ACI EUROPE
AIRPORTS COUNCIL INTERNATIONAL

Implementing the **Balanced Approach**

ACI EUROPE
POSITION PAPER

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Executive Summary

Aircraft noise management is a defining challenge for European airports, shaping environmental policy, public perception, and economic development. The International Civil Aviation Organisation (ICAO) has set forth the Balanced Approach (BAR), a globally endorsed methodology aimed at mitigating aircraft noise impacts through a structured, multi-pillar process. However, within the European Union, the implementation of this approach through Regulation (EU) 598/2014 has been inconsistent. Several EU Member States have deviated from the regulation's systematic procedure by prematurely adopting operational restrictions, thereby undermining the effectiveness of airport noise strategies, compromising regional air connectivity, European airports' competitiveness and weakening Europe's economic growth.

Key Findings

Regulatory Fragmentation: The BAR is being implemented unevenly across Member States, with operating restrictions increasingly used as a first resort rather than a last. This undermines the Regulation's integrity and creates a fragmented landscape for noise management.

Procedural Non-Compliance: Examples from Belgium, the Netherlands, France, and Ireland reveal procedural shortcuts, such as bypassing cost-effectiveness analyses, neglecting land-use planning, and failing to conduct stakeholder consultations.

Overreliance on Generic Noise Thresholds: Some local authorities are using the World Health Organisation (WHO) Environmental Noise Guidelines and the EU Zero Pollution Action Plan as prescriptive benchmarks, imposing unrealistic targets that lack technical assessment.

Limit the Impacts, not the Activity: Operating restrictions limit an activity and can have unintended consequences, such as disincentivising fleet renewal and procedural improvements. Impact limits allow the activity to evolve within an environmental constraint.

Undervalued Role of Land-Use Planning: Poor coordination between urban development and airport master planning has led to increased residential encroachment into noise-sensitive zones, significantly undermining airports' efforts and the effectiveness of noise mitigation policies designed to address noise impacts on surrounding communities.

Unrepresentative Noise Metrics: Selecting a noise metric for an abatement objective can have unintended consequences and may not reflect the benefits of mitigation measures. For example, by considering only outdoor noise levels, no benefit from home insulation schemes is taken into account.

Threats to Connectivity and Competitiveness: Operating restrictions may force airlines to forfeit historic slots, divert traffic to less-regulated airports outside the EU, or stop flying altogether, eroding Europe's strategic autonomy, regional connectivity, and competitiveness.

Policy Recommendations

For the European Commission:

- Reaffirm and enforce Member States' obligations under Regulation (EU) 598/2014, ensuring procedural compliance and full sequencing of the BAR.
- Support the ICAO CAEP Working Group in enhancing the practical implementation of the BAR across Member States.

For National Governments and Competent Authorities:

- Implement the ICAO BAR in its entirety, including stakeholder consultation, cost-benefit analysis, and SMART noise abatement objectives.
- Caps and restrictions must only be imposed as a last resort. Before considering them, authorities must demonstrate that measures for reduction at source, land-use planning, and operational procedures have been fully deployed and evaluated. Restrictions must be justified by rigorous technical evidence and local assessments
- Manage and limit environmental impacts rather than the activity to properly incentivise desired behaviour, such as fleet modernisation.
- Strengthen integration of land-use planning with long-term airport strategies to prevent further residential encroachment.

For Airport Operators:

- To implement the BAR, use ACI World's six-step guidance to develop structured, transparent noise-reduction plans that align with environmental goals and are informed by effective, representative community engagement. Promote ongoing fleet modernisation and improved operational procedures in coordination with airlines, ANSPs, and the local surrounding communities.

If these recommendations are implemented, the EU will benefit from a harmonised, legally sound, and stakeholder-supported noise management framework. This will enhance the regulatory credibility of EU institutions, reduce public resistance through inclusive and transparent decision-making, and ensure that aviation noise policies effectively balance environmental, social, and economic sustainability.

Introduction

Aircraft noise is one of the most salient and locally sensitive impacts of aviation. It affects communities, shapes public perception, and can significantly influence airport development. In recognition of these challenges, the International Civil Aviation Organisation (ICAO) developed the guidance on a balanced approach to aircraft noise management[1], a globally endorsed strategy approach to achieving noise abatement objectives comprising four noise management pillars: reduction at source, land-use planning, operational procedures, and operating restrictions, only as a last resort. The European Union adopted this methodology in Regulation (EU) 598/2014 of 16 April 2014[2], which provides the legal and procedural framework for noise-related actions at EU airports.

At its core, the BAR ensures that all available options are assessed systematically and cost-effectively on an airport-by-airport basis. The regulation is designed not only to achieve specific noise abatement objectives (NAO) but also to support the sustainable development of air traffic capacity and connectivity across the EU. However, the practical implementation of Regulation (EU) 598/2014 has diverged widely among Member States. While some authorities respect the procedural sequencing and stakeholder involvement required by the regulation, others have resorted to unilateral restrictions, such as movement caps and night curfews, without fully exploring alternative measures. This inconsistent application threatens to undermine public and industry trust and compromise airports' regional connectivity and competitiveness.

At the same time, insufficient integration of land-use planning into airport development strategies has left many communities more exposed to noise. This includes the construction of new housing and/or households through the conversion of existing homes in already noise-impacted areas, despite airlines' significant efforts to renew their fleets and improve operational procedures to minimise the impact of their operations.

European airports are proactively implementing operational noise abatement procedures - such as continuous descent operations (CDOs), performance-based navigation, and optimised runway usage - to effectively reduce the noise footprint affecting surrounding areas. In parallel, airports are working closely with airlines to promote the use of quieter aircraft, using differential charges and incentive schemes to accelerate fleet renewal. These efforts are yielding measurable results, contributing to lower community exposure and more sustainable airport operations.

This policy paper examines the systemic shortcomings in the current application of the BAR, presents detailed case studies and regulatory insights, and outlines targeted recommendations for EU institutions, national governments, and airport operators. It does not address the role of non-acoustic measures in influencing levels of high annoyance and high sleep disturbance, as these aspects fall outside the scope of the paper, which focuses exclusively on the four pillars of the BAR. It advocates for consistent enforcement, data-driven decisions, and collaborative planning to ensure that aircraft noise management remains both effective and equitable in a rapidly evolving aviation landscape.

While this policy paper focuses on the implementation of Regulation (EU) 598/2014 by EU Member States, it is important to note that the ICAO BAR applies globally. Accordingly, the principles, challenges, and recommendations outlined here are also relevant to non-EU countries. This broader

