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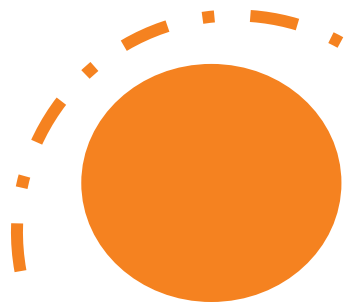
RECONNECTING **THE** WORLD

ICAO work on Green Airports & Airport Community Engagements

ICAO ESAF/WACAF Webinar on Green Airports

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- **Environmental issues** relating to airport operations such as air and water quality, land management, noise, and climate change, has required States to respond with sound policies, plans and procedures
- These include both voluntary and regulatory measures to achieve a **balanced approach to environmental management**
- The compatibility of an airport with its environs can be achieved by **proper planning of the airport, management of polluting-generating sources, and land-use planning of the area surrounding the airport**

➔ **Community Engagement**



Balanced approach to aircraft noise Management - ICAO Doc. 9829

➔ **Eco Airport e-collection**



Environmental Management, air quality and climate change mitigation at airports – ICAO Doc 10031, ICAO Doc 9184, ICAO Doc 10013

ICAO work on Airports

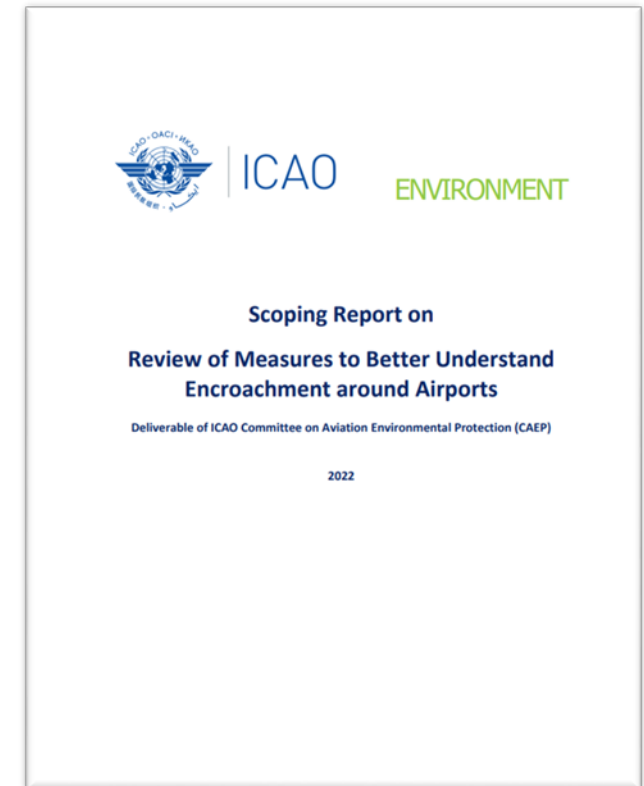
ICAO Committee on Aviation Environmental Protection (CAEP) Working Group 2 – Airports and Operations

- ICAO Standards
- wide range of guidance materials related to airports and operations
- practical and ready-to-use information to support the planning and implementation of airport infrastructure projects: **Eco Airport e-collection**



Review of Measures to better understand encroachment around airports

- Third State of Play report on the Investigation of Possible Indicators on Encroachment focuses **on the challenges and good practices related to population encroachment into the noise contours at airports**
 - including the metrics used to measure this challenge
 - accessing data and information to track levels of encroachment;
 - maintaining positive dialogue and negotiations between the airport and municipality;
 - addressing conflicts with the interests of residents; and
 - property owners in the vicinity of airports





Community engagement by airport operators and other aviation stakeholders

- **key link between environmental stewardship and mitigating environmental constraints to aviation operation and growth**

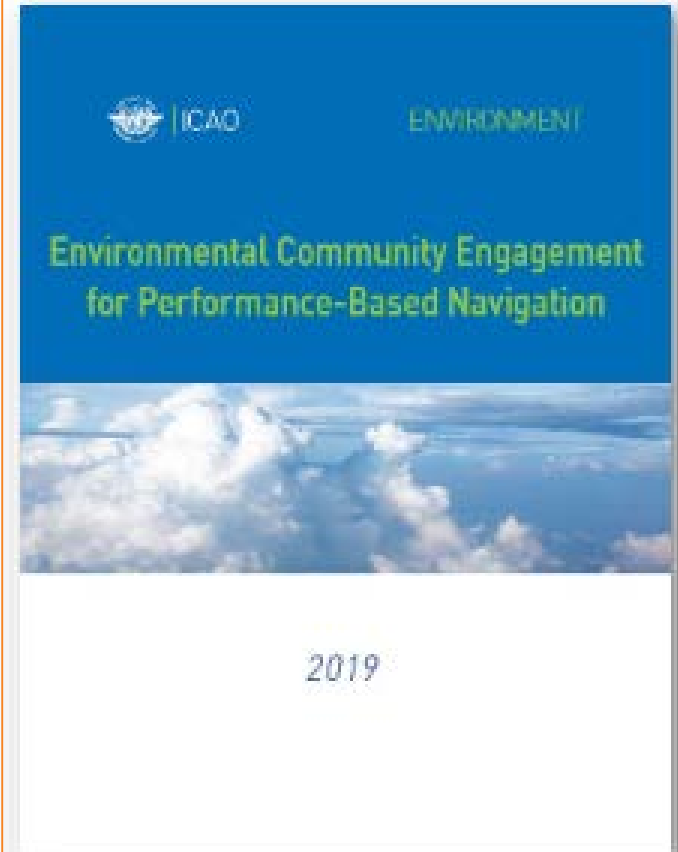
ICAO Circular 351:

