



International Civil Aviation Organization

**The Special Coordination Meeting for the Bay of Bengal area (SCM/BOB)
and The Sixteenth Meeting of the Bay of Bengal ATS Coordination Group
(BBACG/16)**

Bangkok, Thailand, 31 January – 4 February 2005

Agenda Item 6: State Contingency Planning

REVIEW OF STATE CONTINGENCY PLANNING REQUIREMENTS

(Presented by the Secretariat)

SUMMARY

This paper highlights the ICAO provisions with regard to the requirements for States to have in place contingency measures for application in the event of disruptions to ATS and associated services, and reviews issues of State Contingency Planning in the APANPIRG context.

1. INTRODUCTION

1.1 On 27 June 1984, the ICAO Council approved the Guidelines for Contingency Measures for Application in the Event of Disruptions of Air Traffic Services and Related Supporting Services. The approved guidelines were subsequently included in the *Air Traffic Services Planning Manual* (Doc 9426), Part II, Section 1, Chapter 1, paragraph 1.3. The guidelines are included as **Appendix A**.

1.2 During 2002, events which had required contingency planning were examined by ICAO in the context of the guidelines, and the following points were noted by the Air Navigation Commission:

- a) few States appeared to have developed contingency plans in anticipation of circumstances which will, or may, result in a disruption of air traffic services and/or related supporting services;
- b) contingency planning was often initiated only when occurrences which create disruptions were imminent or already a recognized fact;
- c) the time available for contingency planning and implementation is often so short that the necessary coordination between States, the operators and ICAO, and the timely promulgation of NOTAM is difficult to achieve; and
- d) when military activities are involved, coordination between military airspace users and air traffic services authorities is often inadequate.

2. DISCUSSION

ICAO Provisions

2.1 In view of the foregoing, amendments to Annexes 11 and 15 were considered necessary in order to promote timely contingency planning and application as well as to provide for a variety of circumstances affecting the safety and regularity of international civil aircraft operations. Accordingly, amendments were incorporated, effective 27 November 2003, which introduced a Standard in Annex 11 (at paragraph 2.28) for States to develop and promulgate contingency plans, and introduced a provision to Annex 15 (at paragraph 5.1.1.1, w) and x)) regarding the promulgation by NOTAM of contingency measures.

2.2 The Annex 11 provisions require that:

Air traffic services authorities shall develop and promulgate contingency plans for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which they are responsible for the provision of such services. Such contingency plans shall be developed with the assistance of ICAO as necessary, in close coordination with the air traffic services authorities responsible for the provision of services in adjacent portions of airspace and with airspace users concerned.

2.3 The guidelines contained in the *Air Traffic Services Planning Manual* (Doc 9426) relating to the development, promulgation and implementation of contingency plans have also been incorporated as Attachment D to Annex 11.

APANPIRG Considerations

2.4 During APANPIRG/10 (August/September 1999), the meeting noted that the Regional Office had initiated action in 1995 for States to prepare ATS Contingency Plans. These plans proved to be extremely useful during the lead up to the Y2K rollover, and APANPIRG/10 endorsed the highly commendable co-operative efforts by States and international organizations in the development of the Asia/Pacific Regional Y2K Contingency Plan. The meeting agreed that this plan had a continuing role to play after the year 2000 rollover in future regional and State contingency planning, and concluded

Conclusion 10/37 Development of general contingency plans

That the Asia Pacific Regional and State Y2K Contingency Plans and State LOAs or MOUs be used to form the basis on which to develop general contingency arrangements which will permit the continuation of air traffic in the event of any significant degradation of air traffic services and systems.

2.5 In respect of Conclusion 10/37, APANPIRG/11 (October 2000) endorsed a target date requiring the finalization of State Contingency plans by the end of 2001.

2.6 APANPIRG/12 (August 2001) noted, given the ongoing APANPIRG item (C10/37) for the development of ATS Contingency Plans, that these plans would normally be coordinated between appropriate States during this development work. This was particularly in relation to the exchange of Contingency Plans between neighbouring States that might be able to provide assistance during a contingency, and to raise awareness of what assistance or services might be required for example, the provision of communications or SAR alerting services.

2.7 APANPIRG/12 also noted that the Secretariat considered that a survey of States should be conducted to determine the status of contingency planning in the Region and the extent to which Contingency Plans are exchanged between States so that the magnitude of the issue could be more properly gauged. The meeting therefore formulated the following Conclusion:

Conclusion 12/6 – Regional Contingency Planning Survey

That, ICAO survey States in the Asia/Pacific Region to determine the status of contingency planning and the extent to which contingency plans are exchanged between neighboring States.