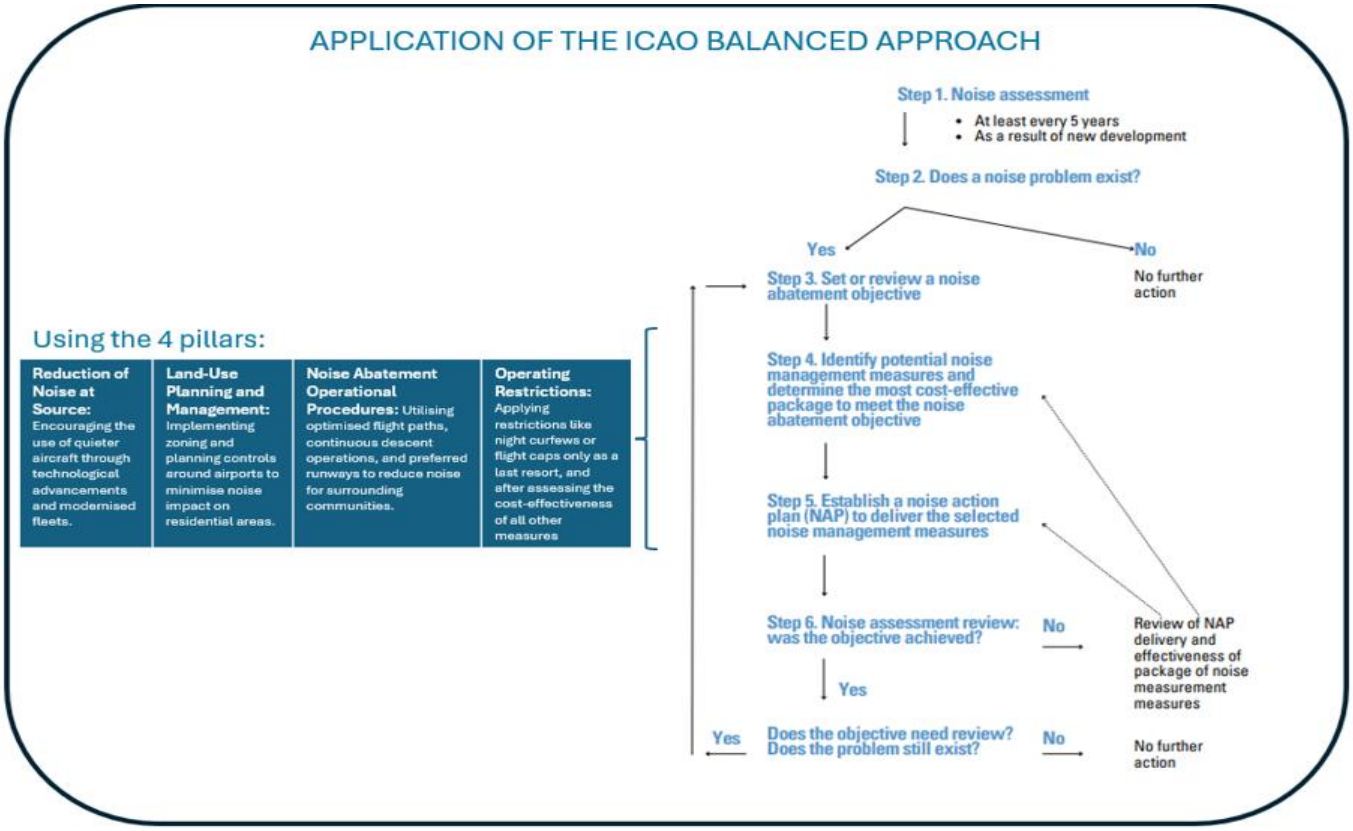
[1] https://www.icao.int/environmental-protection/pages/noise.aspx
[2] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0598

applicability is why our proposals are addressed not only to EU institutions, but also to national governments more broadly.

Legislative background

The International Civil Aviation Organisation (ICAO) has established a comprehensive approach to managing aircraft noise (the **"Balanced Approach"**) that requires the involvement of all stakeholders, including airport operators.

Practical Application of the Balanced Approach within the EU Noise Action Plan (NAP) Process



The BAR aims to facilitate the achievement of specific noise abatement objectives through the use of a basket of measures (namely the reduction of aircraft noise at source, land-use planning and management, noise abatement operational procedures and operating restrictions, all considered in a consistent way with a view to addressing noise issues in the most cost-effective way on an airport-by-airport basis) with a view to achieve the sustainable development of the airport and airport traffic management network capacity from a gate-to-gate perspective.

The EU Balanced Approach Regulation reiterates that "*noise-related operating restrictions should only be introduced when other BAR measures are not sufficient to attain the specific noise abatement objectives*" (recital 9). However, that must always be based on the results of a cost-effectiveness analysis.

According to the same EU BAR, "*the general rules on noise management stipulate that Member States must follow a combination of the foreseeable effect of a reduction of aircraft noise at source, land-use planning and management, noise abatement operational procedures and do not apply operating*

restrictions as a first resort, but only after consideration of the other measures of the BAR" (Article 5(3)d).

To that effect, the EU Balanced Approach contains procedural safeguards:

- Any combination of measures shall not be more restrictive than necessary to achieve the noise objective.
- Operating restrictions must always be non-discriminatory and shall not be arbitrary (Article 5(6)).
- The rules on the noise assessment require a similar assessment of measures before operating restrictions are introduced (Article 6).
- Technical cooperation must be established between stakeholders (airports, airlines, ANSPs) to examine measures to mitigate noise (article 6).
- The rules on the introduction of operating restrictions provide that the European Commission may notify the Member States of comments, which will need to be assessed (Article 8).
- The framework presumes that a noise abatement objective is defined prior to the assessment and selection of interventions under the four pillars, ensuring that all subsequent measures are assessed against a clearly established environmental target.

Key concerns for airports

A growing pattern of inconsistent implementation of the BAR

The implementation of the BAR varies significantly across EU Member States and is often inconsistent and incomplete, undermining the effectiveness of noise management strategies. Such inconsistencies create uncertainty for all stakeholders and foster polarised perspectives on the effectiveness of noise management strategies and action plans. This can lead to fragmented regulations, reduced stakeholder collaboration, and adverse effects on airport connectivity and competitiveness.

The ICAO Assembly recognised "that the 'uncoordinated' development of national and regional policies and programmes for the alleviation of aircraft noise could hinder the role of civil aviation in economic development" (1.1.4 BAR) while also recognising that the implementation of the BAR is the responsibility of individual States, having due regard to ICAO rules and policies. The international nature of civil aviation, acknowledged in EU Regulation 598/2014, underscores the need for clear, consistent regulatory enforcement, data-driven decisions, and inclusive stakeholder collaboration to manage noise effectively while safeguarding airport capacity, regional connectivity, and economic contributions.

Despite this framework, the practical implementation of the BAR remains uneven across EU Member States, with some failing to apply it at all. In certain cases, conflicting national regulations hinder its implementation. Operational restrictions, such as movement caps and curfews, are frequently imposed unilaterally by individual States or enforced at airports without adhering to the required preliminary steps of the BAR, further challenging coordinated noise management.

- In March 2024, in Belgium, the Flemish minister for the Environment granted a new environmental permit for the operation of Brussels Airport. Among other things, the permit introduced a movement cap and unprecedented, very strict noise-reduction targets, without adhering to the BAR procedures. The Flemish Government planned to conduct only an ex post BAR procedure. In July 2025, the Council for Permit Disputes annulled the environmental

permit due to the lack of prior application of the Balanced Approach procedure before the implementation of the operating restrictions in the permit.

- In 2022, the Dutch government announced plans to cut annual aircraft movements at Schiphol Airport to 440,000, a 12% reduction, without first launching the required Balanced Approach (BA) procedure. The procedure was launched only at a later stage. In 2025, a new government revised this plan, proposing a higher cap of 475,000–485,000 movements and reducing night flights from 32,000 to 27,000. The European Commission later identified[3] several shortcomings in the Dutch BA process, including only partial consideration of fleet renewal, the exclusion of general and business aviation, and insufficient assessment of noise-reducing flight procedures.
- In France, 9 BAR procedures have been launched since 2022, with processes at various stages of completion. There are considerable differences in the methodology used to implement each procedure at each airport. Across these cases, the focus has largely been on introducing additional operating restrictions, with insufficient consideration of the other pillars of the BAR.
- In Ireland in 2024, the Competent Authority reported non-compliance with the Noise Abatement Objective (NAO) at Dublin Airport, but this was due to substantial residential growth within the Lnight contour used for the NAO. By failing to consider the effectiveness of enhanced noise insulation, including both zoning requirements and airport insulation schemes, this approach will always prioritise operating restrictions over land-use planning interventions. Night movement limits are also being introduced without due consideration of the BAR process.

