/about-icao/aviation-development/Pages/SDG.aspx>) and the aviation industry ([http://aviationbenefits.org/media/149668/abbb2016\\_full\\_a4\\_web.pdf](http://aviationbenefits.org/media/149668/abbb2016_full_a4_web.pdf)) have identified aviation activities and policies that support various Sustainable Development Goals (SDGs) (<https://sustainabledevelopment.un.org/post2015/transformingourworld> and A/RES/70/1 refer). ICASA here offers its views on how ICAO's "basket of measures" to achieve its interim climate goal of carbon neutral growth from 2020 (CNG2020), in particular market-based measures<sup>1</sup> (MBMs) and alternative fuels<sup>2</sup>, can further support the achievement of the SDGs. ICASA also stresses the need for, firstly, safeguards to ensure these activities in no way undermine the SDGs, and secondly, additional measures in the longer term to ensure the delivery of more ambitious climate goals consistent with the SDGs.

## 2. DISCUSSION

### 2.1 The environment as the foundation of sustainable development

2.1.1 "Ecosystems sustain societies that create economies." ([http://assets.wwf.org.uk/downloads/living\\_planet\\_report\\_2014.pdf?\\_ga=1.226232156.736520801.1416495376](http://assets.wwf.org.uk/downloads/living_planet_report_2014.pdf?_ga=1.226232156.736520801.1416495376) and see Figure 1). As such, achieving sustainable development objectives in the ecological domain (such as climate change mitigation) is an essential precondition for sustained development in the social and economic domains. Therefore, in order for any activity or agency to "support sustainable development", it must at the very least mitigate any adverse ecological impacts, and ideally support ecological improvements, in addition to any positive contributions to social and economic development.



*Figure 1: Ecosystems sustain societies that create economies*

2.1.2 ICASA therefore questions ICAO's assertion in A39-WP/25 that "Air transport has proven to be a catalyst for sustainable development". On the contrary, the significant and rapidly increasing contribution of aviation to climate change is critically undermining the ecological domain of sustainable development, thereby jeopardising sustainable development as a whole. WWF and CARE International ([http://careclimatechange.org/wp-content/uploads/2016/04/CARE-WWF\\_Twin-Tracks-3rdEdition.pdf](http://careclimatechange.org/wp-content/uploads/2016/04/CARE-WWF_Twin-Tracks-3rdEdition.pdf)) further make the case that "Without sustainable development, the threat of climate change cannot be averted, and without action on climate change mitigation and adaptation, development achievements will be stalled or reversed." The SDGs reinforce this point with a specific Climate Action Goal (SDG 13), which is welcomed in the Paris Agreement ([http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php) and FCCC/CP/2015/10/Add.1 refer). Therefore, ICAO has a key role to play to mitigate the adverse ecological impacts of aviation (in particular through its "basket of measures" to address climate change), in order to ensure that aviation may be consistent with sustainable development. In so doing, it must also ensure that the "basket of measures" itself is consistent with broader sustainable development objectives.

<sup>1</sup> ICAO presents its proposed market-based measure (MBM) in A39-WP/52 and ICASA presents its views on this in A39-WP/206.

<sup>2</sup> ICAO presents its work on alternative fuels in A39-WP/56.

2.1.3 In order to achieve this, ICAO must firstly ensure that its “basket of measures” fully delivers the interim CNG2020 goal. It will also be necessary to set a long term goal for the sector consistent with the long term goals of the Paris Agreement, and then to increase the ambition of the interim CNG2020 goal accordingly. Over both the short and long term, in-sector mitigation should be prioritized, for example through the swift implementation and then strengthening of the CO2 Standard (which as currently conceived makes no contribution to incremental emission reductions)<sup>3</sup>. Emissions reductions arising outside the aviation sector, including carbon offsets and the lifecycle benefits of alternative fuels, must be carefully scrutinised for their potential effects, both positive and negative, on broader sustainable development objectives (including the SDGs) outside the aviation sector.

## 2.2 Sustainability of carbon offset projects and alternative fuel production

2.2.1 “Sustainability” commonly describes the extent to which economic activities, including carbon offsets and alternative fuels, support (or risk undermining) sustainable development. In developing eligibility criteria for carbon offsets and alternative fuels to contribute to the CNG2020 goal, ICAO’s first priority is to ensure that these measures achieve the stated emissions reductions. ICAO must also ensure that these measures are consistent with the SDGs by developing safeguards to mitigate sustainable development risks, and may also wish to develop frameworks to assess sustainable development benefits.

2.2.2 For example, renewable energy offset projects have the potential for both sustainable development harm and benefits. Safeguards are needed to prevent e.g. disruption to communities, counter to SDGs 1 (1.1 end extreme poverty, 1.5. build poor people’s resilience to climate change and other disasters), 8 (8.3 decent jobs, 8.4 decoupling growth from environmental degradation, 8.5 productive employment), 11 (11.3 sustainable urbanisation, 11.6. environmental impacts on cities) and 13 (13.1. adaptive capacity to climate change). Meanwhile, frameworks to assess sustainable development benefits could be used to quantify the positive contributions of renewable energy projects to e.g. SDGs 7 (7.1 access to energy, 7.2 renewable energy, 7.3 energy efficiency), 8 (8.1 economic growth, 8.2 economic productivity) and 12 (12c rationalise inefficient fossil-fuel subsidies).

