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ASSEMBLY — 42ND SESSION

EXECUTIVE COMMITTEE

DRAFT TEXT FOR THE REPORT ON AGENDA ITEM 16

The attached material on Agenda Item 16 is submitted for consideration by the Executive Committee.

Agenda Item 16: Environmental Protection – International Aviation and Climate Change

16.1 At its fourth and fifth meetings, the Executive Committee considered the subject of environmental protection on the basis of progress reports by the Council on the Organization's work on international aviation and climate change (WPs 25 and 26) and considered the Council's proposals to update Resolution A41-21, *Consolidated Statement of continuing ICAO policies and practices related to environmental protection – Climate change* (WP/27). In addition, there were 54 papers submitted by States and Observers: WPs 45, 57, 64, 65, 75, 76, 112 Revision No. 1, 121, 126 Revision No. 1, 131, 139, 162, 163, 169, 219, 243, 249, 254, 266 Revision No. 1, 271, 274, 279 Revision No. 1, 303, 338, 339, 346, 365 Revision No. 1, 366, 367, 368, 379, 382 Revision No.1, 384, 385, 396, 434, 440, 448, 451, 452, 458, 468, 481, 490, 491, 517, 518, 554, 560, 565, 570, 573, 575 and 579.

16.2 In WP/25, the Council reported progress made by ICAO since the 41st Session of the Assembly relating to international aviation and climate change, focusing on the implementation of the long-term global aspirational goal for international aviation (LTAG). It highlighted the outcomes arising from the Third ICAO Conference on Aviation and Alternative Fuels (CAAF/3) held in Dubai, United Arab Emirates, in November 2023, namely the ICAO Global Framework for Sustainable Aviation Fuels (SAF), Lower Carbon Aviation Fuels (LCAF) and other Aviation Cleaner Energies, and the ICAO Roadmap for the implementation of the CAAF/3 outcomes and the LTAG, with four interdependent Building Blocks: 1) policy and planning; 2) regulatory framework; 3) implementation support; and 4) financing.

16.3 The Secretariat highlighted some recent developments in addition to information presented in WP/25. For example, ICAO has now received 154 State Action Plans in total, including the recent submissions by Kuwait, Timor-Leste, Andorra, and Comoros since the WP's publication. The ICAO ACT-SAF programme has reached 30 SAF feasibility and business implementation studies as either concluded, under development or planned until 2028, including the recently-completed SAF studies in India and Jordan. The ICAO Finvest Hub platform has officially been launched, including a collaboration with the International Renewable Energy Agency (IRENA), to facilitate funding to SAF and aviation clean energy projects.

16.4 In addition, the Secretariat informed that one of the CORSIA Sustainable Certification Schemes (SCS) (ISCC) has recently initiated the submission of its application to expand its eligibility scope from SAF to cover LCAF certification, for consideration by the Committee on Aviation Environmental Protection (CAEP). Once the CAEP evaluation is complete and then approved by the Council, ISCC will become eligible to certify LCAF.

16.5 In WP/26, the Council reported on ICAO's work relating to international aviation and climate change, with a focus on the progress and next steps on climate change adaptation and resilience, and enhancing scientific understanding of aviation's climate impacts, as well as cooperation and relevant developments in other United Nations (UN) bodies and international organizations including the United Nations Framework Convention on Climate Change (UNFCCC) process.

16.6 In WP/27, the Council proposed revisions of Resolution A41-21, in light of the developments since the last Assembly, including those revisions of the ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies adopted by CAAF/3, and the ICAO Roadmap for the implementation of CAAF/3 outcomes and the LTAG approved by the Council, as well as the technical work of ICAO Council's CAEP and its future work programme.

16.7 In WP/169, Brazil expressed views on financing for aviation CO₂ emissions reduction measures, highlighting the need to support the full implementation of the Global Framework and recognizing the financing needs and gaps, calling for: regular and substantial contributions to the ICAO Voluntary Environment Fund, with clear annual funding targets; a gap analysis to identify needs with attention to developing countries and States having particular needs; prioritization of SAF and LCAF; a dedicated Council workstream on resource sourcing and governance; revised operational rules for the ICAO Voluntary Environment Fund, including stronger transparency and performance monitoring; and defining the Fund's role in providing comprehensive support for decarbonization, particularly in SAF development, production and deployment.

16.8 In WP/440, Brazil highlighted that achieving the LTAG relied not only on future fuels and advanced aircraft technologies, but also on immediate and scalable actions, such as operational improvements and airspace design. Drawing upon recent national and regional examples, Brazil presented quantified CO₂ emissions reductions through airspace redesign, calling on ICAO to provide strategic guidance, technical assistance and financial support through its Regional Offices, and to reaffirm operational measures and airspace redesign as pillars of ICAO's environmental strategy, alongside SAF and technological innovation.

16.9 In WP/112, Revision No. 1, China presented views on the importance of international aviation emissions reduction to global climate efforts, and should follow the principles of equity, common but differentiated responsibilities (CBDR), and respective capabilities, with States making nationally determined contributions based on their national circumstances and stages of development. China highlighted its significant contributions to the sustainable development of global international aviation, expressed views that the implementation of LMR should be specified at both regional and State levels, and highlighted that the success of LTAG would depend on whether developed countries could provide sufficient, affordable, monitorable, reportable and verifiable financial assistance to developing countries for advancing the low-carbon transition of aviation.

16.10 In WP/452, China presented its initiative to jointly build the Green Air Silk Road, aiming to promote green and low-carbon transformation of civil aviation in partner countries, and support the achievement of the UN Sustainable Development Goals (SDGs) and the Strategic Goals of ICAO. It emphasized extensive consultation, joint contribution and shared benefits for the initiative, focusing on jointly building green airports, green air traffic control, green flights and carrying out capacity-building for green transformation of civil aviation.

16.11 In WP/271, Egypt highlighted challenges faced by developing States in scaling up SAF production, noting significant investment needs for fuel plants, airports and Air Navigation Service Providers (ANSPs). It outlined ongoing national-level initiatives for SAF development and deployment, and called for ensuring SAF, LCAF and other aviation cleaner energies are geographically balanced under the *No Country Left Behind (NCLB)* initiative. The paper also highlighted that successful LTAG implementation required differentiated pathways based on special circumstances and respective capabilities (SCRC) of States, and institutional strengthening directed at access to proportional financing, science and technology transfer, and assistance and capacity-building. Egypt also underlined the ICAO Finvest Hub as a catalyst for progress in climate financing.

16.12 In WP/163, India highlighted SAF as a short to medium-term decarbonization lever. It outlined national initiatives, including SAF blending targets, participation in the ICAO ACT-SAF

programme, advances in SAF certification, and adopting co-processing pathways in existing refineries to allow for a rapid scale-up of SAF production. India also presented views on the challenges facing SAF development and deployment in developing States, such as limited SAF production capacity, certification and regulatory bottlenecks, feedstock and infrastructure gaps, financial constraints, and uneven global readiness. It recommended fast-tracking SAF certification, establishing regional SAF hubs, expanding the pool of ICAO-approved SCS, mobilizing blended finance mechanisms, and strengthening cooperation through ICAO platforms.

16.13 In WP/346, Kazakhstan highlighted that TS-1 fuel is the primary jet fuel in the region, but there is no ICAO-recognized protocol for its blending with SAF, unlike Jet A-1 under ASTM D7566. It proposed that ICAO establish a multi-stakeholder task force to jointly address technical, regulatory and logistical aspects related to the integration of SAF and TS-1 fuel within the global aviation framework, and called on the promotion of SAF adoption through policy incentives and infrastructure readiness. In this regard, a State further clarified that the establishment and maintenance of fuel standards do not reside within ICAO, and invited States to work with standard-setting institutions that perform such work, such as ASTM International.

16.14 In WP/45, Nigeria highlighted its SAF development and deployment efforts, and requested continued support, in particular for developing States, in capacity-building and technology transfer. Nigeria also expressed the need to make it easier for States, particularly developing States, to secure funding by ensuring a clear pathway in the operationalization of the ICAO Finvest Hub for decarbonization projects, including SAF, LCAF and other aviation cleaner energies.

16.15 In WP/64, Oman emphasized the importance of State Action Plans in achieving LTAG, highlighting that continuous review and sustained support are key to its effective implementation. Oman also expressed views on the various developments required in the basket of measures (technology, operations, fuels and Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)), the need to facilitate access to international climate finance particularly for SAF infrastructure and research and development, as well as the promotion of stronger regional collaboration frameworks to facilitate alignment of policies, regulatory approaches and technical capabilities among States in enhancing collective efforts towards sustainable aviation.

16.16 In WP/65, Oman expressed the need for policy alignment, financing, capacity-building and harmonized standards to scale up the development and deployment of SAF and LCAF, in support of global aviation decarbonization goals. Oman highlighted the importance of strategic partnerships between government, private sector, academia and international organizations in developing a SAF and LCAF industry, emphasizing the role of LCAF as a short-term solution for reducing emissions, particularly in countries with existing oil refining capabilities.