Unrealistic expectations created by the WHO Environmental Noise Guidelines[4] are undermining aviation connectivity

Against this background are the WHO Environmental Noise Guidelines, which recommend reducing aircraft noise to below 45 dB Lden and 40 dB Lnight to avoid adverse health impacts, along with implementing reduction measures and infrastructure changes. These are problematic for several reasons.

- WHO recommendations are based on reducing noise to achieve total health and well-being, regardless of economic and social impact. They do not recognise the health benefits of air transport, employment or economic prosperity.
- Some local policymakers are treating these guidelines as targets or limits and setting unrealistic noise-reduction requirements based on the WHO Environmental Noise Guidelines for the EU and/or EU-wide environmental targets such as the Zero Pollution Action Plan[5]. An example of an unrealistic reduction is lowering the noise level at a home from 65 Lden to the WHO-recommended 45 dB, which could be achieved with a drastic 99% reduction in air traffic.
- The unrealistic recommended levels raise community expectations, leading communities to believe that noise levels above 45 Lden or 40 Lnight are “illegal”.

While ACI EUROPE[6] welcomed the WHO's systematic review of the scientific literature, it also raised serious concerns about the methodology, including the logic behind some of the links drawn between noise levels and health outcomes. Notably, the WHO rates the quality of its scientific evidence as moderate, meaning further research could significantly alter the conclusions. The guidelines were also very clear in suggesting that local dose-response relationships were preferable and that there was a

[3] https://transport.ec.europa.eu/news-events/news/commission-adopts-decision-schiphol-airport-noise-reduction-plan-2025-03-05_en

[4] https://www.who.int/europe/publications/i/item/WHO-EURO-2018-3287-43046-60243

[5] https://environment.ec.europa.eu/strategy/zero-pollution-action-plan_en

significant lack of research into the effectiveness of noise management measures, further weakening confidence in applying a generic dose-response relationship to unique local situations.

The guidelines for night noise exposure are also based solely on outdoor noise levels, despite clear variations indoors depending on window position, typically 10 dB lower with open windows, 15 dB with tilted windows, and 25 dB with closed windows. For context, indoor noise ranges from 50 dB for normal conversation to 20 dB for whispering or rustling leaves.

Lastly, non-acoustic factors may not have been sufficiently considered. Self-reported sleep disturbance can differ from physiological sleep measures and is not always improved by reduced noise, as shown by the NORAH study[7]. Likewise, while the WHO acknowledges cultural differences in perceived annoyance, it is unclear how these were reflected in the development of generalised thresholds, raising concerns about the applicability and effectiveness of a one-size-fits-all approach.

Within the EU, the Zero Pollution Action Plan sets an objective to reduce the share of people chronically disturbed by transport noise by 30% by 2030. ACI EUROPE stresses that this target is defined at the European level and covers all transport modes combined, rather than for each individual Member State or a specific airport. However, these EU-wide ambitions are often translated into local or regional objectives without sufficient grounding in localised noise-exposure data, technical feasibility or socio-economic impacts and without due account being taken of the progress already achieved under the END process. As a result, some authorities are applying or interpreting the targets in ways that risk embedding noise guidelines that are difficult to implement in practice and that may have unintended consequences for aviation connectivity.

Land Use Planning: A Critical Yet Overlooked Pillar of Noise Management

ACI EUROPE also emphasises the critical importance of land-use planning, the second pillar of the ICAO BAR, to ensure that land around airports is managed in a manner compatible with aircraft operations. This includes avoiding residential developments and noise-sensitive buildings (such as schools and hospitals) in areas frequently overflown by arriving or departing aircraft, such as on the Instrument Landing System or Standard Instrument Departure within 6-10km from the end of a runway. Sound insulation schemes for existing buildings are also part of this planning approach.

While land-use planning is typically the responsibility of local authorities, inconsistent or poor planning decisions have led to increased residential development near some airports, worsening the noise exposure challenge.

Key asks

ACI EUROPE urges the BAR to be fully respected and applied consistently across the EU. This will help serve the interests of all stakeholders by creating a common understanding and expectations in the development of noise management solutions.

The study on Airport Noise Reduction[8] by Noise Consultants Ltd (published in 2022) highlighted several inconsistencies and challenges in implementing the BAR. While the BAR aims to establish a common and harmonised process across the EU for addressing aircraft noise, the absence of common definitions for key concepts such as “noise problem” and “noise objectives” has led to fragmented

[7] http://www.laermstudie.de/en/

[8] https://op.europa.eu/en/publication-detail/-/publication/67225cf1-2d8c-11ed-975d-01aa75ed71a1/language-en

interpretation and application. The study identified limited use of cost-effectiveness analyses in selecting measures, as well as inconsistent application of the framework across Member States. In addition, pre-existing national or local legislation has, in some cases, taken precedence over the BAR Regulation, further contributing to fragmented and less effective noise management processes.

Therefore, ACI EUROPE requests the following:

1. Airport operational restriction measures should not be a first resort, as they undermine the airport's competitiveness and regional connectivity in Europe

The EU BAR Regulation forms part of a broader *acquis* governing the Single Aviation Market, which aims to facilitate airports & airlines providing connectivity under competitive conditions (cf. the Air Services Regulation 1008/2008[9]). These policies aim specifically at promoting competition and encouraging new market entries, including at congested airports (cf. the Slot Regulation 95/93[10]).

ACI EUROPE emphasises that the objective of the EU BAR Regulation is "*to achieve the sustainable development of the airport and air traffic management network capacity from a gate-to-gate perspective*" (article 1(2)b).

More specifically, it requires "*an overview of the possible environmental and competitive effects of measures on other airports, operators and other interested parties*" (Annex 1 – para. 3.2) and provides the following safeguards:

- The possibility of distorting competition or hampering the overall efficiency of the EU aviation network must be considered (recital 6).
- Noise-related operating restrictions should only be introduced when other BAR measures are not sufficient to attain the specific noise abatement objectives (recital 9).
- Unwanted consequences for aviation safety, airport capacity and competition should be avoided (recital 17).

In particular, the relevant information should look at (b) the general criteria applied when distributing and managing traffic in each airport, to the extent that these have an environmental or noise impact (article 6(4)).

Operating restrictions that reduce airport capacity could require airlines to give up historic slots. These slots will *not* be returned to the pool for reallocation to other airlines. This creates a worrying precedent that is not foreseen and for which no procedure exists under the EU Slot Regulation. In fact, the EU Slot Regulation calls upon governments to "*avoid situations where, owing to a lack of available slots, the benefits of liberalisation are unevenly spread, and competition is distorted*".

Airport operational restriction measures risk diverting traffic away from European airports and are also in contradiction with the recent Draghi report (published in 2024) on EU competitiveness[11]. The report rightly underscores the critical role of air connectivity in supporting Europe's competitiveness and strategic autonomy, making it clear that airport infrastructure will need to expand to tackle congestion and unlock further growth. ACI EUROPE's recent report on the "Benefits of Airports & Air Connectivity" also showed that each 10% increase in direct air connectivity drives 0.5% growth in GDP per capita.

