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

AIRPORTS CONTRIBUTION TO ENVIRONMENTAL PROTECTION

(Presented by Airports Council International (ACI))

EXECUTIVE SUMMARY	
This information paper provides background information on airports and ACI's views on environmental protection. This includes CO_2 emissions, climate change adaptation, local air quality, noise, and sustainability. It also emphasises ACI's support for the work of ICAO on environmental protection through the Committee on Aviation Environmental Protection (CAEP) and by other means.	
Strategic Objectives:	This working paper relates to Strategic Objective E: Environmental Protection
Financial implications:	No financial implication
References:	A40-WP/57, A40-WP/58, A40-WP/59, A40-WP/189, A40-WP/193, A40-WP/194, A40-WP/225, A40-WP/260

1. INTRODUCTION: ACI SUPPORT TO ICAO ON ENVIRONMENTAL PROTECTION

1.1 In April 2019 the ACI Assembly, meeting in Hong Kong, passed Resolution 2/2019 which reinforced airport members interest in ACI continuing to engage at all levels within ICAO to represent the interests of airports. ACI contributes to the ICAO Committee on Aviation Environmental Protection (CAEP) with airport experts and welcomes outcomes from the CAEP/11 meeting, particularly the new nvPM standard, the PBN and Community Engagement Report, the Climate Change Adaptation Synthesis, the Eco Airport toolkit, the update of the Airport Air Quality Manual, and future work items such as the exploratory study of supersonic aircraft impacts around airports, among others. ACI has

worked closely with ICAO on the Green Airports Seminar, which took place in Lima, Peru on 6-7 May 2019.

2. CLIMATE CHANGE

2.1 ACI fully supports CORSIA as the global carbon offsetting scheme for international aviation and the role of ICAO to continue leading the efforts to address international aviation's CO_2 emissions through a basket of measures. ICAO should focus on the implementation of CORSIA and on the development of a long-term carbon emissions reduction goal for international aviation to be agreed at the next Assembly. It also needs to keep the environment SARPs and relevant Guidance Manuals up to date, such as the Airport Planning Manual, Part II, and the Airport Air Quality Manual.

2.2 Considering the above and the fact that States obligations under the Paris agreement and national law regulate airports environmental activities, including airport emissions, ACI believes ICAO should not use its scarce resources on airport-specific activities on environment, particularly when it falls outside its remit. ICAO can play a role on capacity building with regulators in regions where there is demand for that and a direct link with international CO_2 emissions. This is the case with climate change adaptation, where there is both an interest and a need to increase support on the issue.

2.3 Airport Carbon Accreditation

2.3.1 The ACI Airport Carbon Accreditation programme is celebrating its 10th anniversary. As a third party verified and audited program which accounts for action taken by airports to measure and reduce emissions, it plays an increasingly important role in communicating trusted information on collective action. From an initiative that began with 17 airports in Europe in the first year (2009-2010), it has become a global industry standard for airports all over the world, with 282 accredited airports as of July 2019, located in 71 States and which welcome close to 44% of all global air passenger traffic - almost every second passenger in the world is travelling through a carbon accredited airport today. They are small and large, commercial hubs and general aviation airports, situated in the biggest countries of the world and in the small island States.

2.4 Airport Carbon and Emissions Reporting Tool (ACERT)

2.4.1 Originally developed by Transport Canada, ACI has taken the lead to update and improve the Airport Carbon Emission and Reporting Tool (ACERT). ACERT enables any airport to measure and manage their GHG emissions and the output can then be used as a basis for application to the Airport Carbon Accreditation programme. No environment expertise is required and ACI distribute ACERT free of charge alongside a Manual and Tutorial.

2.5 ACI Aircraft Ground Energy System Simulator (AGES-S)

2.5.1 ACI has recently launched, with the support of Zurich Airport, the Airport Ground Energy Systems Simulator (AGES-S). AGES-S enables airports to quantify the environmental and economic benefits of reducing the use of aircraft auxiliary power units by replacing them with a ground-based energy system to help airport members create business cases for investment in such energy-saving infrastructure.

2.6 Long-Term Goal For CO_2 Emissions

2.6.1 ACI Resolution 2/2019 promotes the highest safety, security, efficiency and environmental standards for all aviation partners and in respect of environmental protection it encourages ICAO to develop long term goals consistent with the Paris Agreement.

2.6.2 In light of the most recent IPCC Special Report on Global Warming of 1.5°C and with the imminent entry into force of the Paris Agreement, aviation ambition will have to increase. ACI Europe and nearly 200 airports individually have recently committed to net zero airports by mid-century. ACI World recognizes different regional realities, and their ability to reach different commitments, therefore it has embarked on work to develop a credible but realistic long-term carbon goal for the global membership, including consideration of net zero airports.