16.17 In WP/219, Qatar highlighted existing challenges with the limited number of ICAO-approved SCS for SAF and LCAF, and the absence of certification pathways for LCAF, hindering broader CORSIA implementation. It emphasized the importance of deploying CORSIA eligible fuels while addressing barriers, and cautioned against imposing unnecessary financial burdens on airlines through a fragmented regulatory landscape, where differing national or regional rules could lead to compliance complexity and duplication of efforts.

16.18 In WP/254, Qatar expressed views on the current status of development, production and deployment at commercial scale of LCAF, which is 100 per cent drop-in fuel and appeared to be an overlooked alternative jet fuel option to address CO₂ emissions. The paper called on the adoption of measures and allocation of resources to assist Member States in the scale up and acceleration of LCAF's contribution to LTAG.

16.19 In WP/448, the Republic of Korea expressed its views on expanding the use of SAF through mandatory targets, supportive policies and leveraging existing refinery infrastructure. While recognizing the essential role of co-products generated during SAF production, it viewed that co-products were treated as conventional petroleum-derived products, creating a lack of compatibility with other international schemes, and stressed the need for mutual recognition of sustainability certification for co-products which could contribute to the development and expansion of the SAF market.

16.20 In WP/434, the Russian Federation, co-sponsored by the Interstate Aviation Committee (IAC), emphasized that increasing the absorption capacity of forests and reducing harmful emissions from wildfires are vital in reducing global CO₂ emissions. It stressed the effective role of aviation in wildfire management, from early detection to firefighting, and called on ICAO to undertake the development of international rules, taking into account national policies, to set in place a legal framework for the use of international aviation in fighting wildfires. The Secretariat clarified that ICAO continues to work closely with relevant UN bodies and organizations, such as the UN Environment Programme (UNEP), the Food and Agriculture Organization (FAO) and the Global Fire Monitoring Centre (GFMC), on the contributions of international aviation to forest firefighting. ICAO recently joined the Global Fire Management Hub lead by FAO, which is working on international interoperability, and will contribute to their side event on this topic at the UNFCCC COP30 in Brazil in November 2025.

16.21 In WP/451, the Russian Federation expressed concerns regarding potential inconsistencies in the activities of ICAO-approved SCS, including instances where applications for SAF certification from certain States had not been considered. It also highlighted challenges related to the certification of LCAF under the current framework and proposed improvements to enhance transparency, predictability and inclusivity in CORSIA's implementation. These included: accepting LCAF certification by national certification bodies of compliance; updating Annex 16 Volume IV and relevant ICAO documents not more frequently than every three years; and encouraging States, with the participation of ICAO, to implement measures to support the development of international and national aviation climate projects. A State clarified that the current CORSIA certification system does not allow certification by bodies that have not been evaluated and approved by ICAO.

16.22 In WP/266, Revision No. 1, Saudi Arabia emphasized the urgency of strengthening climate change adaptation in global aviation by building resilience through unified guidance, integrated implementation approaches and embedding relevant provisions within existing ICAO Annexes and SARPs to achieve consistent and effective adaptation across the aviation system. It also shared national measures, including integrating adaptation into its Civil Aviation Environmental Sustainability Program.

16.23 In WP/139, Singapore, co-sponsored by Bangladesh, Dominican Republic, Fiji, Japan, Papua New Guinea and Sri Lanka, expressed views on the need for a structured ACT-LTAG programme, building upon ACT-CORSIA and ACT-SAF, to ensure that all States are supported in developing decarbonization strategies aligned with ICAO goals and principles, while expanding support to State Action Plan development and other new areas. Singapore also highlighted how regional platforms can play a

complementary role in delivering targeted programmes addressing regional challenges and priorities, and proposed amending Assembly Resolution A41-21 to include a new paragraph formalizing ACT-LTAG as a global assistance framework under ICAO's *No Country Left Behind* initiative.

16.24 In WP/75, South Africa highlighted the need for continued support and guidance to Member States on climate change risk assessment and adaptation, outlining key measures across planning, finance, implementation and governance. It emphasized the importance of integrating adaptation into State Action Plans, scaling up dedicated adaptation finance for developing States, and ensuring tailored approaches that address specific national and regional vulnerabilities.

16.25 In WP/76, South Africa expressed views on the urgent need to expedite the implementation of climate finance initiatives to enable climate action in the aviation sector among developing countries, supported through financial and in-kind contributions from developed countries. It outlined key considerations for such initiatives, including avoiding adverse impacts on developing countries' debt levels, ensuring a sustainable replenishment mechanism and predictability, prioritizing developing countries as main beneficiaries, addressing both mitigation and adaptation needs, establishing methodologies for tracking and reporting, and ensuring balanced representation in governance structures.

16.26 In WP/379, Belize, on behalf of the Member States of the Central American Corporation for Air Navigation Services (COCESNA) ¹ highlighted significant contributions by the organization to the environmental protection objective of ICAO, through the implementation of advanced technologies and the optimization of airspace management in the Central American region. They urged collaboration between ICAO and other international organizations to align regional initiatives with global sustainability goals, promote the adoption of sustainable practices among airlines and other aviation sector actors, and develop guidance for the continuous monitoring of GHG emissions.

16.27 In WP/468, Belize, on behalf of the Member States of COCESNA highlighted COCESNA's aspirational commitment to achieve carbon neutrality in its corporate operations by 2030. The paper demonstrated quantified CO₂ emissions reductions achieved through operational efficiencies and underscored COCESNA's regional leadership in advancing environmental protection and sustainable aviation. It emphasized the role of collaboration in supporting the sustainable development of the sector and called on ICAO to facilitate the timely coordination of bilateral, multilateral and South-South technical and financial resources to support its decarbonization goals.

16.28 In WP/243, Brazil and supported by 19 LACAC Member States² highlighted that the aviation sector, highly sensitive to environmental disruptions, must prepare not only to reduce its own emissions but also to withstand increasingly frequent and severe climate impacts. They expressed the view that adaptation and mitigation must be addressed as equally urgent and mutually enforcing pillars of climate strategy, encouraging ICAO and its Member States to enhance guidance, resources and planning tools to support the aviation sector's resilience alongside its decarbonization efforts.

16.29 In WP/162, Brazil and Ethiopia expressed views that a package of stronger implementation commitments needs to be reinforced to support the scaling up of SAF supply in all regions towards the achievement of the global aspirational Vision and LTAG. The States highlighted key guiding parameters

¹ Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua

² Belize, Bolivia (Plurinational State of), Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela (Bolivarian Republic of)

based on the Global Framework, which includes: i) the recognition of CORSIA as the sustainability standard for SAF; ii) a non-discriminatory and technology neutral approach to feedstocks and pathways to produce SAF, provided they meet the CORSIA criteria; iii) accelerating the approval of the sustainability of feedstocks and pathways, increasing opportunities for developing countries in a more inclusive decarbonization of international aviation; and iv) implementation support and financing.

16.30 In WP/249, Canada, Costa Rica, Dominican Republic, Equatorial Guinea, Ghana, Japan, Kenya, Papua New Guinea, Republic of Korea, Rwanda, ECAC and its Member States³, and the EU and its Member States⁴, co-sponsored by Mexico, presented views of the members of the International Aviation Climate Ambition Coalition (IACAC), calling on the Assembly to welcome the LMR methodology, the Global Framework for SAF, LCAF and other aviation cleaner energies, encourage global participation in CORSIA, strengthen ICAO's capacity-building and implementation support programmes, and operationalize the ICAO Finvest Hub initiative.

16.31 In WP/481, Colombia, supported by 17 LACAC Member States⁵ emphasized the critical role of SAF in achieving LTAG, and highlighted financial and technical challenges faced by States in the SAF transition. It proposed the establishment of an information observatory, and the development of a "SAF Outlook" to improve data availability, enhance transparency and support informed decision-making. It also requested the development of supplementary guidance on the application of flexible incentives and safeguards related to oil and feedstock prices, as well as mechanisms to strengthen the monitoring of ACT-SAF progress.

16.32 In WP/365, Revision No. 1, Denmark on behalf of the EU and its Member States, the other Member States of ECAC⁶, and EUROCONTROL stressed the importance of continued progress towards LTAG, called for the endorsement of the LMR methodology, requesting its implementation without delay. It requested the regular review of Annex 16 in line with advances in design and technology, and the recognition of the CAAF/3 Global Framework by updating Resolution A41-21, as well as the need to understand and address non-CO₂ aviation emissions. It further noted that residual CO₂ will remain and that additional measures, including carbon removals, will be required to achieve LTAG.