2.8 In its review of matters relating to Conclusion 10/37, APANPIRG/13 (September 2002) was presented with a framework which had been developed by one State which laid out the steps in the development of a State Contingency Plan. The framework is included as **Appendix B**. APANPIRG/13 urged States to use this document, in association with their State Y2K Contingency Plans, in the development of State Contingency Plans where this had not already been completed and endorsed an extension of the target date for completion until the end of 2003.

2.9 APANPIRG/13 also considered recent instances in which restricted airspace had been declared (September 11, 2001 terrorist attacks) or was about to be declared (State industrial action) over the high seas that had an impact on the provision of air traffic services to international civil operations. The meeting was advised that while the closing of airspace was a State's decision in their sovereign airspace, the closure of air space over the high seas is in breach of the Convention on International Civil Aviation. Consequently, APANPIRG/13 formulating the following Conclusion:

Conclusion 13/8 – Contingency Planning

That, States review, amend or develop contingency plans that will:

- a) provide a safe and orderly flow of international air traffic in the event of disruptions of air traffic services and related supporting services,*
- b) preserve the availability of major world air traffic routes within the air transportation system: and,*
- c) ensure continuous access to airspace for international civil flights over areas of the high seas.*

2.10 In its review of Conclusion 13/8, APANPIRG/14 (August 2003) noted that the Air Navigation Commission had submitted to the Council amendments to Annexes 11 and 15, with applicability date of 27 November 2003, concerning the development and promulgation of contingency plans. On the basis of this information, APANPIRG/14 considered Conclusion 13/8 as completed. After discussion, APANPIRG/14 also considered that the provisions of Conclusion 10/37 had been superseded by Conclusion 12/6 and therefore regarded conclusion 10/37 as completed.

2.11 In addition, APANPIRG/14 recognized that the Regional Office survey of State contingency plans called for under Conclusion 12/6 had not yet been undertaken, and noted the matter as ongoing. The meeting urged States to complete State Contingency Plans and send a copy to the Regional Office.

2.12 APANPIRG/15 (August 2004) was advised that the survey of contingency plans raised under Conclusion 12/6 had still not been undertaken, due to resource constraints at the Regional Office. Also, no State Contingency Plans had been received at the Regional Office. The

Regional Office agreed to undertake the survey during the first half of 2005 with a view to reporting to APANPIRG/16 in this regard.

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note and review the ICAO provisions in relation to State Contingency Planning requirements;
- b) note the intention of the Regional Office to conduct a survey during the first half of 2005 in order to assess the status of State Contingency Plans, in accordance with APANPIRG Conclusion 12/6; and
- c) discuss contingency planning issues and identify impediments that may limit the ability of States to comply with the relevant provisions.

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1.3 CONTINGENCY PLANNING

1.3.1 Introduction

1.3.1.1 Guidelines for contingency measures for application in the event of disruptions of air traffic services and related supporting services have been approved by the Council in response to Assembly Resolution A23-12 following a study by the Air Navigation Commission and consultation with States and international organizations concerned, as required by the Resolution. Their purpose is to assist in providing for the safe and orderly flow of international air traffic in the event of disruptions of air traffic services and related supporting services and in preserving the availability of major world air routes within the air transportation system in such circumstances.

1.3.1.2 The guidelines have been developed in recognition of the fact that circumstances before and during events causing disruptions of services to international civil aviation, vary widely and that contingency measures, including access to designated aerodromes for humanitarian reasons, in response to specific events and circumstances must be adapted to these circumstances. They set forth the allocation of responsibility among States and ICAO for the conduct of contingency planning and the measures to be taken into consideration in developing, applying and terminating the application of such plans.

1.3.1.3 The guidelines are based on experience which has shown, *inter alia*, that the effects of disruption of services in particular airspaces are likely to significantly affect the services in adjacent airspaces, thereby creating a requirement for international co-ordination — hence the role of ICAO in the field of contingency planning and co-ordination of such plans, as defined by the guidelines. They also reflect the experience that ICAO's role in contingency planning must be global and not limited to airspaces over the high seas and areas of undetermined sovereignty, if the availability of major world air routes within the air transportation system is to be preserved. Finally, they further reflect the fact that international organizations concerned such as the International Air Transport Association (IATA) and the International Federation of Airline Pilots' Associations (IFALPA) are valuable advisors on the practicability of over-all plans and elements of such plans.