- assists and encourages States and the aviation industry, in particular airports, airlines, and Air Navigation Service Providers, to
 - **engage local communities early in airport development projects to address environmental matters**

Environmental Community Engagement for Performance-Based Navigation

The report highlights

- importance of effective community engagement and provides good practices that should be considered when undertaking airspace modernization:
 - share and promote practices that have supported improved community understanding and effective airspace development
 - Serve as a reference point as the industry continues to modernize airspace in accordance with ICAO Global Air Navigation Plan (GANP) and Aviation System Block Upgrades (ASBU)



ICAO fosters the **exchange of information on best practices for Green Airports**, covering such subjects as smart buildings, renewable energy, green mobility, climate change resilience resource and biodiversity protection, community engagement and sustainability reporting



With the aim of sharing and harmonizing best practices amongst airports. ICAO has developed **practical and ready-to-use information to support the planning and implementation of airport infrastructure projects**

The material is provided as general information only

[Eco-Airport Toolkit e-collection \(icao.int\)](http://icao.int)

CAEP continued to contribute to the development of concrete tools to facilitate the implementation of solid action by aviation stakeholders worldwide:



→ While aircraft noise and local air quality remain key and limiting factors in airport areas. Operational improvements remain short-term levers accessible to all to reduce emissions, ensuring that in this global journey towards greening the aviation sector

Development of an eco-airport toolkit on the *Environmental Impact of Unmanned Aircraft Operations at and around Airports* (to be made freely available on the ICAO website)



Publically available on the ICAO website
[Sustainable Considerations for Airport Surface Access.pdf \(icao.int\)](https://www.icao.int/publications/Sustainable_Considerations_for_Airport_Surface_Access.pdf)

- Customers appreciate convenient, affordable, and accessible means to access and leave the airport. Increasingly, they also expect airports to operate sustainably
- **Strategic planning and implementation of surface access is an important consideration for mitigating environmental impacts** and bring social and economic advantages
- The airport Master Planning process will generally consider the needs for access to the terminal curbs, parking, rental car facilities, and other capacity constraints. Several sustainable solutions address the issues associated with airport surface access

- Many methods have emerged to reduce driving times at the airport, thereby reducing engine emissions :
 - creative tactics have been used to reduce the number of single-occupant private vehicle trips and encourage low-emission vehicles
 - many airports are working to improve public transportation connection, in some cases building and operating rail lines themselves



- There are many examples of new digital tools for moving people, bags, and cargo around an airport in a swift and sustainable manner:
 - by allowing drivers to find open parking spaces quickly
 - customers to hail rideshare services

Guidance on Climate Resilient Airports



Publically available on the ICAO website
[Climate resilient airports.pdf \(icao.int\)](https://www.icao.int/publications/default.aspx?publicationID=11411)

- Climate change presents many challenges for aviation, and the impacts of changing climate are felt at airports worldwide. **Strengthening airports to be more resilient to the impacts of climate change has become a major theme of airport planning**
- A climate resilient airport is one that has taken steps to prepare for the challenges that climate change and severe weather bring.
- Provides recommendations and guidance on resilience planning (Master Plans)

The **Master Plan is commonly used for planning and offers an excellent format for studying climate resilience actions** (in case of extreme cold and ice, flood and other extreme weather conditions)



At Nice airport, for example, the system of parallel runways, partially built in the sea and at low altitude, will be vulnerable to maritime hazards such as rising sea level and rough seas during storms.

Due to climate change, the frequency and intensity of these hazards will increase. Hence, "Aéroports de la Côte d'Azur" - the operator of the airport - conducted a maintenance campaign for existing embankments and sea dikes. In order to strengthen the rip-rap areas that protect the airstrips maritime side of the airport



Publically available on the ICAO website [GHG Management and Mitigation at Airports.pdf \(icao.int\)](https://www.icao.int/airports/ghg-management-and-mitigation-at-airports.pdf)

- Airports have a critical role to play in the sustainable development of the aviation eco-system. More work needs to be done. For instance, by continuing the research on the impacts of integrating new sustainable aviation fuels at the airport or exploring ways to produce renewable energy onsite
- **Airports are key stakeholders to improve practices on the ground.** Better airport traffic sequencing, allowed by the implementation of innovative e-tools such as Airport Collaborative Decision Making tools, help to improve the overall efficiency of airport operations, especially turn-around and pre-departure sequencing, thus avoiding unnecessary GHG emissions

Installation of renewable energy is becoming more attractive not only because of its declining costs, but also due to the additional benefits it can offer of protection against outages and blackouts. Common onsite renewable energy systems at airports **include solar arrays**



Several airport operators around the world are implementing climate initiatives at their airports - such as installing photovoltaic plants and powering aircraft on the ground with renewable energy – and are ready to be replicated worldwide today

Stuttgart Airport (Germany) purchases 100% electricity from renewable sources, as well as running solar power plants with a total of 15,000 square meters and a yield of 2.5 Gigawatt hours (GWh). The airport plans to increase the mix of renewables used and is building a smart grid to ensure stability and continuous flow of energy

New essential topics of interest to the airport community include:

- emerging technology aircraft and their environmental and social impacts at and around airports
- the protection of biodiversity and the use of nature-based solutions to mitigate and adapt to climate change

Sustainability is no longer an option that is ‘nice to have:



In June 2021, global ACI member airports committed to reach net zero carbon emissions by 2050

Customers, passengers, shareholders, investors, regulators, and governments, are looking at airports and expecting them to reduce their environmental impacts

The role of innovation and technology should not be underestimated by the industry. These two enablers have the potential to help airports and all their stakeholders be more resilient and limit their footprint on the environment



Thank You