2.2.3 Robust certification schemes, such as RSB for alternative fuels and Gold Standard (GS) for carbon offsets, can help ensure consistency of these measures with sustainable development objectives. For example, the Gold Standard Principles (<http://www.goldstandard.org/sites/default/files/the-gold-standard-principles-final-270513.pdf>) clearly distinguish between safeguards (“do no harm”) and benefits (“enhance sustainable development”). GS is currently revising its standard (<http://www.goldstandard.org/articles/gold-standard-30>) to “measure and certify impacts toward all the SDGs”, which may prove useful for ICAO in quantifying SDG benefits. This is in addition to the core foundation of safeguards that “mitigate risk, maximise impact, and ensure the results intended.”

2.2.4 ICAO’s threshold for eligibility for emissions reductions from carbon offsets and alternative fuels to count towards the CNG2020 goal must be set at a level that ensures all sustainable development risks are mitigated through safeguards, such as those applied in these certification schemes, in order to classify alternative fuels and carbon offsets as “sustainable”. Incomplete application of safeguards would leave ICAO’s policies at risk of undermining sustainable development and the SDGs. Positive contributions of alternative fuel and carbon offset projects towards the SDGs may also be captured as an indication of a “premium” sustainable project, provided all safeguards are applied.

## 2.3 Sufficient supply of quality carbon offsets and sustainable alternative fuels

2.3.1 In June 2016, the Stockholm Environment Institute (SEI) published research ([http://assets.wwf.org.uk/downloads/sei\\_wp\\_2016\\_03\\_icao\\_aviation\\_offsets\\_biofuels.pdf?\\_ga=1.194186](http://assets.wwf.org.uk/downloads/sei_wp_2016_03_icao_aviation_offsets_biofuels.pdf?_ga=1.194186)

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<sup>3</sup> ICSA presents its views on ICAO’s CO2 Standard for new aircraft in A39-WP/207.

[219.736520801.1416495376](#)) on the potential contribution of high quality carbon offsets and sustainable alternative fuels towards the CNG2020 goal (using the SDGs as a conceptual framework). Over the timeframe 2020-2035 (the expected first term of the ICAO MBM), the potential carbon abatement from carbon offsets that are both unlikely to pose risks to the SDGs whilst achieving an acceptable level of confidence in reducing emissions is 5.1 Gt CO<sub>2</sub>e – above the high end CNG2020 demand for abatement of 4.5 Gt CO<sub>2</sub>e. A further 0.3 Gt CO<sub>2</sub>e of abatement is projected from sustainable alternative fuels. ICAO can therefore introduce an MBM that fully achieves the CNG2020 goal out to 2035, safe in the knowledge that there is likely to be sufficient supply of quality carbon offsets and sustainable alternative fuels to achieve the goal in a manner consistent with sustainable development and the SDGs.

2.3.2 Over a longer timeframe, the picture is less clear. On the one hand, as these industries mature and innovate, costs would be expected to come down, increasing availability. On the other hand, these emissions reductions in other sectors are ultimately finite, meaning their overall availability would be expected to decline as governments make progress towards their Paris Agreement commitments<sup>4</sup>.

2.3.3 In A39-WP/55 ICAO introduces a 2050 emissions scenario with an “illustrative” contribution from alternative fuels, as well as fleet renewal and improved technology, ATM and infrastructure use, but no contribution from MBMs. This scenario fails to achieve the CNG2020 goal in 2050, let alone any more ambitious goal in line with the Paris Agreement. However, such an increase in alternative fuel production would trigger significant demand for biomass and/or wastes. The increased land and water requirements of biomass feedstocks is in tension with SDGs 2 (2.1 end hunger, 2.4 sustainable food production), 6 (6.1 access to water, 6.2 improve water quality) and 15 (15.1. restore ecosystems, 15.2 halt deforestation), especially with the global population expected to increase to 9.7 billion by 2050. Increased usage of waste-based feedstocks, which are generally more likely to be sustainable than purpose-grown biomass, may also be in tension with SDG 12 (12.5 reduce waste).

2.3.4 Other measures are therefore required in the long-term to achieve the CNG2020 goal, and future goals aligned to the Paris Agreement, in a manner consistent with the SDGs. This could include an extension of ICAO’s proposed MBM, a cap-and-trade MBM, or measures more directly targeted at moderating aviation passenger demand, such as an end to the global prohibition on fuel taxation.

### 3. CONCLUSIONS

3.1 By setting comprehensive safeguards for carbon offsets and alternative fuels, coupled with robust frameworks for assessing positive SDG impacts, ICAO can ensure its promotion of these measures towards the CNG2020 goal is also contributing to the SDGs, namely 7 (sustainable energy), 8 (sustainable growth), 12 (sustainable consumption and production), 13 (combat climate change) and 15 (protecting ecosystems) through to 2035. At the same time they would prevent negative impacts on many other SDGs, including 1 (end poverty), 2 (food security), 6 (water) and 11 (sustainable cities).

3.2 Beyond 2035, there is uncertainty over the availability of quality carbon offsets and sustainable alternative fuels, with a major increase in alternative fuel production particularly difficult to reconcile with broader sustainable development objectives. Therefore further market or non-market measures, including measures to moderate demand, may well be required to achieve ICAO’s current and (more ambitious) future climate change goals in a manner fully consistent with sustainable development.

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<sup>4</sup> ICSA presents its views on addressing international aviation emissions in the context of the Paris Agreement in A39-WP/209.