1.3.2 Status of contingency plans

Contingency plans are intended to provide alternative facilities and services to those provided for in the regional

air navigation plan when those facilities and services are temporarily not available. Contingency arrangements are therefore temporary in nature, remain in effect only until the services and facilities of the plan are re-activated and, accordingly, do not constitute amendments to the regional plan requiring processing in accordance with the "Procedure for the Amendment of Approved Regional Plans".

1.3.3 Responsibility for developing, promulgating and implementing contingency plans

1.3.3.1 The State(s) responsible for providing air traffic services and related supporting services in particular portions of airspace is (are) also responsible, in the event of disruption or potential disruption of these services, for instituting measures to ensure the safety of international civil aviation operations and, where possible for making provisions for alternative facilities and services. To that end the State(s) shall develop, promulgate and implement appropriate contingency plans. Such plans shall be developed in consultation with other States concerned and with ICAO, as appropriate, whenever the effects of the service disruption(s) are likely to affect the services in adjacent airspaces.

1.3.3.2 The responsibility for appropriate contingency action in respect of airspace over the high seas continues to rest with the State(s) normally responsible for providing the services until, and unless, that responsibility is temporarily reassigned by ICAO to (an)other State(s).

1.3.3.3 Similarly, the responsibility for appropriate contingency action in respect of airspace where the responsibility for providing the services has been delegated by another State, continues to rest with the State providing the services until, and unless, the delegating State terminates temporarily the delegation. Upon termination, the delegating State assumes responsibility for appropriate contingency action.

1.3.3.4 ICAO will assume the responsibility for initiating and co-ordinating appropriate contingency action in the event of disruption of air traffic services and related supporting services affecting international civil aviation operations provided by a State wherein, for some reason, the authorities cannot adequately discharge the responsibility referred to in 1.3.3.1 above. In such circumstances, ICAO will work in co-ordination with States responsible for airspaces adjacent to that affected by the disruption and in close consultation with international organizations concerned. ICAO will assume the same responsibility at the request of States.

1.3.4 Preparatory action

1.3.4.1 Time is essential in contingency planning if hazards to air navigation are to be reasonably prevented. Timely introduction of contingency arrangements requires decisive initiative and action, which again presupposes that contingency plans have, as far as practicable, been completed and agreed among the parties concerned before the occurrence of the event requiring contingency action, including the manner and timing of promulgating such arrangements.

1.3.4.2 For the reasons given in 1.3.4.1 States should take preparatory action, as appropriate, for facilitating timely introduction of contingency arrangements. Such preparatory action should include:

- a) preparation of general contingency plans for introduction in respect of generally foreseeable events such as industrial action or labour unrest affecting the provision of air traffic services and/or supporting services. In recognition of the fact that the world aviation community is not party to such disputes, States providing services in airspace over the high seas or of undetermined sovereignty should take appropriate action to ensure that normal air traffic services will be provided to international civil aviation operations in non-sovereign airspace. For the same reason, States providing air traffic services in their own airspace or, by delegation, in the airspace of (an)other State(s) should take appropriate action to ensure that normal air traffic services will be provided to international civil operations concerned, which do not involve landing or take-off in the State(s) affected by industrial action;
- b) monitoring of any developments which might lead to events requiring contingency arrangements to be developed and applied. States should consider designating persons/administrative units to undertake such monitoring and, when necessary, to initiate effective follow-up action;
- c) designation/establishment of a central agency which, in the event of disruption of air traffic services and introduction of contingency arrangements, would be able to provide during the 24 hours of the day, up-to-date information on the situation and associated contingency measures until the system has returned to normal. A co-ordinating team should be designated within or in association with such a central agency for the purpose of co-ordinating activities during the disruption.

1.3.4.3 ICAO will be available for monitoring developments which might lead to events requiring contingency arrangements to be developed and applied. During the

emergence of a potential crisis a co-ordinating team will be established in the Regional Office(s) concerned and at ICAO Headquarters in Montreal and arrangements will be made for competent staff to be available or reachable throughout the 24 hours of the day. The tasks of these teams will be to monitor continuously information from all suitable sources, arrange for the constant supply of relevant information received by the State AIS service at the location of the Regional Office and Headquarters, liaise with international organizations concerned and their regional organizations, as appropriate, and exchange up-to-date information with States directly concerned and States which are potential participants in contingency arrangements. Upon analysis of all available data, authority will be obtained for initiating the action required in the circumstances.

1.3.5 Co-ordination

1.3.5.1 A contingency plan must be acceptable to providers and users of contingency services alike, i.e. in terms of the ability of the providers to discharge the functions assigned to them and in terms of safety of operations and traffic handling capacity provided by the plan in the circumstances.