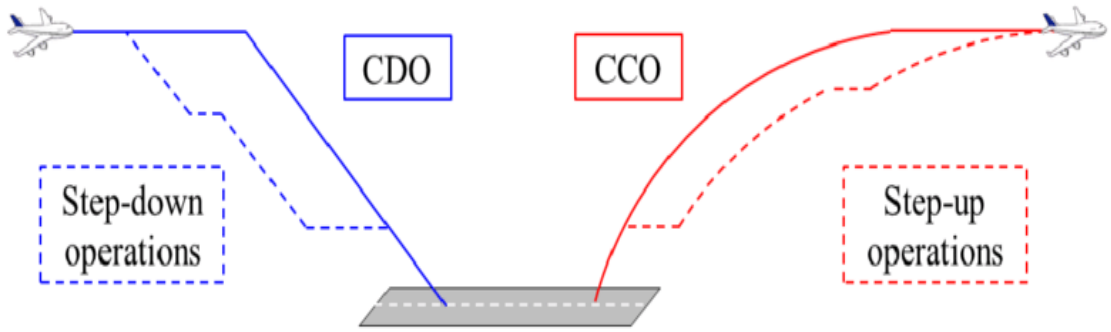
[9] https://eur-lex.europa.eu/eli/reg/2008/1008/oj/eng
[10] https://eur-lex.europa.eu/eli/reg/1993/95/oj/eng
[11] https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

Instead of restrictions, airports need European and national support to improve their competitiveness, increase connectivity, and achieve their green transformation.

2. To promote the adoption of new-generation aircraft and noise-reducing operational procedures that have been proven to significantly mitigate noise impacts on communities surrounding airports

The impact of aircraft noise on local communities near airports affects both health and quality of life. In response, European airports are actively implementing comprehensive measures to mitigate noise exposure and its effects. These initiatives include promoting the use of quieter aircraft through incentives, optimising operational procedures such as performance-based navigation and continuous descent operations, and funding noise insulation programs. The effectiveness of interventions beyond fleet renewal remains insufficiently understood due to a lack of independent research examining these measures and quantifying their value. ACI EUROPE would encourage EU support for this to enable the more effective application of the BAR.

Continuous Descent Operation (CDO) and Continuous Climb Operation (CCO), Source: Daichi Toratani



For example, the implementation of Continuous Descent Operations (CDO) can reduce arrival noise by up to 5 dB by allowing aircraft to remain at higher altitudes longer and reducing engine thrust during descent (see Annex 4). Furthermore, airports are fostering collaboration by engaging with stakeholders to develop tailored, community-focused solutions that balance environmental concerns with operational needs.

Airports are also actively encouraging the replacement of old aircraft with newer, more fuel-efficient types that significantly reduce noise emissions around airports via airport charges or League Tables[12]. For instance, the Airbus A320neo family reduces the departure noise footprint on the ground by 50% compared to its predecessor, demonstrating how technological innovation and targeted investment can drive meaningful progress.

[12] For example, https://mediacentre.heathrow.com/pressrelease/detail/21065

Noise Preferential Routes (NPR) to avoid over-flight of built-up areas where possible at LONDON GATWICK[13]



- By optimising runway allocation schemes and designing flight routes to avoid populated areas to the greatest extent possible, noise exposure for nearby communities can be reduced without adversely affecting airport capacity.

According to the European Environment Agency[14], the number of people highly annoyed by aircraft noise in the EU is projected to decline by 32% by 2030, driven by ongoing fleet modernisation and improved operational procedures. In contrast, the number of people highly annoyed by rail noise is expected to rise by up to 28% over the same period, highlighting the aviation sector's relative advances in noise management. As referenced in the BAR, ACI EUROPE recognises the need for a sustainable transport network across Europe, which requires strong connectivity and integration among the road, rail, and air transport sectors. Noise exposure is a consequence of all of them; limiting and, where possible, reducing those impacts is a shared aim.

3. The European Commission and European countries to safeguard sustainable airport development: balancing social, economic and environmental impacts

The BAR Regulation aims "*to achieve the sustainable development of the airport and air traffic management network capacity from a gate-to-gate perspective*" (article 1(2)b).

Sustainable development occupies a central place for our members in response to the expectations of Europe's communities and regions. The sustainability efforts of airports have primarily been focused on minimising the environmental impact of their operations:

- In 2009, ACI EUROPE launched Airport Carbon Accreditation. Owned and governed by ACI EUROPE, in close cooperation with the other ACI regions and supported by ACI World, the programme is the only institutionally endorsed, global carbon management certification

[13] https://aircraftnoise.gatwickairport.com/2021/03/29/departures/
[14] https://www.eea.europa.eu/en/analysis/publications/environmental-noise-in-europe-2025

programme for airports. Today, it counts more than 600 accredited airports worldwide, 267 of which are in Europe.
- European airports are committed to reaching Net Zero CO_2 emissions well before 2050 (the ICAO long-term aspirational goal); 122 airports (facilitating 16% of air traffic) aim for 2030, while 314 airports (facilitating 71% of air traffic) aim for 2050.

To reaffirm ACI EUROPE's leadership role, our Sustainability Strategy for Airports (2019) seeks to balance the social, economic and environmental impact of sustainability – these pillars of sustainability continue to be recognised by ICAO.

ACI EUROPE acknowledges that noise exposure around airports may affect the health and well-being of residents. Airports are deeply embedded in the regions where they are located and, as such, have strong ties with the local communities in their vicinity. In fact, a significant share of airport employees are also residents. They must be a responsible neighbour by minimising the negative impact of their operations, while maximising the positive contribution to their communities. Our strategy, therefore, includes recommended voluntary actions and initiatives that airports may take to address noise management. These are set out in Annex 1.

The detailed prescriptions in the annex to the BAR Regulation require the assessment of any direct, indirect or catalytic employment and economic effects. The socio-economic contribution of airports in the broadest possible way, as documented by ACI EUROPE, is set out in Annex 2.

These dimensions must be assessed comprehensively, considering the objective of achieving sustainable development. As each airport is unique and operates within a specific local context, the impact of noise issues and the most suitable mitigation measures will be different for each airport.

The need to respect BAR principles means operating restrictions should not be applied as a first resort, but only after consideration of all other measures and in the most cost-efficient manner.

4. The European Commission and Member States are to ensure consistent application and achieve the goals of the BAR across Europe

ACI EUROPE is asking the European Commission to:

- **Remind Member States of their responsibility and the imperative need to respect the BAR procedure**, as well as the need to avoid the effects of announcements that cause great confusion and do not contribute to maintaining a climate of dialogue, understanding, and reciprocal trust between the different stakeholders, a sine qua non condition for achieving real improvements in a sustainable co-construction mode.
- **Take a leading role in supporting the work of the new ICAO Committee on Aviation Environmental Protection (CAEP) Working Group, with the aim of complementing the BAR and enhancing its practical implementation.**
- **Ensure that Member States and their local authorities' decisions rely on robust technical data and objective analysis.**
- **Remind Member States to adopt solutions to harmonise their national regulation on airport noise with "balanced approach" standards**

ACI EUROPE is calling on the National Governments to:

- **Ensure a clear and well-substantiated noise management objective is defined, followed by the identification of appropriate measures to achieve this goal through the ICAO BAR.** This process allows for a systematic evaluation of all available options, ensuring the cost-benefit and cost-effectiveness of measures.
- **Avoid predetermined actions, such as capping airport movements, as they undermine the principles of the BAR and may fail to consider more effective, less disruptive alternatives.**
    - In cases where the outcome of the BAR leads to restrictive measures, further guidance is necessary on:
        - Possible impacts on historic slots and interaction with the caps decision process
        - How monitoring should be envisioned and, if the goal is met, the loosening of restrictive measures or, thereafter, even growth.
- **Ensure that land-use planning is aligned with both the long-term urban or regional development vision and the airport's master plan.**
- **Ensure that national airport noise regulations are fully aligned with the principles of the Balanced Approach.** Airports must be able to implement noise reduction plans that comply with both national and EU rules, without facing conflicting requirements or unclear interpretations

Conclusion

European airports are at the forefront of mitigating the multifaceted challenge of aircraft noise. Through investments in quieter technologies, refined operational procedures, and proactive stakeholder engagement, airports are taking decisive steps to reduce noise impacts on surrounding communities. At the heart of these efforts lies the ICAO BAR, a globally endorsed, EU-legislated framework that ensures noise management is effective, proportionate, and context-sensitive.

