

ICAO

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ENVIRONMENTAL ASPECTS OF
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AIRCRAFT NOISE LEGISLATION

**Text of Speech by
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Aruna Mascarenhas, till recently Air India's Director-Planning & International Relations, has participated actively in the debates within ICAO on the future regulation of Air Transport.

She was amongst the group of experts which studied the question of Aircraft Noise in 1989. She was a speaker at the ICAO Colloquium in 1992 on Bilateralism vs Multilateralism and was subsequently invited to participate in GEFRA (Group of Experts on Future Regulatory Arrangements). She was an active participant at the Fourth Air Transport Conference in 1994.

Mrs.A.Mascarenhas is also one of the members invited by IATA to participate at their annual meeting of the World Aviation Regulatory Monitor.

Mrs.Aruna Mascarenhas currently holds the position of Director-Inflight Service in Air India.

Ladies & Gentlemen,

It is indeed a great honour and privilege to be invited to speak at this Colloquium organized by ICAO on the Environmental Aspects of Aviation – and specifically on the issue of Aircraft Noise.

I would, at the outset, like to compliment ICAO on the scope and quality of the analyses undertaken by various Working Groups and Task Forces in preparation for the fifth meeting of the Council's Committee on Aviation Environmental Protection.

We now have before us an array of noise stringency and phase out options, the costs and benefits of which have been clearly identified in quantitative terms.

This leaves ICAO with the task, not to be underestimated, of having to select judiciously from this menu – balancing its technical role as a progressive and proactive body taking the lead in pushing the environmental envelope further – with its equally important role, as a specialized UN agency, in overseeing and adjudicating between the capabilities, concerns and interests of its Member States.

In the hope of contributing to this effort, I offer you my personal views on the issue of Aircraft Noise. While the views I express are entirely my own – and not

necessarily those of my country or the organization I work for – it would not surprise me if the perspectives I offer are shared by developing countries in several parts of the world.

The first point I wish to make is that coming from a developing (i.e. non-OECD) country, as I do, I find it difficult, per se, to get enthused about the issue of Aircraft Noise.

The Environment – with a capital E – is a big ticket item on the political agenda of the Developed World. It isn't so in developing countries where it is overshadowed by more pressing concerns with issues such as hunger, poverty, health and education.

It would, in my opinion, be unreasonable to expect developing countries to concern themselves with environmental issues unless they have global ramifications – like global warming or climate change – which hold out the threat of displacing vast tracts of population from low lying areas facing the prospect of inundation, both in developed and developing countries.

Aircraft noise does not fall in this category. It is a strictly local issue. Local to the developed world – which can afford the luxury of quieter, more pleasant surroundings – and local to the handful of persons who live within the direct vicinity of airports.

To an outsider, it is amazing that so much attention and effort should be devoted to the comfort of airport communities whose livelihood is, in large part, integrally linked with that of the airport. It is often remarked that airports could not exist without airport communities nor airport communities without airports. If impaired hearing is an accepted professional hazard for several categories of airport workers – like flight dispatchers, for example, – I do not see why airport communities, who share a symbiotic relationship with the airport – should not be expected to come to terms with the downside of their chosen place of work or residence.

As for those not working at airports, several have elected to live near airports for their own personal reasons – including, inter alia, lower rents and land prices. Airport sites have always been selected at a safe distance from highly populated city centres. It is the airport communities which have, of their own volition, evolved around airports – and not airports which have been air-dropped on an unsuspecting population to whom we now owe the moral responsibility of alleviating aircraft noise!

My second reason for not being enthused with the issue of Aircraft Noise is that the problem is not expected to worsen with time. ICAO's base case – i.e. without any change in the status quo – projects that, at a global level, the number of people exposed to

aircraft noise over the time period 1998-2020 will be lower by 22% and 11% for the DNL 65 and DNL 55 contours respectively relative to 1998. While I appreciate this may not be true of every region of the world, it is nevertheless significant that at a global level the problem of Aircraft Noise is expected to be alleviated despite the increase in the volume of aircraft movements and traffic – and without any change in the present noise standards. This, in my view, greatly weakens the case for any new noise stringency standards. To borrow an American aphorism – If it ain't broken, don't fix it!

