International Civil Aviation Organization

WORKING PAPER

A37-WP/270
EX/55
21/09/10
English only

ASSEMBLY — 37TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental protection

REVIEW OF NIGHT CURFEW RESTRICTIONS

(Presented by India)

EXECUTIVE SUMMARY	
This paper reviews the issue of night curfews in some parts of the globe and its impact on the Indian aviation. Unilateral imposition of night curfews by few countries has led to congestion on air routes and airports and underutilization of aviation infrastructure at destination airports in India. **Action:** The Assembly is invited to acknowledge the fact that night curfew will compound the problem of environment due to increased gaseous emissions and noise pollution during the day time due to congestion resulting in holding or delay on ground and in air at destination airports and request the Council to consider the review of the current practice of imposition of night curfew at airports in few regions with a view to achieve a sustainable growth of the aviation sector in developing countries.	
Strategic Objectives:	This working paper relates to Strategic Objective C, *Environmental Protection – Minimize the adverse effect of global civil aviation on the environment.*
Financial implications:	No additional resources required.
References:	ICAO Annex 16, Volume 1 – *Aircraft Noise* Assembly Resolution A36-22, *Consolidated statement of continuing ICAO policies and practices related to environmental protection*

1. INTRODUCTION

1.1 Aircraft noise is one of the most significant causes of adverse community reaction related to the operation of aircraft both in developed and developing countries. This is expected to remain valid in most of the regions of the world in the days to come. With the development and growth in aviation sector, the issue of excessive noise from aircraft operations and resistance by the communities residing in the airport vicinity has become a regular feature. The aircraft coming off the production line today are about 75% quieter than they were 40 years ago and the same is evident from ICAO's Certification Standards.

2. BACKGROUND

2.1 Upon request from India and other countries to review night curfew, CAEP undertook the study of the environmental impact of curfews in one region on origin/destination in other regions, with a case study for a major airport during CAEP/7 meeting. The concerns assigned to the Task group by the CAEP/8 Report are as follows:

a) night curfew at some European airports are perceived to cause the transferring of their night-time noise burden to some developing countries where night-time noise is generated by aircraft scheduled to avoid departing or arriving during the curfew periods at European airports;

b) the need for continuing noise curfews has been questioned, given that aircraft noise Standards have improved over the years and the current aircraft in service are much quieter than when the curfews were instituted;

c) airports with night curfews that are capacity constrained during day time, restrict the ability to open up new slots for additional traffic which may result in opportunity costs to airlines and airports;

d) night curfews restrict the capability of airlines to offer flights at the most convenient times (arrival or departure) to its customers, thereby reducing customer choice and adversely affecting airlines' level of service;

e) in the case of airports in developing countries that have excess capacity during day time, there may be additional economic costs of keeping the airport open during night-time which include air and ground crew, airport operations personnel, and general support staff; and

f) night curfews can cause inconvenience to passengers if they must arrive (or depart) at night-time from one airport due to restrictions on departure (or arrival) airport.

3. FINDINGS OF THE STUDY

3.1 The study states that there is no inherent link between European countries and night-time movement in Mumbai, India. There is no reason why night-time curfew would require flights to leave Mumbai at midnight unless it is to arrive in the early morning to make connecting flights. The report also states that European carriers operate flights to reach India before the activation of curfew hours and return to Europe after curfew hours in order to utilize the aircraft optimally. Optimal utilization of aircraft in international air transport may not want to ground aircraft during 24 hours. However, airlines can better develop their flight schedules so as to make optimal use of their aircraft if the constraint of night curfew is removed. Now airlines have to make off-optimal. This also includes the issue of congestion at airports resulting in additional emissions.

3.2 The study seemed to have digressed from the main issue that unilateral night curfew by certain European countries is not conducive to healthy international air transportation on the following grounds:

1) Night curfews are imposed as a local protest by citizens living around the airport. These persons all over the world were aware of the noise before they bought the property but they did so with their own will and with possibly an eye to capital appreciation due to proximity to airport.

2) Unilateral night curfews are an increasing phenomena all over the world and as noise awareness grows, night curfews, if imposed by countries like India or South Africa, would limit the flight timing options between the countries. The present night curfew in Europe has effectively transferred the problem of night-time noise burden from the communities around their airports to communities around airports of Mumbai, Delhi, Johannesburg, etc.