However, recent developments across several EU Member States reveal a concerning trend: an inconsistent application of the BAR. Unilateral decisions to impose operational restrictions without adequate consideration of alternatives undermine not only the legal and procedural integrity of Regulation (EU) 598/2014 but also the broader goals of regional connectivity, economic growth, and public trust in aviation policy.

The BAR is designed to facilitate dialogue, transparency, and fairness among all stakeholders. Its structured sequence begins with an assessment of the noise situation and the setting of a clear noise objective. Only then are measures considered, starting with noise reduction at source, followed by land-use planning and other operational measures, with operating restrictions used strictly as a last resort. Respecting this sequence is essential to preserving the BAR's credibility and effectiveness.

ACI EUROPE calls on the European Commission to ensure full and uniform implementation of the BAR across the EU. This includes reaffirming the legal requirements, supporting technical guidance, and preventing premature decisions that bypass cost-benefit assessments or stakeholder consultation. Moreover, national governments must align local planning policies with airport development strategies and avoid imposing unrealistic noise targets.

Only through a coordinated, outcome-based application of the BAR can Europe achieve a sustainable, competitive, and community-aligned air transport system. The recommendations outlined in this paper represent a pragmatic pathway toward restoring regulatory consistency, enhancing stakeholder trust, and safeguarding the vital connectivity that airports provide across Europe.

ANNEX 1

Building on the ICAO BAR Guidelines, the ACI World guidance of the ICAO BAR to Aircraft noise management outlines a systematic six-step process for developing airport-specific noise management strategies:

1. Assessment of the existing and future situation
▪ **Conduct comprehensive assessments of current and projected noise impacts of the first three pillars of the BAR, using various noise metrics, including health-based indicators such as sleep disturbance and annoyance levels. Metrics can particularly help explain the situation to community members and other non-technical stakeholders.** ▪ **In collaboration with authorities, airports should proceed to a land-use and planning assessment to identify any noise-sensitive zones.** ▪ **Conduct a community assessment to identify the Airport's current and future economic contributions and reflect community attitudes toward its operations**
2. Identification of Noise Problems
▪ **Establishing clear criteria for determining noise problems allows airports to clearly and efficiently prioritise intervention areas. Common indicators include community annoyance levels and population exposure above specific noise thresholds.** ▪ **Urge regulators to define clear parameters to specify the noise problem and desired outcomes. For instance, the metric of annoyance should be commonly understood as it may lead to unwanted outcomes (e.g., concentration rather than the dispersion of flights)**
3. Setting Noise Abatement Objectives
▪ **Draft, consult and publish a clear and focused objective** ▪ **Establish a technical noise management group to set SMART (Specific, Measurable, Achievable, Realistic, and Time-bound) objectives to create measurable outcomes that align with environmental, economic, and social goals. This will also foster community trust and accountability.**
4. Evaluating Potential Measures
▪ **Competent Authorities should conduct a cost-effectiveness analysis of potential noise management measures across all four pillars, considering both economic and social costs and benefits. Key areas of focus should be fleet deployment and operating procedures with input from the technical noise management group.** ▪ **The analysis should assess capital expenditures, operational expenditures, and direct economic and social costs. It should also determine the responsible parties for bearing costs, those accountable for decision-making, and the prioritisation criteria they intend to apply.**
5. Developing a Noise Action Plan
▪ **The competent authority should consider the airport's maturity in noise management. Based on analysis, airports should draft an action plan that aligns**

with stakeholder feedback. Typically, 4 potential stages in airport noise management might take 5-10 years to mature:

1. **Phase 1 begins by recruiting a team and procuring a noise and track monitoring system. This will establish the baseline position on the community's perception of the airport and its operation.**
2. **Phase 2 is to develop a SMART noise abatement objective based on comprehensive data and assumptions to monitor and report on operational performance and other key metrics**
3. **Phase 3 is to formulate the Noise Action Plan and review performance against targets.**
4. **In Phase 4, collaboration with community and industry partners grows, fostering joint initiatives that enhance the airport's integration into the community and its contributions to quality of life and commerce. Effective stakeholder management is key to maintaining focus and productivity.**

6. Monitoring and Review

- **Airports review the plan's effectiveness periodically, adjusting measures as necessary. Assigning clear responsibility for each action is crucial for the successful implementation of the noise action plan. Transparent reporting and community engagement are essential throughout this phase to build trust and ensure compliance with evolving local needs.**

ACI EUROPE: Sustainability Strategy on noise[15]

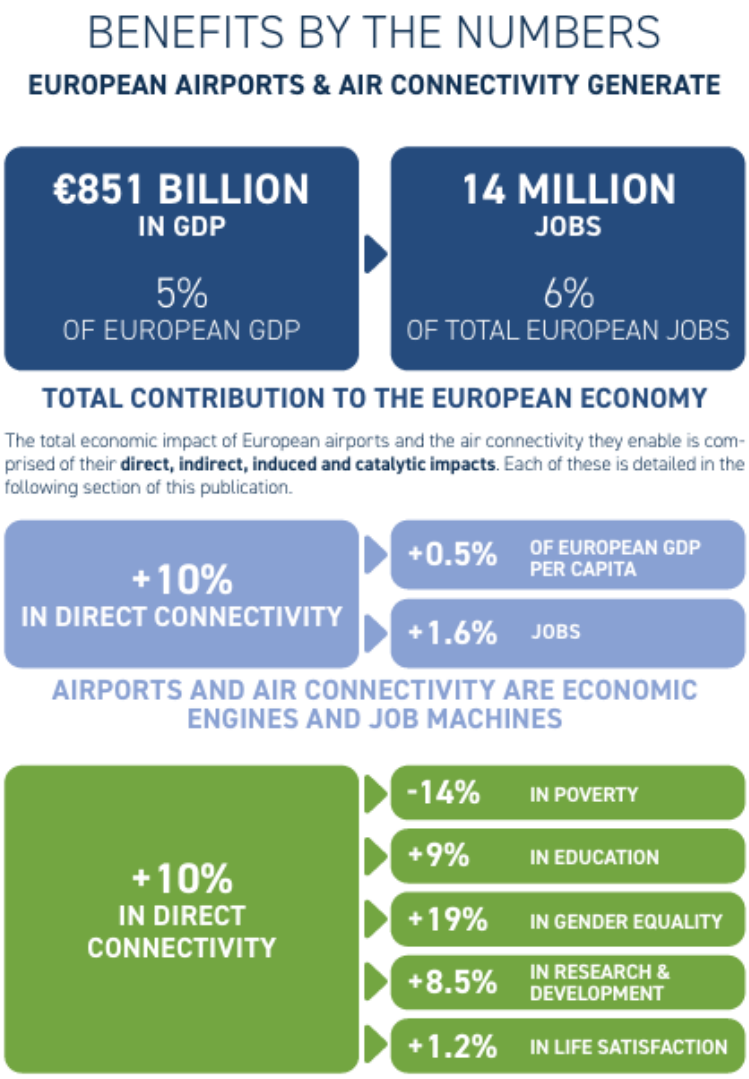
	Recommended Actions	Indicative KPIs
Launch	• Implement noise monitoring. • Establish and assess noise footprint. • Define a mechanism to receive and address complaints.	Number of people exposed to excessive noise levels as per the relevant regulation.
Development	• Engage (in a structured way) with local communities on noise issues. • Set mitigation targets and identify the most relevant and effective mitigative options.	% change in the number of people exposed.
Maturity	• Implement agreed mitigation measures and track progress. • Publicly report on progress in a transparent manner.	% change in the number of people complaining about noise.
Leadership	• Reach mitigation targets.	% ICAO Chapter 14 aircraft serving the airport

