Noise, Europe’s airports’ perspective
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ACI EUROPE

- European branch of the Airports Council International (ACI), based in Brussels
- Represents the interest of some 440 airports in 45 countries
- Our members account for over 90% of commercial air traffic in Europe each year, welcoming 1.5 billion passengers
- Working with the European Union institutions, ECAC and EUROCONTROL
The overall Challenge

Economy (incl. pricing & financing)

Sustainability, profitability and growth is the result of the balancing of the performance in the 3 domains

Capacity

Environment

Noise concerns are still a dominant environmental issue at EU airports.

Capacity cap

Taxes

Charges

Price out of flying

Restrict from flying
An Extensive Legal Framework

- Legislators and regulators have set the tone for the future:
  - Quieter
  - Cleaner
- Noise is already the subject of voluminous legislation
- Gaseous emissions were somewhat behind, but the legislator is catching up

complex ‘NOISE PICTURE’
Environmental Management
It comes at a Price..

Small Eastern Europe airport: € 61,000 p.a.

- Staff, procurement of materials, energy (for noise monitoring system)
- Procurement of environmental services:
  - air quality protection
  - water resources and waste water protection
  - waste management
  - underground water protection

Environmental Management
It comes at a Price..

Major Western European Hub: € 4-5m p.a.

- Staff, procurement of materials, energy (for noise monitoring system)

- Construction of a new Runway:
  - Upto € 1billion – noise insulation, buyback, compensations
  - high extra operational costs – each year
Noise at airports: 5 core elements

The **acoustical** side - ICAO Balanced approach
- Reduction at Source
- Land Use Planning
- Operational Procedures
- Operational Restrictions

The **non-acoustical** side:
- Communication, Consultation & Mediation

Development of noise at EU airports: “shrinking” of Lden-contours will stop

Phase out of old/noisy aircraft improved total noise picture, while doubling traffic
Development of noise at EU airports: increased number of night-flights is an issue

- Number & type of night flights (23-7 or 22-6) very sensitive in local debate

1. Noise reduction at source
   ICAO Annex 16 standards: not enough

- ICAO (noise) standards are ‘underpinning’ existing technology, not driving quieter acs
1. **Noise reduction at source**
   
   Expected technology development

   ![](chart.png)

   - **Stated research targets** are ambitious, but ‘compromises’ once implemented

1. **Noise reduction at source**

   - **noise-incentive charging schemes**

   - **difference in airport charges** to **stimulate quieter aircraft** and **discourage the noisiest aircraft**

   - Based on **ACI Noise rating index** or national scheme
2. **Land use planning** (by government) prevent encroachment & safety issues

- Demolition zones 3rd part risk
- Demolition zones noise
- Restrictions for new buildings
- Height restrictions

**Physical planning restrictions in the airport area**

3. **Operational Procedures**

shift routes to less populated areas

**CDA’s over the sea at night**

**Before**

**After**
3. Operational Procedures
introduce continuous decent approaches

difference of a single B747-4 noise footprint
3000 ft approach vs. CDA approach

- Indicative Village/City
- Landing RWY

Distance to centreline (km)
Distance to landing RWy (km)

- Reduce noise impact, fuel use/emissions

4. Operational Restrictions
last resort, difficult to implement

- Directive 2002/30/EC
- Limited to marginal Chapter 3 aircraft
- Partial or full ban
- Lengthy procedure, with full impact assessment & consultation process
- Implemented / in progress at a number of EU airports
Noise impact differs from noise disturbance!

Conclusions:
• Most of the complaints are from outside official noise zones
• Shifting traffic will create new “hot spots”

5. The non-acoustical side of noise
Communication, Consultation & Mediation

• Tolerance enhancement
• Why: impact ALARA
• When: continuous process, dependent on current (local) situation
• Who: joined actions by all responsible parties
• What:
  – Communication
  – Consultation
  – Mediation
5. The non-acoustical side of noise open, honest information is crucial

example: using online websites for actual flight track, altitude and noise event information

www.dfs.de  www.schiphol.nl/nomosonline

Noise & flight track monitoring around airports is a valuable starting point

Questions?