

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

Agenda Item 4: Capacity-enhancement measures

4.2 Regional measures

:

ENHANCING AIRSPACE CAPACITY IN THE ASIA/PACIFIC REGION

(Presented by Singapore)

SUMMARY

The Asia/Pacific Region, under the leadership of ICAO, has successfully implemented major airspace capacity enhancement measures in the last two years. Singapore proposes that ICAO and the region continue with the momentum and begin planning for further enhancements in airspace capacity, such as RNP 4 operations, in order to cater for future air traffic growth in the region.

Action by the conference is in paragraph 3.

1. INTRODUCTION

1.1 To cater to the demands for more airspace capacity, the Asia/Pacific Region has, in the past two years, implemented major airspace capacity enhancement measures under the leadership of ICAO. These included the implementation of the Revised South China Sea ATS Route Structure in November 2001, reduced vertical separation minimum (RVSM) operations in the South China Sea area in February and October 2002, as well as the Europe/Middle-East Asia Revised Route Structure South of the Himalayas (EMARRSH) in November 2002. Come November 2003, RVSM will be introduced in the Bay of Bengal area.

1.2 The above initiatives together with the introduction of required navigation performance (RNP) 10 applications have benefited both the air traffic services (ATS) providers (in terms of reduced workload and more efficient management of air traffic) and users (in terms of less ground delays and more

optimal flight levels). The next challenge is to further reduce delays, enhance flight safety and reduce airlines' operating costs.

2. FURTHER AIRSPACE CAPACITY ENHANCEMENTS

2.1 The South China Sea revised route structure was designed to support RNP 12.6 operations, i.e. 60 NM lateral separation and 80 NM longitudinal separation. The EMARSSH route structure over the Bay of Bengal was designed to support RNP 10 operations, i.e. 50 NM lateral separation and 50 NM longitudinal separation. These restructured routes are major improvements over the old route structures which had routes separated by 100 NM laterally. However, efforts should not stop here as there is more that can be done to further enhance airspace capacity and reduce flight delays in the Asia/Pacific Region.

2.2 Based on ICAO's forecasts, traffic growth in the Asia/Pacific Region is expected to be higher than that in the other ICAO Regions in the coming years. It would therefore be prudent for the region to look ahead and start planning for further airspace capacity enhancements, in particular RNP 4 operations which supports the application of 30 NM lateral separation and 30 NM longitudinal separation. From RNP 12.6 to RNP 4 operations, lateral separation is halved while longitudinal separation is more than halved. This means that airspace capacity would essentially be quadrupled. Not only would RNP 4 operations maximize airspace usage and minimize ground delays to flights, optimum flight profiles would also be better accommodated. The amount of savings for airlines in terms of operating costs could be considerable and welcomed in an increasingly challenging economic environment. Recognizing these benefits, RNP 4 operations have already been adopted in parts of European and Australian airspace.

2.3 In order for the necessary systems and procedures to be put in place in time to support the future Asia/Pacific aviation system, planning for RNP 4 operations should begin now. The Asia/Pacific Region has shown much cooperation and resolve in the last few years in the implementation of the revised route structures over South China Sea and Bay of Bengal, as well as the implementation of RVSM over South China Sea. With States and users of the Asia/Pacific airspace standing to gain tremendously from further airspace capacity enhancements such as the implementation of RNP 4 operations, it is hoped that States concerned will continue to work closely together with one another and with ICAO and other international organizations to bring about such enhancements successfully.

3. ACTION BY THE CONFERENCE

3.1 The conference is invited to note Singapore's proposal for the Asia/Pacific Region to commence planning for further airspace capacity enhancements, in particular the implementation of RNP 4 operations, to cater for future air traffic growth in the region.