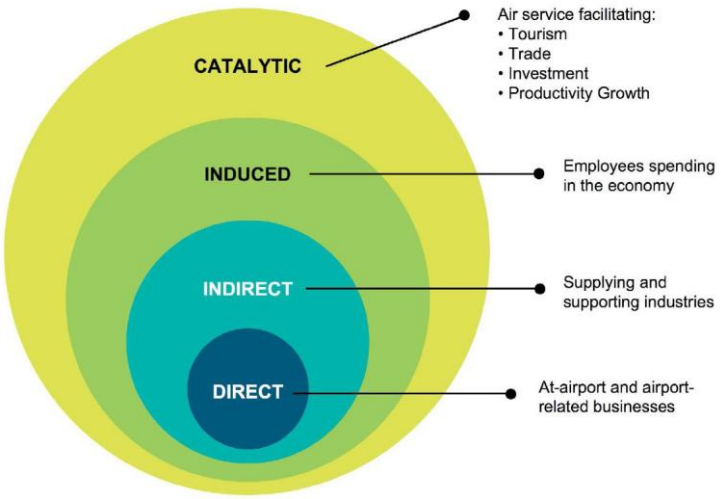
[15] https://www.aci-europe.org/downloads/resources/ACI%20EUROPE%20SUSTAINABILITY%20STRATEGY%20-%20SECOND%20EDITION.pdf

	• Identify best practices potentially applicable to other airports.	

Enablers	Indicative initiatives
Innovation	• Implement noise-related modulation of airport charges to promote the use of quieter aircraft. • Provide for noise respite (predictable relief from noise). • Diversify the format and channels of communication on noise. • Explore new building design and landscaping for noise abatement • Contribute to the development and implementation of new operational measures
Partnerships	• Engage airlines and ANSPs in noise mitigation efforts
	• Ensure regularity and transparency in engagement with local communities • Allow for communities' contribution to decision-making on noise mitigation • Engage with local authorities to avoid land-use planning incompatible with airport operations • Cooperate with the research community to enhance understanding of all factors influencing the perception of noise and health impacts •

ANNEX 2

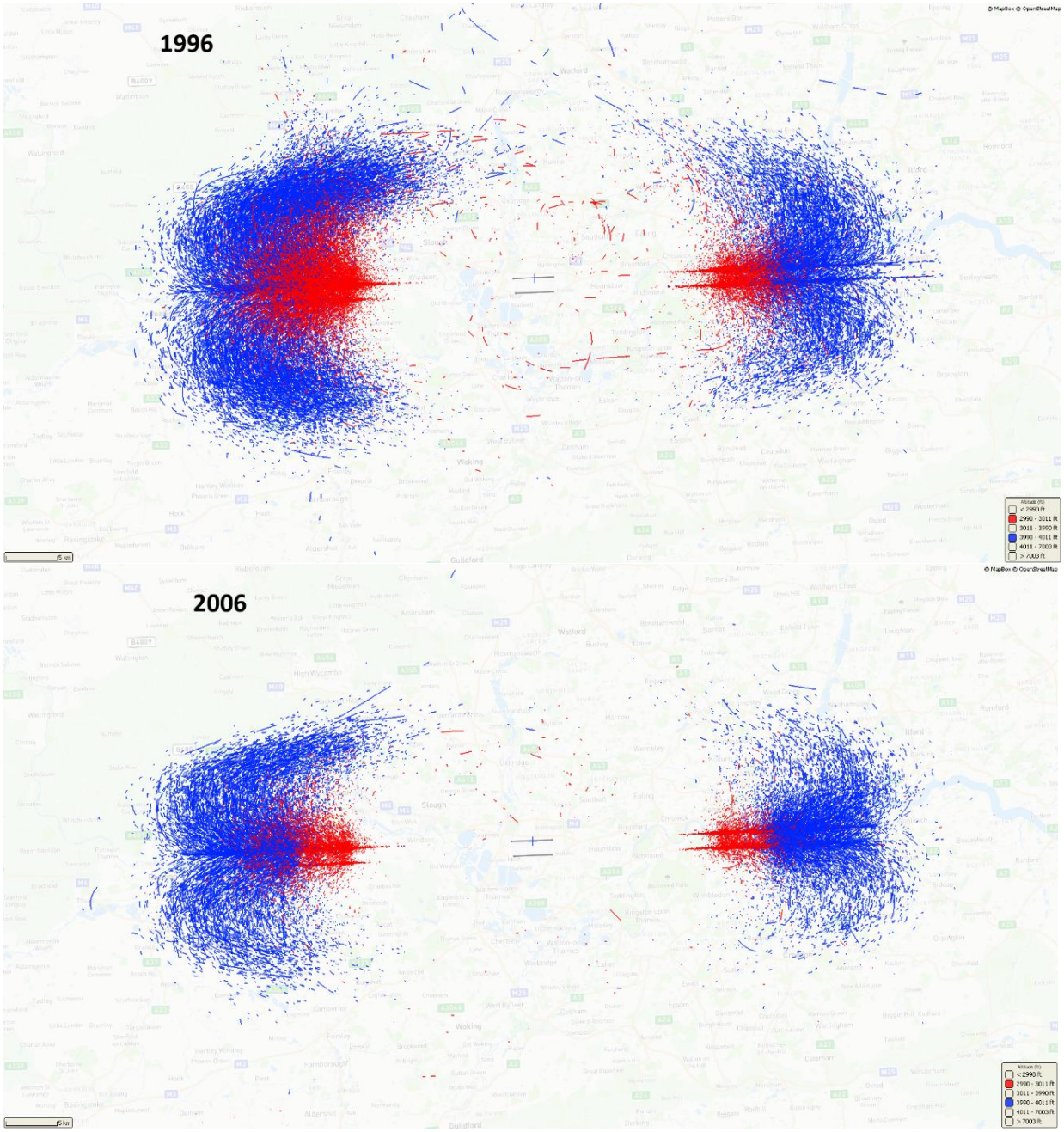

BENEFITS BY THE NUMBERS
EUROPEAN AIRPORTS & AIR CONNECTIVITY GENERATE
€851 BILLION
IN GDP
5%
OF EUROPEAN GDP
14 MILLION
JOBS
6%
OF TOTAL EUROPEAN JOBS
TOTAL CONTRIBUTION TO THE EUROPEAN ECONOMY
The total economic impact of European airports and the air connectivity they enable is comprised of their direct, indirect, induced and catalytic impacts. Each of these is detailed in the following section of this publication.
+10%
IN DIRECT CONNECTIVITY
+0.5%
OF EUROPEAN GDP PER CAPITA
+1.6%
JOBS
AIRPORTS AND AIR CONNECTIVITY ARE ECONOMIC ENGINES AND JOB MACHINES
+10%
IN DIRECT CONNECTIVITY
-14%
IN POVERTY
+9%
IN EDUCATION
+19%
IN GENDER EQUALITY
+8.5%
IN RESEARCH & DEVELOPMENT
+1.2%
IN LIFE SATISFACTION