Thirdly, the costs and benefits of noise legislation are not evenly distributed. Specifically, for developing countries they entail additional costs without any benefits at all. Progressive increases in noise stringency – and phase-out requirements of non-compliant aircraft - are of a piece with the Western concept of built-in obsolescence - and the fleet rollover policies of large, more competitive airlines. For developing countries' airlines – which are typically much smaller in size and generally undercapitalized – any policy which requires the retirement of aircraft before the end of their useful economic life is a clear-cut example of economic waste – and runs counter to the advice of institutions like the IMF and World Bank.

Worse still, the balance of benefits from noise legislation is weighed entirely in favour of countries imposing new noise standards, benefitting

- a) Local Airport Communities and their political supporters and lobbyists
- b) Airport authorities – who will be freed to undertake long overdue expansion
- c) Airlines - who would otherwise have faced the single largest road block to their future expansion
- d) and
- d) Aircraft manufacturers who will benefit from an artificially and prematurely expanded market for newer aircraft types.

Developing countries' airlines do not share in any of these benefits, and, contrary to conjecture in certain quarters, there is NO secondary or spin-off benefit to these airlines in their own home countries from operating a less noisy fleet of aircraft. Aircraft noise is, quite simply, NOT a problem or public concern in developing countries and its abatement offers NO perceptible benefits.

It is from this perspective that I offer you my comments on the four elements of the Balanced Approach developed by CAEP which is currently under consideration.

Noise at Source

There is little to argue with the objective of cutting noise at source by imposing more stringent noise standards for the certification of new aircraft types. The real question is – how stringent should these new noise standards be and what role should ICAO play in framing them? A minimalist approach, which I favour, would entail ICAO merely flagging the noise issue and bringing it onto the drawing boards of aircraft designers – and leaving it to them to optimize aircraft noise reduction together with other objectives such as greater fuel efficiency and lower engine emissions. The other, more ambitious, role would be for ICAO to frame noise stringency standards with a view to achieving harmonization of noise legislation and preventing a patchwork of differing noise standards from country to country and airport to airport. It would be commendable if ICAO could achieve this without having to pitch the new noise standard at a level which meets the demands of the most aggressive votaries of quieter aircraft.

Land Use Planning

As I see it, this is the most vital element in the Balanced Approach and a fertile ground for future action. Aircraft noise need not have emerged as an issue on the environment agenda had areas around airports been planned and managed more

effectively. We have been simplistic in treating aircraft noise as a technical problem needing a technical solution when, in fact, aircraft noise belongs to the

realm of perceptions - and the subjectivity that inevitably colours them.

The measures of aircraft noise – PNL (Perceived Noise Level) and EPNL (Effective Perceived Noise Level) – cannot be read off meters because they are contrived units based on annoyance data. One must appreciate that there could be very wide cultural differences on this issue – one has only to witness peak hour traffic in an Indian metro – or a wedding or festival season in India - to realize that the threshold of tolerance to noise is indeed very high. The point is – aircraft noise is a local problem needing a local solution. And, as the saying goes, there is more than one way to skin a cat!

Anyone in the service industry can vouch that perceptions of an unpleasant event – be it a terminally delayed flight, denied boarding, mishandled baggage, whatever – can be changed dramatically if the situation is handled adroitly with suitable compensation offered to the aggrieved party. Denied Boarding compensation levels required in Europe, for example, make it almost tempting for passengers to be bumped off flights! The grievances of airport communities could be similarly managed. After all, aircraft noise merely means discomfort – there is nothing life-threatening about it. And discomfort can be compensated here as it is in so many other walks of life.

The nodal agency for this should be the airport, which, as an economic entity, presumably has a stake in ensuring that it can keep pace with the growth in demand for air traffic.

Airports should prevail on town planning authorities to make airport neighbourhoods strictly off-limits for all except those who wish to live there for reasons of work, notwithstanding the problem of Aircraft Noise. We have no evidence of local authorities having encouraged a migration away from airport neighbourhoods – a move which, I believe, will be as, if not more, successful in reducing the size of the noise affected population than actions taken by airports to extend curfews, limit aircraft movements and cap aircraft noise levels – which – all other things being equal, should be expected to increase as traffic grows.

In my part of the world – where we do not have any airport curfews – we are quite philosophic about Aircraft Noise. Once the need for air travel is accepted – as is the fact that technology has not yet produced a soundless aircraft takeoff or landing – Aircraft Noise is, quite simply, accepted as an inevitable outcome by airport neighbourhoods. I hope to be forgiven if I remark that, in comparison, local communities at noise-sensitive airports in the West appear to be treated like

prima donnas – whose every whim has to be met at a great cost to a great number of people. What is worse, the more you succeed in appeasing them, the greater the problem you

create for yourself as their threshold of tolerance to noise gets lower and lower – and even the odd noisy aircraft movement becomes unbearable.