16.33 In WP/367, Denmark on behalf of the EU and its Member States, the other Member States of ECAC, and EUROCONTROL, and co-sponsored by Japan, expressed the view that achieving the LTAG would require extraordinary efforts including solidarity, cooperation and assistance between States to ensure that all States would benefit from the environmental, social and economic benefits that net-zero promises. It highlighted the scaling up of ICAO ACT-SAF and ACT-CORSIA programmes, and called for further scale up and acceleration of technical support, with all States and industry encouraged to contribute. It urged prioritization of ICAO Finvest Hub operationalization, to facilitate access for aviation

³ Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine and United Kingdom

⁴ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden

⁵ Belize, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay

⁶ Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Iceland, Republic of Moldova, Monaco, Montenegro, North Macedonia, Norway, San Marino, Serbia, Switzerland, Türkiye, Ukraine, and United Kingdom.

decarbonization projects, promoting greater geographical distribution of SAF, LCAF and other cleaner energy production.

16.34 In WP/396, Honduras on behalf of the Member States of COCESNA, highlighted the region's high vulnerability to climate change, and outlined the Alliance for Sustainable Aviation's (ALAS) activities, reflecting the Central American States' common interest in promoting a sustainable air transportation system, fostering aviation safety and operational security, economic growth, improved services, efficiency and environmental protection. It highlighted the need for cooperation between States to achieve LTAG, and requested the coordination of bilateral, multilateral and South-South cooperation over technical and financial resources for the implementation of measures to reduce CO₂ emissions in the aviation sector.

16.35 In WP/126, Revision No. 1, Saudi Arabia, Egypt, Nigeria and the United Arab Emirates highlighted the critical role of LCAF in advancing the implementation of CORSIA, LTAG and the ICAO Global Framework for SAF, LCAF and other aviation cleaner energies. The States urged ICAO-approved SCS to expedite the preparation of system requirements covering LCAF certification, CAEP to prioritize SCS applications seeking approval for both SAF and LCAF, apply more flexible processes, including timeframe for SCS applications. ICAO Member States were also urged to actively support and provide resources to the CAEP SCS Evaluation Group (SCSEG).

16.36 In WP/458, Venezuela and supported by 15 LACAC Member States⁷ highlighted the urgent need for ICAO to enhance assistance and capacity-building for States on climate adaptation, from the impact of climate change on aviation. It highlighted risks from extreme weather events and rising sea levels affecting aviation infrastructure and operations. It requested ICAO to conduct studies on climate impacts, develop guidance material to support risk-based aviation adaptation plans, provide capacity-building assistance and encourage States to share experiences and best practices on adaptation measures.

16.37 In WP/279, Revision No. 1, the Airports Council International (ACI), Brazil, the Aviation Services Association (ASA World), the International Business Aviation Council (IBAC) and the International Coordinating Council of Aerospace Industries Associations (ICCAIA), co-sponsored by the Dominican Republic, Kazakhstan and Trinidad and Tobago, highlighted the importance of access for the industry to sufficient, reliable, renewable and low-carbon energy to meet growing demand and ICAO and aviation decarbonization goals, and enable future sustainable air transport solutions. It urged the development and implementation of frameworks to facilitate the deployment of renewable and low-carbon energy projects at airports, as well as its related capacity-building and technical assistance programmes, proposing specific amendments to Assembly Resolution A41-21.

16.38 In WP/382, Revision No. 1, the Air Transport Action Group (ATAG), co-sponsored by ACI, IBAC and ICCAIA, reaffirmed the air transport industry's support for LTAG, CORSIA, the outcome of the CAAF/3, and the work of ICAO to support continued progress towards these climate goals. It elaborated that governments at a regional and national level should implement supportive policy environments for technology deployment, infrastructure improvements, low-carbon options, SAF and consideration of aviation needs as part of government hydrogen strategies. It also highlighted the role of the energy sector, financial institutions and customers in supporting the energy transition.

⁷ Belize, Bolivia (Plurinational State of), Brazil, Colombia, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay and Uruguay

16.39 In WP/338, the International Air Transport Association (IATA), co-sponsored by the Dominican Republic, Malaysia and Singapore, urged States to address the unintended consequences of recent SAF mandates that increase costs, distort markets and impact airlines' ability to claim environmental benefits. It called for stronger policy action to scale up SAF production, and for the integration of a global and robust SAF accounting and reporting methodology to facilitate the claiming of SAF environmental benefits consistent with CORSIA and other relevant internationally-recognized recommended practices.

16.40 In WP/384, the International Coalition for Sustainable Aviation (ICSA) proposed actions to strengthen ICAO's ability to achieve the LTAG by: undertaking an analysis to propose a pathway with interim CO₂ emissions reduction targets in line with the Paris Agreement temperature goals; updating Assembly Resolution A41-21 to recognize that non-CO₂ emissions represent a significant proportion of the net climate warming from international aviation; and encouraging further science, target setting and mitigation; as well as an integrated trajectory assessment of both CO₂ and non-CO₂ emissions impacts to 2050.

16.41 The Committee noted the following information papers: WPs 570 and 573 by China, WPs 517 and 518 by Italy, WP/303 by Kazakhstan, WP/579 by Malaysia, WP/490 by Norway, WP/57 by Oman, WP/575 by Saudi Arabia, WP/565 by Türkiye, WP/366 and WP/368 by Denmark on behalf of the EU and its Member States and the other Member States of ECAC, and EUROCONTROL, WP/554 by Indonesia and Timor-Leste, WP/131 by Saudi Arabia, Egypt, Nigeria and the United Arab Emirates, WP/121 by Uruguay supported by 18 LACAC Member States, WP/560 by ACI, WP/339 by IATA, WP/491 by ICCAIA, WP/385 by ICSA, and WP/274 by the Latin American and Caribbean Air Transport Association (ALTA).

16.42 The Committee acknowledged the substantial progress since the last Assembly, including the adoption of the ICAO Global Framework by CAAF/3, and the approval of the ICAO Roadmap by the Council. It also recognized the timely development of the LTAG monitoring and reporting (LMR) methodology, and the importance of the progress achieved on the ICAO State Action Plans initiative, the LTAG stocktaking events, and Tracker Tools in this regard. The Committee recalled the collective nature of the LTAG and the global aspirational Vision, which do not attribute specific obligations or commitments in the form of emissions reductions to individual States. The Committee emphasized the importance of a transparent LMR, regular updates of the State Action Plans, and invited States to take appropriate policy action to support progress towards the LTAG. The Committee also recognized the need for ICAO to continue to monitor the progress of the four Building Blocks of the ICAO Roadmap.

16.43 The Committee reiterated that CORSIA sustainability criteria, sustainability certification and the methodology for the assessment of life cycle emissions used for CORSIA eligible fuels should be used as the accepted basis for the eligibility of SAF, LCAF and other aviation cleaner energies for international aviation, emphasizing the importance of facilitating their global scale up in all regions. In this regard, it encouraged States to further engage in the ICAO activities to accelerate the analysis and approval of life cycle values for new fuel sources and pathways, and their sustainability certification, under a globally-harmonized approach, while it highlighted the importance of a global and robust SAF accounting and reporting methodology.

16.44 Specifically on the issues related to LCAF, while acknowledging the current absence of sustainability certification schemes (SCS) certifying LCAF, the Committee emphasized the importance of accelerating ICAO's evaluation and approval of new SCS for CORSIA eligible fuels (SAF and LCAF) as

requested by CAAF/3, with a view to facilitating broader participation by States, without excluding any particular fuel source, pathway, feedstock or technology, and in this regard underlined the need for timely and flexible evaluation procedures, while ensuring that the compliance with the CORSIA requirements is not undermined. The Committee also encouraged States to engage in the ICAO's technical work related to LCAF consideration in CORSIA, and highlighted the importance of improving awareness on the actions required to develop and deploy LCAF, ensuring no country is left behind.

16.45 The Committee recognized the progress on implementation support and financing for aviation decarbonization measures. It recognized the voluntary contributions and the progress made under the ICAO ACT-SAF programme, while encouraging all States and stakeholders to participate and continue providing additional resources, and requested ICAO to continue expanding the activities as resources allow. As a next step, the Committee requested ICAO to build upon ACT-SAF and ACT-CORSIA in creating an ACT-LTAG programme to include other aviation decarbonization measures, while noting the associated resources implications. The Committee welcomed the recently launched ICAO Finvest platform, including the collaboration with the International Renewable Energy Agency (IRENA), and requested its full operationalization. The Committee also recognized the importance of regional initiatives and platforms towards implementation support and financing for aviation decarbonization.

16.46 Regarding the consideration of the establishment of a climate finance initiative or funding mechanism under ICAO as requested by the last Assembly, the Committee recognized the urgency and importance of scaling up the financing to aviation decarbonization measures, and requested the Council to take urgent action for implementation of the near-term recommendations identified in Appendix G of WP/25 to enhance the existing framework and schemes on funding and financing initiatives to further support the progress towards achieving and implementing the LTAG and the Global Framework on SAF, LCAF and other Aviation Cleaner Energies, in particular for developing countries and States having particular needs. The Committee also requested the Council to set up a workstream to identify financing needs and gaps and explore ways of addressing the long-term options identified in Appendix G of WP/25, including the feasibility aspects, and report to the 43rd Session of the ICAO Assembly.