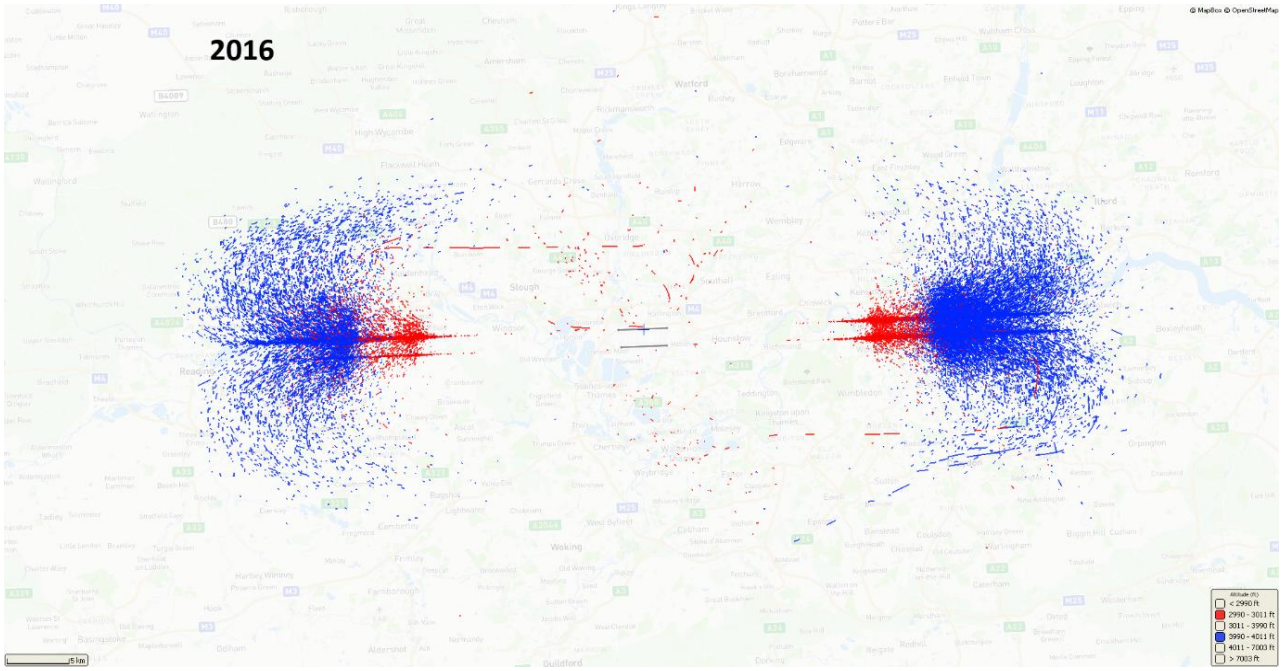

CATALYTIC
Air service facilitating:
• Tourism
• Trade
• Investment
• Productivity Growth
INDUCED
Employees spending in the economy
INDIRECT
Supplying and supporting industries
DIRECT
At-airport and airport-related businesses

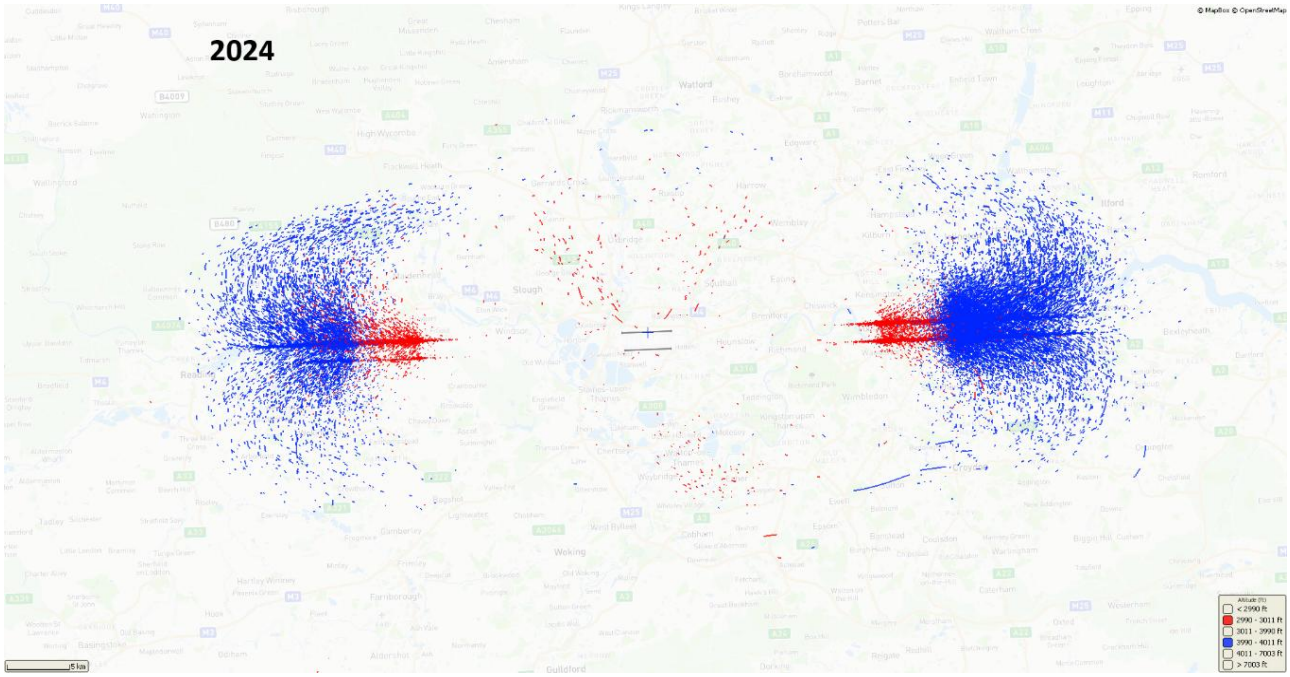
ANNEX 3

Demonstration of Continuous Descent Operation (CDO) improvement in final approach height (between Initial Approach Fix and Intermediate Fix) at Heathrow Airport

- At Heathrow, arriving aircraft must be established on final approach at 2,500 feet during the day and 3,000 feet at night. For noise reduction purposes, aircraft are also required to follow a CDO whenever practicable. Since the mid-1990s, Heathrow has collaborated with air traffic control and airlines to improve adherence to CDO procedures. Initially, CDO compliance ranged from 50% to 60%; today, performance has improved significantly, reaching 85% to 95%. In the 1990s, level flight segments at 4,000 feet were common.

