



Balanced Approach to Noise Management around Airports

Traditionally, the reduction of noise at source, through technological progress sanctioned by successive certification standards and fleet renewal, has been accompanied by other mitigation measures including, in particular, land-use planning and management, noise abatement procedures and aircraft operating restrictions.

From global phase-out to a more Balanced Approach

Aircraft operating restrictions were first considered by ICAO 15 years ago. The extraordinary session of the Assembly in 1990 established a global framework for the phase-out of Chapter 2 aircraft, after lengthy and difficult discussions initiated during the previous Assembly one year before.

States with serious airport noise problems were allowed to impose restrictions on the operation of aircraft that did not comply with Chapter 3 requirements. States were urged to apply the restrictions only to aircraft over 25 years old and to implement the phase-out progressively over a seven year period beginning on 1 April 1995 and ending on 1 April 2002.

The special circumstances of developing nations' airlines had to be taken into account through limited economic hardship exemptions, up to 2005. States were also urged not to impose any operating restrictions on Chapter 3 compliant aircraft.

The Chapter 2 phase-out addressed the concept of aircraft economic life. A critical aspect of any new fleet transition is the need for a realistic interpretation of a guaranteed minimum aircraft life that, as far as possible, mirrors the actual economic life of aircraft today, and does not devalue present technology.

In 2001, the question of phase-out again surfaced, involving a comprehensive ICAO CAEP review of the potential phase-out of Chapter 3 aircraft along with consideration of a new noise certification standard, the Chapter 4 standard. In its review, CAEP performed a detailed analysis of the certification, stringency and phase-out options through the development of various sophisticated modelling tools¹. This analysis showed that an additional phase-out would only have a very limited environmental benefit and that the cost would be extreme, leading CAEP and the ICAO Assembly in 2001 to decide against a global phase-out of Chapter 3 aircraft. Recognising that there are other tools beyond phase-outs and operating restrictions to address aircraft noise, CAEP and the ICAO Assembly endorsed instead the *Balanced Approach* concept.

What the Balanced Approach consists of

ICAO's *Balanced Approach* consists of identifying the noise problem at an airport and then analysing the various measures available to reduce noise using four principal elements, namely:

- reduction at source;
- land-use planning and management;

¹ For details, see the IATA Environmental Review 2000, page 55

- noise abatement operational procedures; and
- aircraft operating restrictions.

The goal is to address the local noise problem in the most cost-effective manner, on the understanding that the solutions need to be tailored to the specific characteristics of the airport concerned. Similar solutions should, therefore, be applied if similar noise problems are identified at different airports.

The *Balanced Approach* calls for the reconciliation, as far as practicable, of two opposite parameters: on the one hand, noise mitigation measures have to meet local requirements that can vary from one airport to another and on the other hand, the selected measures have to be universal enough to satisfy the global requirements of airlines and manufacturers who cannot modify their services or products beyond certain limits.

According to the *Balanced Approach*, only airports with documented noise problems are entitled to take specific measures. Furthermore, these measures must be:

- the most cost-effective ones; and
- must fall within the four principal elements of the *Balanced Approach*.

ICAO also urges States and airports to be transparent when considering mitigation measures, by:

- assessing the noise problem at the airport concerned based on objective, measurable criteria and other relevant factors;
- evaluating the likely costs and benefits of the various measures available and, based on that evaluation, selecting measures that *achieve maximum environmental benefit most cost-effectively*; and
- disseminating the evaluation results for the purposes of stakeholder consultations, in particular with airlines, and for dispute resolution.

Moreover, ICAO recommends against applying operating restrictions as a first resort. The other elements of the *Balanced Approach* should be considered first. If operating restrictions are considered, they should:

- be based on the noise performance of the aircraft, according to Annex 16, Volume I;
- be limited to restrictions of a partial nature wherever possible, rather than the complete withdrawal of operations and introduced gradually over time, giving operators a reasonable period of advance notice;
- take the possible consequences for air services without any suitable alternative into account and consider the special circumstances of operators from developing countries.

Urging regulators to implement the Balanced Approach

ICAO has developed specific guidance for the proper implementation of the Balanced Approach, to which IATA contributed. At the 35th ICAO Assembly, ICAO urged all regulators around the world to fully implement this guidance material. IATA had lobbied for this outcome, as well as for swift publication of the guidance. It is now available for purchase from the [ICAO website](#).

Some States have already introduced the *Balanced Approach* concept in their regulations.

Europe

In March 2002, a European Union (EU) Directive on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at European Community airports entered into force. This Directive, which replaced a proposed regulation to restrict operations of *hushkitted aircraft*², makes provision for the gradual withdrawal from service of “marginally compliant aircraft” (those that meet Chapter 3 noise standards by 5 cumulative decibels or less) at “noise sensitive” airports. According to the Directive, operators may be required to reduce the number of movements of their marginally compliant aircraft serving a specific airport at an annual rate of no more than 20% of the initial total number of these movements. Exemptions exist for marginally compliant aircraft registered in developing countries, for a period of 10 years.

The Directive urges EU Member States to ensure interested parties are properly consulted and that a proper cost-benefit analysis is carried out. The industry has some reservations regarding the Directive, since it does not entirely comply with ICAO’s recommendations, which urge States not to impose operating restrictions as a first resort and to focus on restrictions of a partial nature. Moreover, since minor modifications to pre-existing restrictions are exempted from full compliance with the Directive, there have been a few disputes with individual States.

US

In the US, the FAA has adopted the elements of the ICAO *Balanced Approach* in Part 161 and Part 150 of Title 14 of the US Code of Federal Regulations. The Part 161 noise management programme establishes requirements governing airport noise and access restrictions. Part 150 administers the FAA’s noise evaluation and mitigation programme and provides for the preparation of noise exposure assessments and maps. It also provides for airports to recommend measures for a noise compatibility programme to reduce noise and non-compatible land-uses.

Other States

As all ICAO Member States are expected to adopt the *Balanced Approach*, it can be expected that regulatory efforts similar to those in Europe and the USA will also occur elsewhere.

www.iata.org/whatwedo/environment

² Due to concerns about restrictions on hushkitted aircraft, the EU Council Regulation of 29 April 1999 on the registration and operation of jet aeroplanes which have been modified and re-certificated as meeting Chapter 3 standards had been challenged by the US at the ICAO Council, before being replaced by the Directive of 26 March 2002.