16.47 The Committee expressed broad support for further ICAO action on climate change adaptation. It recognized the importance of ICAO's work, in cooperation with States and relevant UN bodies and international organizations, to identify potential impacts of climate change on international aviation operations and related infrastructure, and possible adaptation measures to address such impacts. In that regard, the Committee noted the importance of CAEP work on this topic, including the recently-updated ICAO Climate Adaptation Synthesis Report and the cost impact assessment of climate change as part of the LTAG Monitoring and Reporting (LMR) methodology, and encouraged the Council to develop further guidance materials and assistance initiatives to facilitate the development of aviation climate change adaptation plans by States, while noting the limited resources of the Secretariat to pursue these objectives. The Committee encouraged further collaboration between States to share experiences on climate change adaptation actions for aviation.

16.48 Regarding the topic of non-CO₂ emissions of international aviation, the Committee acknowledged the progress achieved since the last Assembly, including the convening of the ICAO Symposium on Non-CO₂ Aviation Emissions and the establishment of the Non-CO₂ Coordination Group under CAEP. The Committee requested ICAO to continue to provide a forum for enhancing the scientific understanding of aviation's climate impacts beyond CO₂ emissions. Noting the significant uncertainties

still existing on this topic, many States did not support further work directed towards measures to address such impacts.

16.49 The Committee recognized the concerns against levies / taxation of international aviation emissions, which were also submitted for Agenda Item 17: Environmental Protection – CORSIA in WP/295 by the Arab Civil Aviation Organization (ACAO) on behalf of 21 Arab States, WP/122 by the African Civil Aviation Commission (AFCAC) on behalf of 54 African States, and WP/322 by IATA, as well as submitted for Agenda Item 26: Economic Development of Air Transport in WP/181 by the United States and WP/267 by IATA.

16.50 In this regard, the Committee urged ICAO and its Member States to promote the recognition of ICAO's efforts and achievements to decarbonize international aviation, and to express a clear concern regarding proposals to use international aviation as a potential source for the mobilization of revenue for climate finance to other sectors to ensure that international aviation would not be targeted as a source of such revenue in a disproportionate manner, including through coordination with relevant government representatives and national delegations to relevant UN bodies and international organizations. The Committee also requested ICAO to continue to cooperate with, and provide relevant input to, other UN bodies and international organizations, with a view to ensuring ICAO's leadership in all matters related to international aviation and climate change.

16.51 Regarding the draft Assembly Resolution attached to WP/27, the Committee considered and agreed on the following additional amendments:

- a) inclusion of a new operative paragraph 16 *quater*. on the establishment of ICAO ACT-LTAG programme, as follows:

16 quater. Requests the Council to establish the ACT-LTAG programme as a structured and comprehensive framework to support the development and update of State Action Plans to voluntarily contribute to the LTAG, building upon existing initiatives such as the ACT-CORSIA and ACT-SAF programmes, and collaborating with regional initiatives and platforms to deliver targeted, practical support tailored to State-specific needs, in line with No Country Left Behind (NCLB);

- b) recognition of airports' contribution to decarbonization in the existing preamble paragraph and operative paragraphs related to airports, as follows:

Welcoming the convening of the ICAO Seminars on Green Airports in November 2017, May 2019, November 2021 and April 2024, and recognizing the important role of airports in the distribution of new innovative sources of energy to air transport critical role of airports in the deployment and distribution of cleaner energies for air transport decarbonization in support of the LTAG, and the importance on the resilience of airports;

25. c) *Requests States to: develop and implement frameworks that facilitate the deployment of decarbonization projects at airports such as for energy storage and infrastructure, and work together through ICAO to exchange information and best practices on Green Airports, including practices related to airport planning, development, operations and maintenance; and*

26. c) *Requests* the Council to: continue to ~~provide~~ facilitate capacity building and technical assistance, and provide the forum to exchange information on best practices for Green Airports, covering such subjects as smart buildings, renewable energy, green mobility, climate change adaptation and resilient development, community engagement and sustainability reporting, aiming at sharing lessons learned and best practices among airports;

16.52 The Committee agreed to recommend that the Assembly adopt the following Resolution:

Resolution 16/1: Consolidated statement of continuing ICAO policies and practices related to environmental protection - Climate change

Whereas ICAO and its Member States recognize the critical importance of providing continuous leadership to international civil aviation in limiting or reducing its emissions that contribute to global climate change;

Reemphasizing the vital role which international aviation plays in global economic and social development and the need to ensure that international aviation continues to develop in a sustainable manner;

Acknowledging that the work of the Organization on the environment contributes to 14 of the 17 United Nations Sustainable Development Goals (SDGs), including SDG 7 “*Ensure access to affordable, reliable, sustainable and modern energy for all*”, SDG 9 “*Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*” and SDG 13 “*Take urgent action to combat climate change and its impacts*”;

Whereas a comprehensive assessment of aviation’s impact on the atmosphere is contained in the special report on *Aviation and the Global Atmosphere*, published in 1999, which was prepared at ICAO’s request by the Intergovernmental Panel on Climate Change (IPCC);

Whereas the IPCC special report and the assessment reports recognized that the effects of some types of aircraft emissions are well understood, it revealed that the effects of others are not, and identified a number of key areas of scientific uncertainty that limit the ability to project aviation’s full impacts on climate and ozone; and *recognizing* the need for the Organization to continue to provide a forum for enhancing the scientific understanding of aviation’s climate impacts and exploring measures to address such impacts ~~the Organization will update the information contained in the IPCC special report;~~

Acknowledging that international aviation emissions continue to account for less than 2 per cent of total global CO₂ emissions, and they are projected to increase as a result of the continued growth of air transport, unless action for emissions reduction is taken;

Whereas the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC) is to achieve stabilization of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system;

Whereas the Kyoto Protocol, which was adopted by the Conference of the Parties to the UNFCCC in December 1997 and entered into force on 16 February 2005, calls for developed countries (Annex I Parties) to pursue limitation or reduction of greenhouse gases from “aviation bunker fuels” (international aviation) working through ICAO (Article 2.2);

Whereas the Paris Agreement, which was adopted by the Conference of the Parties to the UNFCCC in December 2015, enhances the implementation of the UNFCCC including its objective, and aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

Whereas the Glasgow Climate Pact, which was adopted by the Conference of the Parties to the UNFCCC in November 2021, reaffirms the long-term global goal to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change, and the Glasgow Climate Pact also recognizes that the impacts of climate change will be much lower at the temperature increase of 1.5°C compared with 2°C and resolves to pursue efforts to limit the temperature increase to 1.5°C;

Recognizing the global aspirational goals for the international aviation sector of improving fuel efficiency by 2 per cent per annum and keeping the net carbon emissions from 2020 at the same level, as adopted by the ICAO Assembly at its 37th Session in 2010 and reaffirmed at its 38th, 39th, and 40th and 41st Sessions in 2013, 2016, and 2019 and 2022, respectively;

~~*Recalling Acknowledging*~~ the substantial ICAO work undertaken to explore the feasibility of a long-term global aspirational goal (LTAG) for international aviation in light of the 2°C and 1.5°C temperature goals of the Paris Agreement;

~~*Recognizing* the information sharing and consultative process on the feasibility of an LTAG for international aviation, including the ICAO stocktaking on aviation in-sector CO₂ emissions reduction, and the convening of ICAO Global Aviation Dialogues (GLADs) and the High-level Meeting on the Feasibility of a Long-Term Aspirational Goal for International Aviation CO₂ Emission Reductions, since the 40th Session of the ICAO Assembly;~~

Recognizing that the ICAO *Report on the Feasibility of a Long-Term Aspirational Goal for International Civil Aviation CO₂ Emission Reductions*, which assessed the global-level technical feasibility of various aviation in-sector CO₂ emissions reduction scenarios, served serves as the basis for the consideration and adoption at the 41st Session of the ICAO Assembly of the collective long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050, in support of the Paris Agreement's temperature goal, recognizing that each State's special circumstances and respective capabilities (e.g. the level of development, maturity of aviation markets, sustainable growth of its international aviation, just transition, and national priorities of air transport development) will inform the ability of each State to contribute to the LTAG within its own national timeframe;

~~*Recognizing* that the global aspirational goals for the international aviation sector of improving fuel efficiency by 2 per cent per annum and keeping the net carbon emissions from 2020 at the same level do not deliver the level of reduction necessary to reduce aviation's absolute emissions contribution to climate change, and that goals of more ambition are needed to deliver a sustainable path for aviation;~~

Affirming that addressing GHG emissions from international aviation requires the active engagement and

cooperation of States and the industry, and *noting* the collective commitments announced by Airports Council International (ACI), Civil Air Navigation Services Organisation (CANSO), International Air Transport Association (IATA), International Business Aviation Council (IBAC) and International Coordinating Council of Aerospace Industries Associations (ICCAIA) on behalf of the international air transport industry, to continuously improve CO₂ efficiency by an average of 1.5 per cent per annum from 2009 until 2020, to achieve carbon neutral growth from 2020 and to achieve a long-term goal of net-zero carbon emissions by 2050;