1.3.5.2 Accordingly, States which anticipate disruption of air traffic services and/or related supporting services, should advise as early as practicable, the ICAO Representative accredited to them and other States whose services might be affected. Such advice should include information on associated contingency measures or a request for assistance in formulating contingency plans.

1.3.5.3 Detailed co-ordination requirements should be determined by States and/or ICAO, as appropriate, keeping the above in mind. In the case of contingency arrangements not appreciably affecting airspace users or service provided outside the airspace of the (single) State involved, co-ordination requirements are naturally few or non-existent. Such cases are believed to be few.

1.3.5.4 In the case of multi-State venture, detailed co-ordination leading to formal agreement of the emerging contingency plan should be undertaken with each State which is to participate. Such detailed co-ordination should also be undertaken with those States whose services will be significantly affected, for example by re-routing of traffic, and with international organizations concerned who provide invaluable operational insight and experience.

1.3.5.5 Whenever necessary to ensure orderly transition to contingency arrangements, the co-ordination referred to

in this Section should include agreement on a detailed, common NOTAM text to be promulgated at a time to be notified by a special agreed message.

1.3.6 Development, promulgation and application of contingency plans

1.3.6.1 Development of a sound contingency plan is dependent upon circumstances, including the availability or not for use by international civil aviation operations, of the airspace where services have been disrupted. Sovereign airspace can be used only on the initiative of or with the agreement or consent of the authorities of the State concerned regarding such use. Otherwise, the contingency arrangements must involve bypassing the airspace, and should be developed by adjacent States or by ICAO in co-operation with such adjacent States. In the case of airspace over the high seas or of undetermined sovereignty, development of the contingency plan might, depending upon circumstances, including the degree of erosion of the alternative services offered, involve temporary re-assignment by ICAO of the responsibility for providing air traffic services in the airspace concerned.

1.3.6.2 Development of a contingency plan presupposes as much information as possible on current and alternative routes, navigational capability of aircraft and availability or partial availability of navigational guidance from ground based aids, communications capability of adjacent air traffic services units, volume and types of aircraft to be accommodated and the actual status of the air traffic services, communications, meteorological and aeronautical information services. Following are the main elements to be considered for contingency planning depending upon circumstances:

- a) re-routing of traffic to avoid the whole or part of the airspace concerned, normally involving establishment of additional routes with associated conditions for their use;
- b) establishment of a simplified route network through the airspace concerned, if it is available, together with a flight level allocation scheme to ensure lateral and vertical separation and a procedure for adjacent area control centres to establish longitudinal separation at entry point and to maintain such separation through the airspace;

- c) re-assignment of responsibility for providing air traffic services in airspace over the high seas or in delegated airspace;
- d) provision and operation of adequate air-ground communications, AFTN and ATS direct speech links, including reassignment to adjacent States of the responsibility for providing meteorological information and information on navigation aids;
- e) special arrangements for making, collecting and disseminating in-flight and post-flight reports from aircraft;
- f) a requirement for aircraft to maintain continuous listening watch on a specified pilot-pilot VHF frequency in specified areas where air-ground communications are uncertain or non-existent and to broadcast, preferably in English, position information and estimates on that frequency, including start and completion of climb and descent;
- g) a requirement for all aircraft in specified areas to display navigation and anti-collision lights at all times;
- h) a requirement and procedures for aircraft to maintain their own longitudinal separation from preceding aircraft at the same cruising level;
- i) a requirement for climbing and descending well to the right of the centre line of specifically identified routes;
- j) establishment of arrangements for controlled access to the contingency area to prevent overloading of the contingency system;
- k) a requirement for all operations in the contingency area to be conducted in accordance with IFR, including allocation of IFR flight levels from the Table of Cruising Levels in Appendix 3 of Annex 2 of ATS routes in the area.

1.3.6.3 Notification by NOTAM to users of air navigation services of anticipated or actual disruption of air traffic services and/or related supporting services shall be dispatched as early as practicable. The NOTAM shall include the associated contingency arrangements. In the case of foreseeable disruption, the advance notice shall in any case not be less than 48 hours.

1.3.6.4 Notification by NOTAM of discontinuance of contingency measures and re-activation of the services set forth in the regional air navigation plan shall be dispatched as early as required to ensure an orderly transfer from contingency conditions to normal conditions.

NATIONAL ATS CONTINGENCY PLANNING FRAMEWORK

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Development of contingency plans

Introduction

ATS Contingency Planning is necessary to ensure the continuing safety of air navigation within *[insert state]* FIRs and to minimise effects on the traveling public in the event of facility failures, natural disasters, civil unrest (demonstrations), personnel shortages or industrial action. This document provides guidelines for the development of ATS Contingency Plans.