2.6.3 Similarly, ATAG is currently working on the delivery of its existing goal of reducing CO_2 emissions to half of 2005 levels by 2050, and ATAG is also calling on ICAO to work on a long-term goal for the next triennium and to reach an agreement on this goal at the 41st ICAO Assembly in 2022.

2.7 Climate Change Adaptation

2.7.1 Resilience is essential to address the impacts of climate change that are already happening, despite our best mitigation efforts. ACI is committed to continue working on climate change adaptation, encouraging airports to conduct risk assessments, but also supporting ICAO's work on the matter. Airports are nationally critical infrastructures that facilitate both mobility and economic growth. However, due to their fixed infrastructure and vulnerability to extreme weather, as well as industry interconnectivity, they are also at particular risk from the potential consequences of climate change.

2.7.2 ACI's Annual Assembly in 2018 recognized this through a Resolution which encourages airports to conduct risk assessments and implement resilience and adaptation elements into their Master Plans. ACI has also released the Policy Brief: Airports' Resilience and Adaptation to a Changing Climate. Furthermore, a Resilience and Adaptation to Climate Change Survey has been launched asking ACI member airports to contribute to improve understanding of the impacts and risks of climate change already faced by the industry and its evolution over time. ACI will use the results of the survey to better inform action and policy to promote business continuity and sharing of best practices.

3. RENEWABLE ENERGY

3.1 Airports worldwide have implemented sustainable renewable energy, including solar, wind, and biomass initiatives. Cochin International Airport, the first fully solar-powered airport and Galapagos Ecological Airport, that works 100% with renewable energy (solar and wind) are prime examples. The availability of renewable energy is of paramount importance for the decarbonization of airports. Studies defining pathways and appropriate business cases on how to access renewables are necessary for airports to deliver more ambitious targets on climate change. These studies are generally locally driven, considering the availability of renewable energy where the airport is located and local incentives/policies that can support such developments. ACI will be working with its member airports to identify opportunities to define and share good practices.

3.2 Sustainable Aviation Fuel (SAF)

3.2.1 Los Angeles, Oslo, Stockholm, Halmstad Karlstad have enabled regular commercial use of SAF, while others such as Bromma, Landvetter, Växsjö, Malmö, Kiruna, Östersund, Visby, Luleå offer SAF to some degree. Other airports have either ongoing initiatives to supply SAFs, such as Seattle and

San Francisco, or are planning to launch new projects. Additional studies which involve both airports and airlines should help the industry to better understand how these initiatives could be extended to other airports, to support uptake, coalesce understanding and to also avoid repeated duplication of requests from airlines to participate at each airport. Caution should be used in any assumptions that rely on airports to contribute to the financing of SAFs and the provision of the relevant infrastructure, considering that this would be highly dependent on airport ownership formats, a proper business case established, and local subsidies, grants or other incentives available at particular airport locations. The availability of established and standardized best practices necessary to support access to SAFs onsite at airports is an element that could facilitate airlines in moving forward with investments in biofuel and thus in the deployment of SAFs at a commercial scale. This is directly relevant to the transition to a net zero global economy by 2050.

4. LOCAL AIR QUALITY

4.1 Impacts from aircraft and airport activities have long been on the radar of airport operators. Often driven by national ambient air quality regulations or by stakeholder expectations, airports have assessed the emissions and concentration of air pollutants and taken appropriate measures to reduce them.

4.2 Recently, Ultrafine particles have been in the focus of airports, local authorities, and residents. For some airports, it has become the most significant source of opposition from communities. In this regard, ACI welcomes the new mass and number nvPM emissions standard recently developed by ICAO and the update of the ICAO Airport Air Quality Manual completed by the last CAEP cycle.

4.3 However, expertise and experience on ultrafine particles is still at the beginning. To this end, many airports around the globe have initiated measurements of ultrafine particles (mass and number) at and in the closer vicinity of airports. While it is still premature to draw firm conclusions, current results show that airport activities – primarily triggered by aircraft – emit considerable amounts of particles of small sizes. Results further confirm that concentrations tend to decrease with increasing distance. Findings of several campaigns show the importance of suitable measurement equipment, the chosen location and the duration of the campaign over longer time and subject to different weather conditions.

4.4 The activities around ultrafine particles have led to two important developments. First, in an update of the ACI EUROPE Report on the current status of the understanding of ultrafine particles at airports in 2018. And second, in the further development of local air quality models to enable the assessment both for emission inventories, and for dispersion modelling of ultrafine particles.

4.5 While measuring and modelling of local air quality is an integral part of airports' activities, measures have to be implemented to yield results and improve existing conditions. As such, airports have taken many initiatives to promote and implement the electrification of airside vehicles and ground support equipment and to provide electric alternatives to aircraft auxiliary power units such as pre-conditioned air and ground power. Such initiatives reduce noise, global emissions and locally relevant pollutants. Airports worldwide are committed to continue implementing measures that are relevant, environmentally beneficial, and economically affordable.