Recognizing the LTAG Monitoring and Reporting (LMR) methodology developed by the Council, with the technical contribution of the Committee on Aviation Environmental Protection (CAEP), to assess progress on the implementation of CO₂ emissions reduction measures towards the achievement of the LTAG, including the past and future CO₂ emissions reduction and the cost impacts of efforts to achieve the LTAG, the impact on the development of the sector, as well as the cost impacts of climate change on international aviation;

Recalling the UNFCCC and the Paris Agreement and *acknowledging* its principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances;

Also acknowledging the principles of non-discrimination and equal and fair opportunities to develop international aviation set forth in the Chicago Convention;

Recognizing that this Resolution does not set a precedent for or prejudice the outcome of negotiations under the UNFCCC or the Paris Agreement, nor represent the position of the Parties to those agreements;

Noting that, to promote sustainable growth of international aviation and to achieve its global aspirational goals, a comprehensive approach, consisting of a basket of measures including technology, sustainable aviation fuels, operational improvements and market-based measures to reduce emissions and possible evolution of Standards and Recommended Practices (SARPs), is necessary;

Acknowledging the significant technological progress made in the aviation sector, with aircraft produced today being about 80 per cent more fuel efficient per passenger kilometre than in the 1960s, *while observing* an unprecedented level of emerging new technologies and innovations towards green aviation transition;

~~*Acknowledging* the adoption of the CO₂ emissions certification Standard for aeroplanes by the Council in March 2017, and the need to keep this Standard up to date based on the latest aircraft efficiency technology improvements;~~

Acknowledging the need for the timely update and development of relevant ICAO environmental SARPs and guidance for new advanced aircraft technologies, as appropriate;

Welcoming the latest CO₂ emissions certification Standard for aeroplanes recommended by CAEP, and the need to keep this Standard up to date based on the latest aircraft efficiency technology improvements;

Recognizing the work being undertaken to consider the environmental aspects of aircraft end-of-life such as through aircraft recycling;

Recognizing that air traffic management (ATM) measures under the ICAO Global Air Navigation Plan

contribute to enhanced operational efficiency and the reduction of aircraft CO₂ emissions;

Welcoming the assessment of the environmental benefits of the Aviation System Block Upgrades (ASBUs) completed for Block 0 and Block 1, and the results of the global horizontal and vertical flight efficiency analysis;

Welcoming the convening of the ICAO Seminars on Green Airports in November 2017, May 2019, and November 2021 and April 2024, and *recognizing* the important role of airports in the distribution of new innovative sources of energy to air transport critical role of airports in the deployment and distribution of cleaner energies for air transport decarbonization in support of the LTAG, and the importance on the resilience of airports;

Noting that the first Conference on Aviation and Alternative Fuels in November 2009 (CAAF/1) endorsed the use of sustainable aviation fuels, particularly the use of drop-in fuels in the short- to mid-term, as an important means of reducing aviation emissions, and that the ; *Also noting* that the CAAF/1 established an ICAO Global Framework for Aviation Alternative Fuels (GFAAF) established by CAAF/1 has been integrated into the ICAO Cleaner Energy Tracker Tools through which progress has been registered, including the increasing number of fuel conversions processes, and airports distributing such fuels for more commercial flights;

Further noting that the second Conference on Aviation and Alternative Fuels in October 2017 (CAAF/2) adopted recommendations and approved a declaration, including the 2050 ICAO Vision for Sustainable Aviation Fuels, as a living inspirational path for a significant proportion of aviation fuels to be substituted with sustainable aviation fuels by 2050, and the need to update the 2050 ICAO Vision to include a quantified proportion of such fuels to be used by 2050;

Recognizing that the technological feasibility of drop-in sustainable aviation fuels, lower carbon aviation fuels and other aviation cleaner energies is proven and such fuels are expected to have the largest impact on aviation CO₂ emissions reduction by 2050 and continue to have a large impact beyond 2050, according to the ICAO LTAG Report, and that the introduction of appropriate policies and incentives to create a long-term market perspective is required;

Recognizing the continuing developments in drop-in fuels such as sustainable aviation fuel (SAF) and lower carbon aviation fuel (LCAF) to reduce aviation CO₂ emissions, and *welcoming* the development of new fuels and cleaner energy sources for aviation, including the use of hydrogen and renewable electricity;

Acknowledging the need for such fuels to be developed and deployed in an economically feasible, socially and environmentally acceptable manner and the progress achieved in the harmonization of the approaches to sustainability, including the; *Recognizing* that sustainability criteria, sustainability certification, and the methodology for the assessment of life cycle emissions of such fuels, which are developed and updated as part of work for the implementation of Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and should be used as the accepted basis for the eligibility of SAF, LCAF and other aviation cleaner energies used in international aviation;

Welcoming the adoption at the third Conference on Aviation and Alternative Fuels in November 2023 (CAAF/3) of the ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies including the global aspirational Vision, which aims to facilitate the global scale-up in development and deployment

of SAF, LCAF and other aviation cleaner energies by providing greater clarity, consistency and predictability to all stakeholders, on the policies, regulations, implementation support, and financing and investments required, to ensure all States have equal opportunities to contribute to, and benefit from, the expected emissions reductions from such aviation cleaner energies ~~Acknowledging the need to explore and facilitate the civil aviation sector's access to renewable energy including through its cooperation with the Sustainable Energy for All (SE4ALL) initiative, as part of the Organization's contribution to SDG 7 "Ensure access to affordable, reliable, sustainable and modern energy for all";~~

Also welcoming the approval by the Council in June 2024 of the ICAO Roadmap for the implementation of CAAF/3 outcomes and the LTAG, as a living document, to monitor and reflect a balanced progress between the four interdependent Building Blocks on policy and planning, regulatory framework, implementation support, and financing;

Recalling that Assembly Resolution A37-19 requested the Council, with the support of Member States, to undertake work to develop a framework for market-based measures (MBMs) in international aviation, including further elaboration of the guiding principles listed in the Annex to A37-19, and that the guiding principles were elaborated as listed in the Annex to Assembly Resolutions A38-18, A39-2, and A40-18 and A41-21, which are reproduced in the Annex to this Resolution;

Noting that a substantial strategy for capacity building and other technical and financial assistance was undertaken by the Organization, in line with the ~~No Country Left Behind (NCLB) initiative~~, to assist with the preparation and submission of States' action plans, including the holding of regional seminars, the development and update of ICAO Doc 9988, *Guidance on the Development of States' Action Plans on CO₂ Emissions Reduction Activities*, an interactive web-interface, the ICAO Fuel Savings Estimation Tool (IFSET), the ICAO Environmental Benefits Tool (EBT) and a Marginal Abatement Cost (MAC) curve tool;

Welcoming that, as of July 2025~~2022~~, ~~150~~~~133~~ Member States that represent more than ~~99~~~~98~~ per cent of global international air traffic voluntarily prepared and submitted action plans to ICAO;

Recognizing the need to further develop and update State Action Plans, including the quantification of CO₂ emissions reduction benefits with practical tools, for sustainable aviation and infrastructure with the focus on environment-driven innovations;

Recognizing the different circumstances among States in their capacity to respond to the challenges associated with climate change and the need to provide necessary support, in particular to developing countries and States having particular needs;

Affirming that specific measures to assist developing States as well as to facilitate access to financial support, technology transfer and capacity building should be initiated as soon as possible;

Recognizing the assistance provided by ICAO in partnership with other organizations to facilitate Member States' actions to reduce aviation emissions, as well as to continuously search for potential assistance partnerships with other organizations;

Welcoming the progress under ~~launch of~~ the ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuel (ACT-SAF) Programme to support the global scale-up in development and deployment of SAF, LCAF and other aviation cleaner energies, ~~including recognizing the significance of~~

the establishment of partnerships, initiatives and international cooperation among States and relevant stakeholders, in line with the *No Country Left Behind* (NCLB) initiative;

Recognizing the need to invest up to 3.2 trillion USD in producing aviation cleaner energies through to 2050, and additional investments will be needed for other aviation CO₂ reduction measures such as aircraft technologies and operational improvements, according to the LTAG report, and *welcoming* the establishment of initiatives such as the ICAO ACT-SAF and ICAO Fininvest Hub to accelerate the development, and facilitate enhanced access to public and private investment capacities and funding from financial institutions, for projects contributing to the decarbonization of international aviation, in particular for developing countries and States having particular needs;

Recognizing the consideration of the Council on the establishment of a climate finance initiative or funding mechanism under ICAO, while addressing the possible financial, institutional and legal challenges, as requested by the 41st Session of the ICAO Assembly;

Recognizing that, according to the latest reports from the IPCC, progress in climate change adaptation planning and implementation has been observed across all sectors and regions, but it is still being unevenly distributed with several adaptation gaps observed, including potential vulnerabilities of key transport infrastructures such as international aviation systems and infrastructures, meaning that their design standards should give due consideration to account for projected climate impacts and risks;