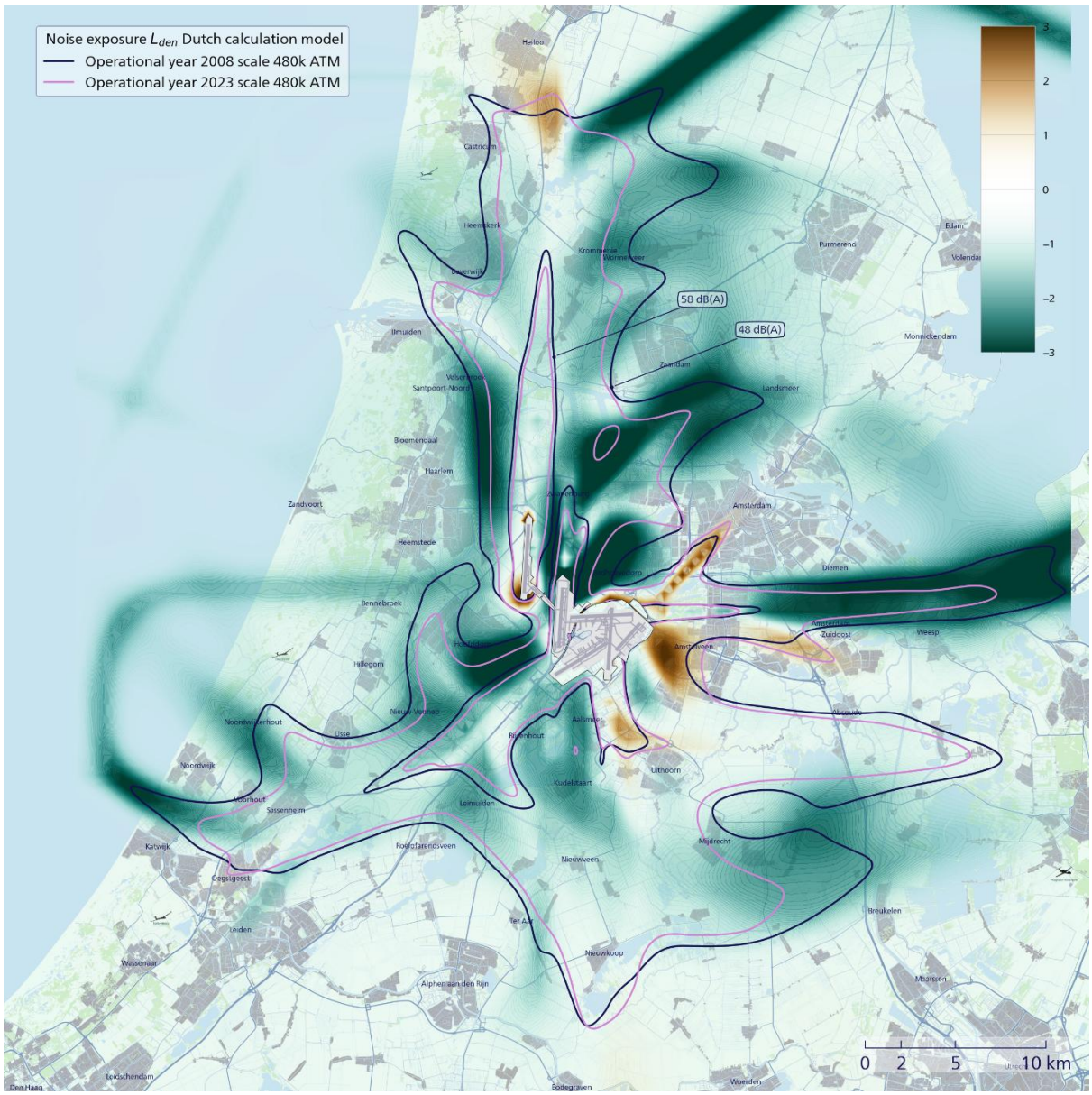






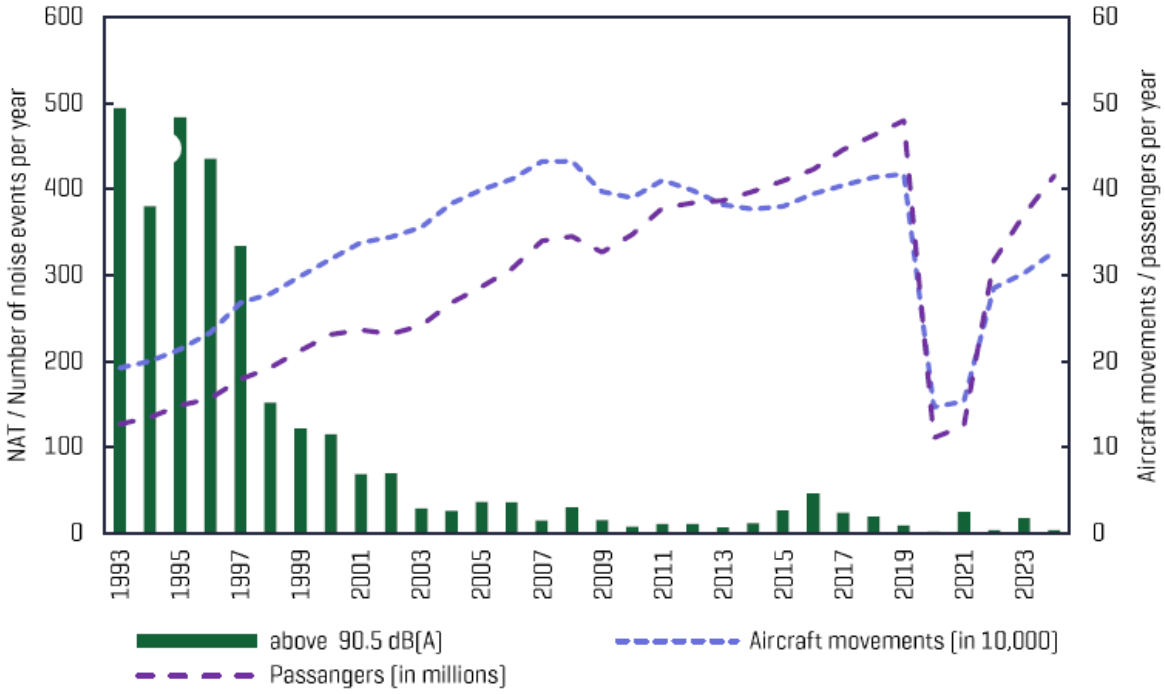
- The graphics illustrate the altitudes at which arriving aircraft descended to 4,000 feet and 3,000 feet on approach to Heathrow. The “spread of blue” observed in the 1996 data indicates that aircraft were flying at or below 4,000 feet farther from the airport, increasing noise exposure over a wider area. By contrast, the 2019 data show a more concentrated pattern, aligning with CDO procedures, in which aircraft descend more efficiently and reach only 4,000 feet in areas closer to their final approach, typically at 2,500 or 3,000 feet.

ANNEX 4



- The figure shows noise exposure (Lden) over a 24-hour period at Schiphol Airport for the operational years 2008 and 2023. The number of aircraft movements has been scaled to the same total (480.000) for both noise contours to allow for a direct comparison. The green areas indicate a decrease in noise, indicating a significant reduction in noise load across the wider Schiphol region.
- It should be noted that these are actual noise contours based on actual traffic and radar tracks, including operational disruptions such as runway maintenance. These partially explain the local increase in noise load in specific locations (shown in amber). Calculations were performed using the Dutch Calculation Model (NRM). Noise exposure data for 2008 is not available in the European Doc.29 calculation model. Helicopters have been excluded from the noise calculation, as they could not be accurately modelled in 2008.

ANNEX 5



- The figure presents the evolution of maximum sound level events above 90.5 dB(A) at Munich Airport alongside aircraft movements and passenger numbers from 1993 to 2023. Over the period shown, aircraft movements and passenger volumes increased substantially until 2019, then declined temporarily during the COVID-19 pandemic and recovered.
- In contrast, the number of noise events exceeding 90.5 dB(A) decreased sharply from the mid-1990s onwards and has remained at very low levels despite the growth in air traffic. This long-term divergence indicates that increases in traffic volumes have not translated into higher peak noise exposure, reflecting the progressive introduction of quieter aircraft and engine technologies into airline fleets as well as airport operational measures.

ACI EUROPE is the European region of Airports Council International (ACI), the only worldwide professional association of airport operators. ACI EUROPE represents over **600 airports** in **55 European countries**. Our members facilitate over **95% of commercial air traffic** in Europe. Air transport supports **14 million jobs**, generating **€851 billion** in European economic activity (**5% of GDP**). In response to the Climate Emergency, in June 2019 our members committed to achieving Net Zero carbon emissions for operations under their control by 2050, without offsetting.

EVERY FLIGHT BEGINS AT THE AIRPORT.

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