5. NOISE

5.1 Reducing the impact of aircraft noise should remain a key priority for all aviation stakeholders. While aircraft design has resulted in steady reductions in engine noise, progress on aircraft noise at the source has been challenged by increases in traffic and the introduction of larger aircraft. The result has been increases in cumulative noise levels at some airports. However, acoustic factors are estimated to be only responsible for 30% of noise-related community annoyance. ACI recommends that States and the industry need to work together to better understand the remaining 70%, so that effective policies and actions can be planned accordingly.

5.2 In addition, the implementation of Performance-Based Navigation (PBN) and the potential re-introduction of supersonic aircraft have brought additional layers of complexity to aircraft noise management. The implementation of PBN can lead to a concentration of noise over communities (even though they may be located in a smaller area and fewer people in total affected) and thus requires aviation stakeholders to work in closer cooperation with communities from very early stages. On supersonics, ACI supports the development of new technology, but their considerable noise and emissions footprint must be understood and cannot compromise the work done by the industry in decades.

5.3 Another key element to airports' license to operate and grow is sensible land-use planning policies to ensure that the activities near to airports are compatible with airport operations. Airport operators should engage with their local authorities and also need the cooperation and engagement of aircraft operators and air traffic managers. Furthermore, ACI also advocates that communities should be at the core of noise management strategies. For instance, it should be recognized as a cross-cutting element of the ICAO Balanced Approach, with the goal of identifying practical solutions which includes communities' feedback, whenever possible.

6. ACI CAPACITY BUILDING ON ENVIRONMENT

6.1 Capacity building is a priority for ACI. ACI Developing Nations Assistance Program (DNA) provides capacity building for airports located in developing nations. We have conducted the following DNAs in Environment since the last ICAO Assembly: 22-23 October 2016 in Mozambique; 19-20 October 2017 in Mauritius; 20-21 September in Miami; 05-06 September 2018 in Miami; and another one is planned to happen at in Accra, Ghana on 17-18 October 2019.

6.2 ACI is also piloting a new strand of its Airport Excellence – or APEX – programme dedicated to helping airports to overall improve their environmental management. APEX in Environment is based on ACI best practices and ICAO Guidance Material. Pilots have been conducted in Quito International Airport, Ecuador and Adisumarmo International Airport, Indonesia in 2018, in Geneva Airport in 2019 and more pilots are in the pipeline, including Hong Kong International Airport, planned for the beginning of 2020.

7. AIRPORTS SUSTAINABILITY

7.1 There is a delicate balance between environmental stewardship, economic development and social protection, and the aviation sector needs to contribute to the delivery of several UN Sustainable Development Goals (SDGs). Airports, due to their physical infrastructure also contribute to additional elements, such as water conservation.

7.2 These environmental principles have also led to the transition of some elements of airport environment management: such as waste management, which is now moving towards a circular economy; and community engagement, where communities concerns and their social and economic development have become part of sustainability strategies of airports worldwide.

7.3 In addition, airports act on issues that are relevant to environmental and social impacts but may not have a direct link to their mandates. These actions are also taken under their sustainability umbrellas and some of the examples are the need to tackle wildlife and human trafficking.

7.4 ACI EUROPE launched a comprehensive Sustainability Strategy for Airports in June 2019. Addressing the three dimensions of sustainability - environmental, social and economic - it focuses on areas where ACI EUROPE sees significant potential for airports to be more ambitious and step up their efforts, particularly by implementing voluntary measures beyond regulatory requirements. It covers a broad range of topics, from climate change, material resources and biodiversity, to human rights and business ethics, noise and quality of life of local communities, employee experience, sustainable supply chain and sustainable destination (tourism), amongst others. For each of these topics, it outlines pathways with recommended actions that can help airport operators implement the above vision and defines indicative metrics to support them in measuring their achievements and identify areas for further progress. It also relates to the UN Sustainable Development Goals (SDGs) and the Global Reporting Initiative (GRI).

8. CONCLUSION

8.1 ACI and its member airports, operating almost 2,000 airports in 176 States are committed to limiting and reducing their environmental footprint through initiatives that go beyond the activities and remits of ICAO, particularly considering the airport infrastructure footprint and the national regulations on environmental protection. ACI will continue to support ICAO's activities on environmental protection and believes that collaboration with all stakeholders is key to promote the sustainable development of aviation. Given the tight budget and its limited resources it is essential that ICAO focus its efforts on those issues that only ICAO can do, particularly in terms of setting the international regulatory framework: however, ICAO should work closely with industry partners to support their outreach and capacity building efforts.

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