Recognizing the need for enabling conditions for the implementation of long-term climate change adaptation measures, especially for vulnerable parts of the aviation system and infrastructure, which would enhance the preparedness level of the international aviation sector for projected extreme and disruptive climate-related events;

Recognizing the importance of work being undertaken by ICAO, in cooperation with States and relevant United Nations bodies and international organizations, to identify the potential impacts of climate change on international aviation operations and related infrastructure, together with identified options of adaptation measures; and

Recognizing the progress made by ICAO in its implementation of the Climate Neutral UN initiative and the significant support provided by ICAO to the initiative, in particular through the development and regular updates of the ICAO Carbon Emissions Calculator, to support the assessment of emissions from passengers travelling by air and welcoming its expansion to add air cargo emissions;

The Assembly:

1. *Resolves* that this Resolution, together with Resolution ~~A42-xxA41-20~~: *Consolidated statement of continuing ICAO policies and practices related to environmental protection – General provisions, noise and local air quality* and Resolution ~~A42-xxA41-22~~: *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*, supersede Resolutions ~~A41-20, A41-21 and A41-22A40-17, A40-18 and A40-19~~ and constitute the consolidated statement of continuing ICAO policies and practices related to environmental protection;

2. *Requests* the Council to:

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- a) ensure that ICAO exercise continuous leadership on environmental issues relating to international civil aviation, including GHG emissions;
 - b) continue to study policy options to limit or reduce the environmental impact of aircraft engine emissions and to develop concrete proposals as needed, encompassing technical solutions and market-based measures, and taking into account potential implications of such measures for developing as well as developed countries; and
 - c) continue to cooperate with organizations involved in policy-making in this field, notably with the Conference of the Parties to the UNFCCC;
3. *Reiterates* that:
- a) ICAO should continue to take initiatives to promote information on scientific understanding of aviation's impact and action undertaken to address aviation emissions and continue to provide the forum to facilitate discussions on solutions to address aviation emissions; and
 - b) emphasis should be on those policy options that will reduce aircraft engine emissions without negatively impacting the growth of air transport especially in developing economies;
4. *Resolves* that States and relevant organizations will work through ICAO to achieve a global annual average fuel efficiency improvement of 2 per cent until 2020 and an aspirational global fuel efficiency improvement rate of 2 per cent per annum from 2021 to 2050, calculated on the basis of volume of fuel used per revenue tonne kilometre performed;
5. *Agrees* that the goals mentioned in paragraph 4 above would not attribute specific obligations to individual States, and the different circumstances, respective capabilities and contribution of developing and developed States to the concentration of aviation GHG emissions in the atmosphere will determine how each State may voluntarily contribute to achieving the global aspirational goals;
6. *Also resolves* that, without any attribution of specific obligations to individual States, ICAO and its Member States with relevant organizations will work together to strive to achieve a collective medium-term global aspirational goal of keeping the global net carbon emissions from international aviation from 2020 at the same level, taking into account: the special circumstances and respective capabilities of States, in particular developing countries; the maturity of aviation markets; the sustainable growth of the international aviation industry; and that emissions may increase due to the expected growth in international air traffic until lower emitting technologies and fuels and other mitigating measures are developed and deployed, while also recognizing the long-term global aspirational goal in paragraph 7 below;
7. *Further resolves* that, in addition to the medium-term global aspirational goal in paragraph 6 above, ICAO and its Member States are encouraged to work together to strive to achieve a collective long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050, in support of the Paris Agreement's temperature goal, recognizing that each State's special circumstances and respective capabilities (e.g. the level of development, maturity of aviation markets, sustainable growth of its international aviation, just transition, and national priorities of air transport development) will inform the ability of each State to contribute to the LTAG within its own national timeframe;

8. *While recognizing* that the LTAG is a collective global aspirational goal, and it does not attribute specific obligations or commitments in the form of emissions reduction goals to individual States, *urges* each State to contribute to achieving the goal in a socially, economically and environmentally sustainable manner and in accordance with national circumstances;

8 bis. *Emphasizes* the need to globally scale up the development and deployment of SAF, LCAF and other aviation cleaner energies, which are expected to have the largest contribution to aviation CO₂ emissions reductions to support the achievement of the LTAG, *and resolves* that ICAO and its Member States strive to achieve a collective global aspirational Vision to reduce CO₂ emissions in international aviation by 5 per cent by 2030 through the use of SAF, LCAF and other aviation cleaner energies (compared to zero cleaner energy use). In pursuing this Vision, each State's special circumstances and respective capabilities will inform the ability of each State to contribute to the Vision within its own national timeframe, without attributing specific obligations or commitments in the form of emissions reduction goals to individual States;

9. *Requests* the Council, with the technical contribution of CAEP, to implement the LTAG Monitoring and Reporting (LMR) methodology to assess progress on the implementation of CO₂ emissions reduction measures towards the achievement of the LTAG, while the LMR will be supported by information from annual ICAO LTAG Stocktaking, ICAO Tracker Tools, State Action Plans for international aviation CO₂ emissions reduction and other information sources, including the monitoring of progress on means of implementation support and financing. The LMR also incorporates the monitoring and review of the global aspirational Vision and the ICAO Global Framework on SAF, LCAF and other Aviation Cleaner Energies, including through the annual ICAO LTAG Stocktaking and the convening of CAAF/4 no later than 2028 with a view to updating the ambition on the basis of market developments in all regions. In this regard, the Council will present necessary updates on the LMR, for consideration by the 43rd Session of the ICAO Assembly; ~~to regularly monitor progress on the implementation of all elements of the basket of measures towards the achievement of the LTAG, including through: the ICAO environment stocktaking process; the review of the ICAO Vision for SAF; further assessment of the CO₂ emissions reduction and cost impacts of a changing climate on international aviation, regions and countries, in particular developing countries, and the impact on the development of the sector, as well as the cost impacts of the efforts to achieve the LTAG; monitoring of information from State Action Plans for international aviation CO₂ emissions reduction; and means of implementation. To this purpose, the Council will consider necessary methodologies for the monitoring of progress, and report to a future Session of the ICAO Assembly;~~

9 bis. *Requests* the Council to continue to monitor and update the ICAO Roadmap for the implementation of CAAF/3 outcomes and the LTAG, as a living document, while maintaining a balanced progress between the four interdependent Building Blocks on policy and planning, regulatory framework, implementation support, and financing;

10. *Further encourages* all States to submit and update voluntary action plans to ICAO to reduce CO₂ emissions from international aviation, outlining respective policies, actions and roadmaps, including long-term projections;

11. *Invites* those States that choose to prepare or update action plans to submit them to ICAO as soon as possible preferably by the end of June 2027~~2024~~ and once every three years thereafter, in order that ICAO can continue to compile the quantified information in relation to achieving the global aspirational goals and the global aspirational Vision, and the action plans should include information on the basket of measures

considered by States, reflecting respective national capacities and circumstances, quantified information on the expected environmental benefits from the implementation of the measures chosen from the basket, and information on any specific assistance needs for the implementation of the measures so that ICAO can tailor capacity building and implementation support measures including facilitating access to financing and funding in line with the State's needs;

12. *Encourages* States that have already submitted action plans to share information contained in action plans and build partnerships with other Member States in order to support those States that have not prepared action plans, and to make the submitted action plans available to the public, taking into account the commercial sensitivity of information contained in States' action plans;

13. *Requests* the Council to facilitate the dissemination of economic and technical studies and best practices related to the global aspirational goals and the global aspirational Vision and to continue to provide guidance and other technical assistance for the preparation and update of States' action plans prior to the end of June 2027~~2024~~, including through cooperation and assistance on identifying possible sources of financing for decarbonization of aviation in cooperation with financial and other relevant organizations, in order for States to conduct necessary studies and to voluntarily submit action plans to ICAO;

14. *Requests* the Council to maintain and enhance appropriate standards, methodologies and a mechanism to measure/estimate, monitor and verify global GHG emissions from international aviation, and that States support the work of ICAO on measuring progress through the reporting of annual data on traffic, fuel consumption and CO₂ emissions;

14 *bis*. *Specifically requests* the Council, with technical contribution of CAEP, to undertake a study of fuel accounting systems for international aviation currently used in the open market. This study would include preliminary exploration of the so-called 'book and claim' concept to assess its relevancy and applicability, and taking into account relevant developments in other UN bodies, including Article 6 of the Paris Agreement. The intent of the study would be to better understand these accounting systems and concepts and identify potential areas for further investigation. This work can help determine what, if any, role ICAO could have in supporting these systems to facilitate access to environmental benefits of SAF, LCAF and other aviation cleaner energies for international aviation and ensure environmental integrity, with a view to fostering without disincentivizing the global production of such fuels, in particular in developing countries;

15. *Requests* the Council to request States to continue to support the efforts of ICAO on enhancing the reliability of measuring/estimating global GHG emissions from international aviation, and to regularly report CO₂ emissions from international aviation to the UNFCCC, as part of its contribution to assessing progress made in the implementation actions in the sector based on information approved by its Member States;