Somehow, I feel, we have got it all wrong.

If local communities are a road block, the solution rests in compensating them rather than in placing unrealistic caps on future aircraft noise levels. Airports could play a very forceful role in partnering local communities – giving them employment at airports (if they are not already so employed) – undertaking noise insulation of neighbourhood areas as Zurich Airport and some others have done – and creating a forum for local communities to voice their views and, equally, to appreciate the constraints under which airlines and airports operate. Such a dialogue, backed by appropriate monetary compensation, will provide a far more effective and equitable solution to the problems of local airport communities than a global approach based on aircraft design, performance and operating restrictions.

In short, it is for airports – who drew their workforces for neighbourhood areas but earn their revenues from airlines – to take the lead in ensuring that the interests of both are evenly balanced and that there are no road blocks to sustainable growth in airport capacity and air traffic.

Unfortunately, I am disappointed that airports have not seized this role and have instead chosen to pander to their local communities, judging by the fact that the ACI is a supporter – the only supporter as far as I know - of the most radical noise stringency standards of – 14 dB cumulative reduction over chapter III standards – and –4 dB at each measurement point.

Operating Restrictions

I am wary of operating restrictions on aircraft to meet the new Chapter IV noise stringency levels which should be addressed only to new aircraft types. I would not have a problem if it were only a question of reduced flap settings entailing a minimal increase in maintenance costs for increased wear and tear of brakes. What I fear are actions like those of the UK DOT at Heathrow which has imposed hefty fines on B747-400 operators. Considering that the B747-400s are amongst the most modern of aircraft – and that the operating restrictions that would be

necessary to avoid these huge fines would entail an even greater penalty in the form of payload restrictions – it is obvious that airlines are being presented with a Hobson's Choice - and that the authorities will succeed in collecting substantial fines in the guise of non-compliance with operating restrictions – without achieving any appreciable reduction in noise levels.

Phase Out of Chapter 3 aircraft

I strongly believe that this element should not feature at all in the Balanced Approach – even as a very last resort – and even with exemptions for developing countries’ airlines. I oppose this on three grounds

- e) the results of the cost – benefit analysis conducted by ICAO do not support a phase out of Chapter 3 aircraft in even the non-exempt regions – the costs far outweighing the benefits
- f) A phase out of Chapter 3 aircraft – even if limited to the developed (i.e. non-exempt) world, will adversely affect the balance sheets of developing countries’ airlines judging from the sharp fall off in resale values experienced by Chapter 2 aircraft when they faced phase-out deadlines. In short, it is not enough to exempt developing countries’ airlines from phase out restrictions – it is necessary to also protect them against any slide in their net asset

value on account of phase out requirements elsewhere in the world. Phase out should, if at all, be a voluntary action by airlines which hub at the most noise-sensitive airports – and should not feature at all as a policy measure in the Balanced Approach.

g) Thirdly, ICAO's resolution A32-8 which, in 1990, urged states that 'if and when any new noise certification standards are introduced which are more stringent than those in Volume I, Chapter 3 of Annex 16, not to impose any operating restrictions on Chapter 3 compliant aircraft'. We owe it to airlines the world over that we not only honour this commitment, but, likewise, commit that there will be no restrictions on Chapter 4 compliant aircraft in the future, should further increases in noise stringency be forthcoming.

h)

These, then, are my views on the subject of Aircraft Noise. Before I conclude, I would like to seek your indulgence if my views have struck a discordant note, or worse still, offended anyone. It is not my intention to belittle the concerns over Aircraft Noise, but to point out that these concerns are not a worldwide phenomenon – and that meeting them through a global solution imposes costs on certain groups of countries which receive no benefits at all from these measures.

As stated earlier, while I personally believe that we should get off the Aircraft Noise treadmill – and that the most effective solutions would be of a non-technical and local nature - I would nevertheless wish ICAO every success in framing a noise policy

which, I hope, will aspire to meet the needs of noise-sensitive airport communities in developed countries at minimal cost to the rest of the world – for whom Aircraft Noise is not a public concern and for whom its abatement offers no benefits at all.

Thank you for your attention..

Mrs.Aruna Mascarenhas