

Balanced Approach to Aircraft Noise Management

Jane Hupe, Chief, Environment Branch, ICAO Air Transport Bureau











- Balanced Approach to Aircraft Noise Management
 - Rationale (Why it was developed).
 - Objectives (What it aims to achieve).
 - Concept & elements (How it works).



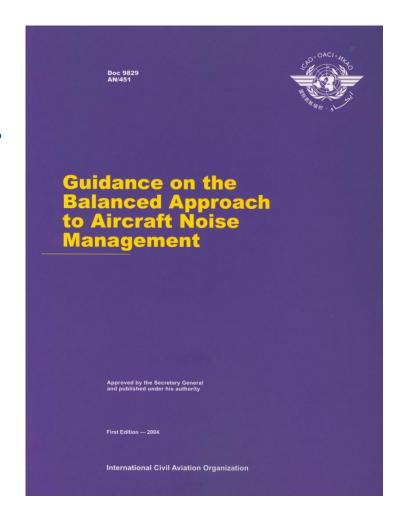








- Problems with aircraft noise have led to operational limitations and opposition to airport expansion/construction.
- Uncoordinated policy developments to address aircraft noise could hinder the economical operation of air transport.
- Guidance document was published in 2004 (Doc 9829 AN/451) and revised in 2007.













- Address aircraft noise problems at individual airports in an environmentally responsive and economically responsible way.
- Achieve maximum environmental benefit most cost-effectively.
- Recognize that States may already have noise regulations and policies in place.











- Follows comparative economic analysis based on "best practice" cost benefit analysis techniques
- To achieve maximum environmental benefit in the most cost-effective manner.
- Combinations of measures can be necessary to achieve noise objectives.
- Interdependencies must be taken into account:
 - Between different element;
 - Between noise and emissions.





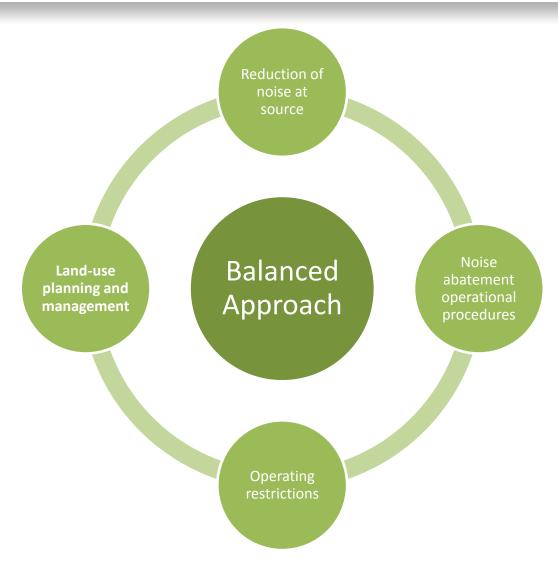








Concept & Elements







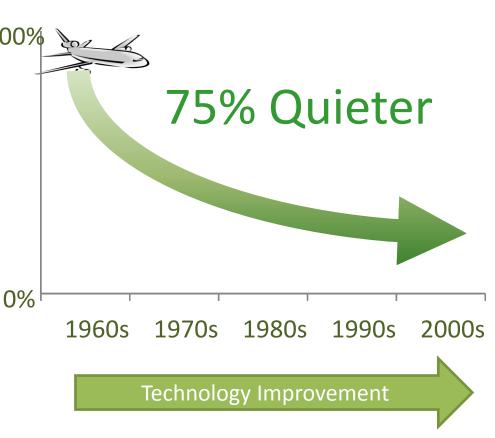






Reduction of noise at source

- Manufacturers' new technologies have produced significant noise 100% reductions.
- Noise certification is based on aircraft performance (airframe + engine).
- ICAO Annex 16, Volume I contains the aircraft noise Standards.
- Environmental Technical Manual (Doc 9501) contains the procedures for noise certification of aircraft.















Noise Abatement Operational Procedures

- Aimed at reduction and/or redistribution of noise around the airport.
- Enable full use of modern aircraft capabilities.
- Potentially a cost effective measure.

Noise Benefits Associated With Departure Procedure 10000 800' Cutback, Accel at 3000' 9000 800' Cutback, Accel at 800' 8000 Noise Benefit Area 7000 5000⊋ 4000 Accel Segment 3000 Cross-over 2000 Thrust Cutback 1000 Accel Segmen 15 Distance from Brake Release (NM)











- Defined as any noise-related action that limits or reduces an aircraft's access to an airport.
- Not to be used as a first resort, only after consideration of benefits gained from the other three elements.
- Examples:
 - Movement caps;
 - Noise quotas;
 - Non-addition rules;
 - Curfews.













Land Use Planning and Management

- Planning (zoning, easement, etc.).
- Mitigation (building codes, insulation, real estate disclosure, etc.).
- Financial (tax incentives, charges, etc.).
- Key to protecting noise reduction and abatement benefits.
- May involve "opportunity costs" for airports/local government.















 Should be levied only at airports experiencing noise problems.

Should recover no more than the costs incurred.

 Doc 9082 - ICAO's Policies on Charges for Airports and Air Navigation Services.











A sustainable approach is crucial...

- Combining the principal elements of the ICAO
 Balanced Approach may be necessary to improve
 the noise climate in the vicinity of airports.
- ICAO encourages the benefits to be safeguarded by accounting for sustainability of airport growth.
- ICAO's role is to provide a global forum to develop a commonly-agreed solution among member States:
 - Consists of a variety of measures to address all aspects of aviation and environmental protection in a harmonized and balanced manner.



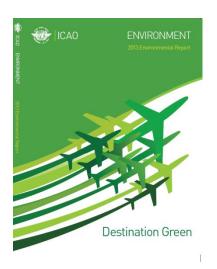








For more information on ICAO activities on Aircraft Noise...



ICAO Web Page www.icao.int/

THANK YOU