16. *While recognizing* that no effort should be spared to obtain means to support the reduction and stabilization of CO₂ emissions from all sources *and emphasizing* the need for significant financial resources to achieve aviation's clean energy transition and the LTAG, *urges* that ICAO and its Member States express a clear concern, through the UNFCCC and other relevant processes, on the use of international aviation as a potential source for the mobilization of revenue for climate finance to the other sectors, in order to ensure that international aviation would not be targeted as a source of such revenue in a disproportionate manner;

16 *bis*. *Recognizes* that the achievement of the LTAG requires a robust, targeted and tailored capacity-building and implementation support programme, and that ICAO, industry, academia and other relevant stakeholders need to work together to deliver such a programme, taking into account different circumstances of States and regions, and in line with *No Country Left Behind*;

16 *ter*. *Requests* the Council to continue to implement the ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuel (ACT-SAF) Programme to support the global scale-up in development and deployment of SAF, LCAF and other aviation cleaner energies, including:

- a) provision of guidance and training, including for the national policy development;
- b) sharing of best practices, including through ICAO seminars and ICAO Tracker Tools;
- c) facilitating the establishment of partnerships, knowledge sharing and technical cooperation amongst ACT-SAF partners;
- d) promoting the voluntary transfer of technology, in particular for developing countries and States having particular needs, including on technical skills, manufacturing, processing and equipment;
- e) assistance for the development of feasibility studies and business implementation studies;
- f) accelerating the development of specific aviation CO₂ emissions reduction projects (e.g. acceleration of the sustainability assessment in SAF projects) including under the Technical Cooperation Programme, which may also facilitate the project's financial access under the ICAO Fininvest Hub in sub-paragraph 18. c) below;
- g) further outreach to States and other stakeholders to provide voluntary contributions of additional resources to the ICAO Voluntary Environment Fund in support of activities above under the ACT-SAF programme, and *urges* States and other stakeholders to make regular and substantial contributions to the Fund; and
- h) extending the ACT-SAF programme to add support to the implementation of other emissions reduction measures (e.g. aircraft technology, operations and infrastructural measures) as an ACT-LTAG programme;

16 *quater*. *Requests* the Council to establish the ACT-LTAG programme as a structured and comprehensive framework to support the development and update of State Action Plans to voluntarily contribute to the LTAG, building upon existing initiatives such as the ACT-CORSIA and ACT-SAF programmes, and collaborating with regional initiatives and platforms to deliver targeted, practical support tailored to State-specific needs, in line with *No Country Left Behind* (NCLB);

17. *Recognizes* that means of implementation commensurate to the level of ambition, including financing, will promote the achievement of the LTAG. It requires substantial investments for States, according to their national circumstances, and that various possible modalities and/or funding mechanisms could be used by ICAO to complement the capacity building and implementation support activities above,

and facilitate financing and investment support for implementation of specific aviation CO₂ emissions reduction measures;

18. *Requests the Council to:*

- a) enhance engagement and establish networks and structured dialogues between Member States and the international finance community and other relevant stakeholders, including public and private financial institutions, investors and insurers, as well as the UN and other internationally-recognized funds and investment vehicles, in order to outreach and advocate the financial needs towards the achievement of the LTAG including for SAF, LCAF and other aviation cleaner energies, and to identify and promote financing and funding opportunities and prioritization to aviation decarbonization projects, in particular for developing countries and States having particular needs;
- b) promote and encourage States to use the ICAO sustainability criteria, which are the accepted basis for the eligibility of SAF, LCAF and other aviation cleaner energies, to prioritize and facilitate financial access to aviation cleaner energy projects;
- c) further operationalize the ICAO Finvest Hub to facilitate enhanced access to public and private investment capacities and funding from financial institutions, for projects contributing to the decarbonization of international aviation towards the achievement of the LTAG with a special attention to SAF, LCAF and other aviation cleaner energies, in particular for developing countries and States having particular needs, including:
 - 1) developing a platform to connect aviation decarbonization projects with potential public and private investors with a matchmaking function, thus helping investors to identify and assess projects, including through the partnerships with the financing platforms of other organizations, while ensuring the ICAO technical requirements such as the sustainability criteria are met;
 - 2) working with various stakeholders to explore innovative funding and risk mitigation mechanism adapted to the decarbonization of aviation, incentivizing investments, and promoting collaboration among stakeholders to mobilize financial resources effectively (e.g. fostering Public Private Partnerships);
 - 3) collaborating with financial institutions, such as development banks, to create pathways for the funding of projects at various stages of maturity;
 - 4) developing a database of funding and financing sources, together with their terms and conditions, for project developers to be able to draw on; and
 - 5) developing a toolkit of term sheets templates (basic conditions to satisfy investors) for SAF, LCAF and other aviation cleaner energies;
- d) while recognizing the urgency and importance of scaling up the financing to aviation decarbonization measures, take urgent action for implementation of the near-term recommendations identified from the Council's consideration of possible climate finance

initiatives or funding mechanisms under ICAO¹, to enhance the existing framework and schemes on funding and financing initiatives to further support the progress towards achieving and implementing the LTAG and the ICAO Global Framework on SAF, LCAF and other Aviation Cleaner Energies, in particular for developing countries and States having particular needs;

- e) set up a workstream to identify financing needs and gaps and explore ways of addressing the long-term options identified from the Council's consideration of possible climate finance initiatives or funding mechanisms under ICAO¹, including the feasibility aspects, and report to the 43rd Session of the ICAO Assembly; and
- f) continue to monitor the progress on the means of implementation support and financing, as part of the LMR in paragraph 9 above;

18. *Requests the Council to:*

- ~~a) initiate specific measures or mechanisms so as to facilitate, in particular for developing countries and States having particular needs, better access to private investment capacities, as well as funding from financial institutions, such as development banks, for projects contributing to the decarbonization of international aviation, as well as encourage new and additional funding to this purpose;~~
- ~~b) further consider the establishment of a climate finance initiative or funding mechanism under ICAO, while addressing the possible financial, institutional and legal challenges, and report to the 42nd Session of the ICAO Assembly;~~
- ~~c) subparagraphs a) and b) above will be complementary to a robust assistance and cooperation programme dedicated to LTAG in order to share information on best practices and provide guidance, capacity building, and other technical assistance. Welcoming the establishment of the ICAO Assistance, Capacity building and Training for SAF (ACT-SAF) programme, it should be extended to add support to the implementation of other emissions reduction measures in an ICAO ACT-LTAG programme (e.g. aircraft technologies, operational improvements, infrastructural changes, LCAF and other cleaner energy sources for aviation);~~
- ~~d) promote the voluntary transfer of technology, in particular for developing countries and States having particular needs, to enable them to adapt to cutting-edge technology and to enhance their contribution to achieve the LTAG; and~~
- ~~e) in line with the *No Country Left Behind* initiative, urge ICAO Member States to make regular and substantial contributions to the ICAO Environment Fund, to address specific ICAO activities on the LTAG, including the ACT-SAF programme, aiming at assisting developing States and States having particular needs. States are also encouraged to develop specific projects under the ICAO Technical Cooperation Programme.~~

19. *Requests* States to promote scientific research aimed at continuing to address the uncertainties identified in the IPCC special report on Aviation and the Global Atmosphere and in the Assessment reports, and ensure that future assessments undertaken by IPCC and other relevant United Nations bodies include

¹ Refer to Appendix G of A42-WP/25.

updated information, if any, on aircraft-induced effects on the atmosphere;

19 *bis*. *Requests* the Council, with the technical contribution of CAEP, to enhance the scientific understanding and address uncertainties of aviation's climate impacts, including exploring means to quantify potential climate impacts of non-CO₂ aviation emissions and technological and operational measures to address such impacts;

20. *Requests* the Council to:

- a) continue to develop and keep up to date the guidance for Member States on the application of policies and measures aimed at reducing or limiting the environmental impact of emissions from international aviation, and conduct further studies with respect to mitigating the impact of international aviation on climate change and to adapting international aviation systems and infrastructure to climate change impacts and risks;
- b) encourage States to cooperate in the development of predictive analytical models for the assessment of aviation impacts;
- c) continue evaluating the costs and benefits of the various measures, including existing measures, with the goal of addressing aircraft engine emissions in the most cost-effective manner, taking into account the interests of all parties concerned, including potential impacts on the developing world; and
- d) assist Member States with studies, evaluations and development of procedures, in collaboration with other States in the region, to limit or reduce GHG emissions on a global basis and work together collaboratively to optimize the environmental benefits that can be achieved through various programmes;

21. *Invites* the Council and Member States to work together with relevant organizations to strive to achieve the maximum possible level of progress on the implementation of aviation in-sector CO₂ emissions reduction measures (e.g. technology, operations and fuels), recognizing that the largest potential impact on aviation CO₂ emissions reduction will come from fuel-related measures;