3) The need for continuing noise curfews has also been questioned given the aircraft noise standard improvements over the years and that the current aircraft engines are quieter than earlier ones mainly due to ICAO specifications. The need for night curfews has therefore, diminished. In fact, ICAO should link the reduction of engine noise rules to reduction/removal of night curfews.

4) Airports with night curfews are generally capacity constrained during the day and restrict ability to open up new slots for additional traffic which may result in opportunity cost to airlines and airports. Night curfews restrict the capacity of airlines to offer flights at most convenient times (arrival or departure) to their customers at destination airports thereby reducing customer choice and adversely affecting airlines' level of service.

3.3 The principle of night curfews imposed unilaterally is in question. ICAO must address the issue of night curfew to help the airline business to grow. With the growth in air traffic and introduction of night curfews, there will be congestion in air between city pairs at certain times. With the improvements in noise standards mandated by ICAO, there should be a parallel imposition of SARPS for containment of night curfews. Night curfews are a result of political development which is taking place against noise at airports and for the communities living around airports and has no basis for mutual reciprocity which is the basis of air service. This issue is common to the cities where there is an airport near the city. There would be an additional cost to airports in case they have excess capacity during day time.

4. ICAO's INTIATIVES AND NOISE REQUIREMENTS

4.1 ICAO has been addressing the issue of aircraft noise since the 1960s. Since the first Standards and Recommended Practices (SARPs) for aircraft noise certification were published in 1971, ICAO has made several changes in the noise standards and the latest Chapter 4 requirements were developed and subsequently became applicable in March 2002.

4.2 Aircraft manufacturers have been continuously developing technologies to reduce aircraft noise and striving for a better understanding of the source of aircraft noise. Accordingly, the inclusion of noise absorbing material in engines and engine nacelle design and mechanical refinements on engines, together with airframe adjustments, have all contributed incrementally to further reducing noise of jet powered aircraft. Although none of these improvements individually has matched the step forward that came from the increase in bypass ratio, together they have been significant.

4.3 The state-of-the-art development and stringent requirements of ICAO has forced manufacturers to achieve next generation aircraft with significant increases in carrying-capacity while achieving reductions in noise levels such as A-380. Boeing's new Dreamliner aircraft B787 is also expected to have about 15 to 20 decibel (dB) below the Chapter 4 limits and therefore leading to achievement of at least 10 dB better than the older aircraft.

5. ICAO'S AIRCRAFT NOISE MANAGEMENT PROGRAM

5.1 ICAO has also developed Aircraft Noise Management through the Balanced Approach concept which identifies the noise problem at an airport and then analyses the various measures available to reduce the noise using four principal elements, namely:

a) reduction of noise at source;

b) land-use planning and management;

c) noise abatement operational procedures; and

d) operating restrictions.

5.2 It may be pointed out that according to ICAO traffic growth of Asia Pacific region will become the highest air traffic region by 2012. However it will not be long before a movement for night curfew also starts in Asia and Africa and therefore the issue of night curfew has to be resolved by the Council.

6. COMMENTS

6.1 India has following comments on the CAEP Study on night curfews:

6.2 The CAEP study is limited in scope and at variance with its own conclusion.

6.3 The issue of night curfew is to be addressed in its full scope and global approach should be attempted.

6.4 Night curfew will affect the airline operations if the Asian and African countries also impose similar kind of restrictions on public demand.

6.5 Night curfew issues need to be addressed keeping in view the growth of aviation sector and state-of-art of aircraft design.

6.6 Specific runways/airports could possibly be utilized for night operations to minimise the community noise problem. Duration of night curfew could possibly be reduced by airports having such night curfews.

6.7 International airlines operate across the globe. Time restriction is a severe constraint in developing flight schedules and off-optimum utilization of aircraft. Therefore, in the interest of airline business this constraint of night curfew should be avoided.

6.8 Removal of night curfew would also help to achieve the aspirational goals of carbon neutral growth and reduction in CO_2 emissions apart from providing sustainable growth to aviation sector.

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