22. *Encourages* the Council and Member States to keep abreast of innovative aircraft technologies, new types of operations conducive to emissions reductions, and SAF, LCAF and other aviation cleaner energies ~~sustainable aviation fuels (SAF), lower carbon aviation fuels (LCAF) and other cleaner energy sources~~ in line with the *No Country Left Behind initiative*, in order to enable timely certification, as well as timely update and development of relevant ICAO SARPs and guidance, as appropriate. ICAO and its Member States are urged to continue work on the elements of the basket of measures for the achievement of the LTAG, including paragraphs 23 to 28 below;

23. *Requests* States to:

- a) consider policies to encourage the introduction of increasingly fuel efficient aircraft into the market and facilitate cost-effective fleet renewal by manufacturers and aircraft operators, and work together through ICAO to exchange information and develop guidance for best practices on aircraft end-of-life such as through aircraft recycling; and

- b) incentivize and accelerate investments on research and development of new aircraft with zero CO₂ emissions;

24. *Requests* the Council to:

- a) update the CO₂ emissions certification Standard for aeroplanes, as appropriate, based on the latest aircraft efficiency technology improvements;
- b) timely update and develop relevant ICAO environmental Standards and Recommended Practices (SARPs) and guidance for new advanced aircraft technologies, as appropriate; and
- c) update medium- and long-term technological goals for aircraft fuel burn;

25. *Requests* States to:

- a) work together with manufacturers, air navigation services providers (ANSPs), aircraft operators and airport operators to accelerate the development and implementation of fuel efficient routings and air navigation procedures and ground operations to reduce aviation emissions, and work with ICAO to bring the environmental benefits to all regions and States, taking into account the Aviation System Block Upgrades (ASBUs);
- b) reduce legal, security, economic and other institutional barriers to enable implementation of the new air traffic management operating concepts for the environmentally efficient use of airspace;
- c) develop and implement frameworks that facilitate the deployment of decarbonization projects at airports such as for energy storage and infrastructure, and work together through ICAO to exchange information and best practices on Green Airports, including practices related to airport planning, development, operations and maintenance; and
- d) consider undertaking climate risk assessment to foster the inclusion of climate change adaptation measures into national climate policies and planning processes, with respect to international aviation systems and infrastructures, as appropriate;

26. *Requests* the Council to:

- a) maintain and update guidance on operational measures to reduce international aviation emissions, and place emphasis on increasing fuel efficiency in all aspects of the ICAO's Global Air Navigation Plan (GANP); encourage States and stakeholders to develop air traffic management that optimizes environmental benefits;
- b) continue to develop and update the necessary tools and guidance to assess the benefits associated with air traffic management improvements, and assess the environmental benefits associated with the implementation of the Aviation System Block Upgrades (ASBUs);
- c) continue to ~~provide~~ facilitate capacity building and technical assistance, and provide the forum to exchange information on best practices for Green Airports, covering such subjects as smart buildings, renewable energy, green mobility, climate change adaptation and resilient

development, community engagement and sustainability reporting, aiming at sharing lessons learned and best practices among airports;

- d) publish and maintain guidance material on the implementation of environmentally sustainable practices at airports, including the Eco-Airport Toolkit e-collection; and
- e) encourage States to pursue a climate-resilient development of their aviation systems and infrastructures, through the provision of guidance and the exchange of best practices, with a focus on the development of policies that integrate climate mitigation and adaptation actions to advance the sustainable aviation development;

27. *Requests* States to:

- a) set a coordinated approach in national administrations for policy actions and investment to accelerate the appropriate research, development, deployment and use of SAF, LCAF and other aviation cleaner energies ~~cleaner and renewable energy sources for aviation, including the use of sustainable aviation fuel (SAF) and lower carbon aviation fuel (LCAF), in accordance with their national circumstances;~~
- b) consider the use of incentives and other policies to encourage the scale-up in the production and deployment of cleaner and renewable energy sources for aviation, including SAF and LCAF, noting that ICAO guidance provides further detail on these potential policy approaches, and recognizing the need to consider a combination of policies which may differ between States due to their national circumstances;
- c) work with relevant stakeholders to accelerate the fuel research, certification and development as well as processing technology and feedstock production, and the certification of new aircraft and engines to allow the use of 100 per cent SAF, in order to decrease costs and support scale-up of sustainable fuel production pathways up to a commercial scale, especially through encouraging and promoting SAF and/or LCAF purchase agreements as well as supporting timely delivery of any necessary changes to airport and energy supply infrastructure, taking into account the sustainable development of States;
- d) recognize the sustainability criteria, sustainability certification, and the methodology for the assessment of life cycle emissions of such fuels, which are developed and updated as part of work for the implementation of CORSIA and should be used as the accepted basis for the eligibility of SAF, LCAF and other aviation cleaner energies used in international aviation ~~existing approaches to assess the sustainability of all fuels in general, including those for use in aviation which should achieve net GHG emissions reduction on a life cycle basis, contribute to local social and economic development; competition with food and water should be avoided;~~ and
- e) adopt measures to ensure the sustainability of aviation fuels, building on existing approaches or combination of approaches, and monitor their production at a national level;

28. *Requests* the Council to:

- a) encourage Member States and invite industry, financial institutions and other international

organizations to actively participate in exchange of information and best practices ~~through seminars and training~~, and facilitate the establishment of partnerships and the definition of policies that will further promote the transition to cleaner, renewable sources of energy for aviation, including SAF and LCAF, ~~including through the ICAO ACT-SAF programme through regional seminars~~;

- b) continue to maintain the ICAO ~~Cleaner Energy Tracker Tools Global Framework for Aviation Alternative Fuels (GFAAF)~~;
- c) enhance efforts, with the technical contribution of CAEP, to increase the number of ICAO approved Sustainability Certification Schemes (SCS) in all regions and accelerate the sustainability certification of qualifying SAF, LCAF and other aviation cleaner energies in line with the CORSIA requirements, without excluding any particular fuel source, pathway, feedstock or technology; and in this regard, accelerate the development and approval of new SCS and the analysis and approval of life cycle values for new fuel sources and pathways;
- d)e) continue to give a global view of the future use of SAF, ~~and LCAF~~ and other aviation cleaner energies and to account for changes in life cycle GHG emissions in order to assess progress toward achieving global aspirational goals and the global aspirational Vision;
- e)d) work with financial institutions to facilitate access to financing infrastructure development projects dedicated to SAF, ~~and LCAF~~ and other aviation cleaner energies and incentives to overcome initial market hurdles;
- f)e) cooperate with other relevant international initiatives, including the Sustainable Energy for All (SE4ALL) initiative, to facilitate aviation's access to renewable energy; and
- g)f) continue to assess progress on the development and deployment of SAF, LCAF and other aviation cleaner energies, as part of the LMR and monitoring and review of the global aspirational Vision and the ICAO Global Framework in paragraph 9 above, and convene CAAF/4 no later than 2028, with a view to updating the ambition on the basis of market developments in all regions ~~cleaner energy sources for aviation as part of the ICAO stocktaking process, and convene the CAAF/3 in 2023 for reviewing the 2050 ICAO Vision for SAF, including LCAF and other cleaner energy sources for aviation, in order to define a global framework in line with the No Country Left Behind (NCLB) initiative and taking into account national circumstances and capabilities;~~

29. *Requests* the Council to identify the potential impacts of climate change on international aviation operations and related infrastructure, identify adaptation measures to address the potential climate change impacts, and maintain and enhance guidance on climate change risk assessment and adaptation measures for international aviation, in cooperation with other relevant international organizations and the industry; and

30. *Requests* the Council to continue to cooperate with the Climate Neutral UN initiative, remain at the forefront of developing methods and tools for quantifying aviation's GHG emissions with respect to the initiative, including the ICAO Carbon Emissions Calculator that also incorporates cargo emissions, and further develop and implement the strategy for reducing GHG emissions and enhancing in-house sustainability management practices of the Organization.

Annex

The guiding principles for the design and implementation of market-based measures (MBMs) for international aviation:

- a) MBMs should support sustainable development of the international aviation sector;
- b) MBMs should support the mitigation of GHG emissions from international aviation;
- c) MBMs should contribute towards achieving global aspirational goals;
- d) MBMs should be transparent and administratively simple;
- e) MBMs should be cost-effective;
- f) MBMs should not be duplicative and international aviation CO₂ emissions should be accounted for only once;
- g) MBMs should minimize carbon leakage and market distortions;
- h) MBMs should ensure the fair treatment of the international aviation sector in relation to other sectors;
- i) MBMs should recognize past and future achievements and investments in aviation fuel efficiency and in other measures to reduce aviation emissions;
- j) MBMs should not impose inappropriate economic burden on international aviation;
- k) MBMs should facilitate appropriate access to all carbon markets;
- l) 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;
- m) MBMs should include de minimis provisions;
- n) 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;
- o) where emissions reductions are achieved through MBMs, they should be identified in States' emissions reporting; and
- p) 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.