This document outlines the framework of Contingency Planning. The National ATS Contingency Plan follows on from this document. Individual Centre then group plans follow on from the National ATS Contingency plan.

Contingency plan objectives

The objective of contingency plans is to provide a timely, ordered and structured response to and recovery from, any catastrophic degradation or failure to provide Air Traffic Services. Whilst circumstances may vary, contingency plans provide for the worst case scenario. Depending on the availability of resources, a greater level of air traffic services may be provided.

Airways Contingency Committees

When necessary, Airways Contingency Coordination Committees (ACCC) will be formed to implement contingency plans, allocate times for the operation of individual flights and manage traffic restrictions. These committees may be at a National and/or Local level. Each contingency plan shall outline the ACC responsibilities and communication requirements between the ATS service provider, government agencies, aircraft operators and any other relevant party.

National Airways Contingency Coordination Committee

The National Airways Contingency Coordination Committee (NACCC) will be convened to implement the national contingency plan or during any other significant event. If any contingency plan is activated, the *[insert responsible authority]* shall be notified.

Testing and review

Regular review (biannually) and testing (annually) of contingency plans shall be undertaken to ensure validity of the plans.

Following activation of any ATS contingency plan, *[insert responsible Manager]* shall ensure that formal revision is undertaken involving consultation with all affected organisations (ATS, Regulator, Military and Industry).

Air Traffic Services

In ICAO Annex 11, ATS comprises:

1. an air traffic control service;
2. a flight information service; and
3. an alerting service.

Airspace over the high seas

Only an airspace classification (Classes A – G) or a Danger Area should be declared beyond Australia's Territorial Limits, however it is recognised that airspace management is necessary in the vicinity of major airports.

Considerations

Staffing

- Staff availability and manning arrangements;
- Licensing status of available staff;
- Additional resources such as briefing officers to provide particular attention to airspace, frequency and clearance requirements.

Procedures

- Consider the need to increase traffic spacing to ensure the minimum is not infringed; and
- Need to temporarily suspend the application of certain procedures , eg traffic information in Class G airspace;
- Minimise the impact on existing airspace arrangements, pilot / ATS procedures;
- The preparation of diagrammatic presentation of affected airspace changes, including frequency change details and SID / STARs suitable for transmission via AVFAX and NAIPS;
- Develop a methodology to facilitate special operations.

Facilities

- Availability of NAVAIDS and communications facilities;
- The use of other units facilities, including towers;
- The use or assistance of military ATS facilities.

Demand/Capacity

- Determine anticipated traffic levels;
- Need to limit or “flow” traffic eg:
 - by means of gate spacing at sector boundaries;
 - route restrictions to initiate a simplified network;
 - controlled departures times; and
 - enroute holding.

Individual plans will outline use of a time allocation system where necessary.

Options

When developing a contingency plan, the preferred options, in order, are:

- a. Consolidate functions to alternate operating positions (subject to availability of appropriately licensed staff) and, if required, implement traffic metering; or
- b. Transfer responsibility for services to another Unit / Centre and if required, implement traffic metering; or
- c. Implement traffic metering, to reduce traffic congestion, and / or
- d. Reclassify the airspace to another classification (eg Class C to Class A or Class C to Class D); or
- e. Re-designate the airspace to Restricted area; and
 - (1) implement TIBA;
 - (2) implement MBZ at certain aerodromes; or
- f. Reclassify as Class G airspace; or

Where airspace is reclassified as Class G or the normal services of Class G airspace are affected, [eg SAR alerting], issue NOTAM to define what services are not available.

Transfer of Responsibility

Where a transfer of responsibility for airspace occurs, formal Letters of Agreement shall be exchanged between Unit/Centre Managers to clearly state requirements for the transfer of responsibility. Additionally, all ATS personnel shall be trained in appropriate aspects of the responsibilities they may be required to assume under any Contingency Plan Letter of Agreement (LOA). When necessary, the LOA shall indicate training and competency requirements. When responsibility for airspace cannot be absorbed or transferred, then **Options c-g** (above) will apply. LOAs shall contain, but are not limited to the following:

- a. notification procedures where an event can be foreseen, the transfer should take place prior to any risk of failure of communications facilities;
- b. areas of responsibility with training and competency requirements;
- c. procedures and coordination arrangements;
- d. relevant Local Instructions;
- e. lateral separation diagrams; and
- f. details of a formal amendment process of the foregoing.

Procedures documentation shall detail contingency arrangements with military ATS units.

Where appropriate, en-route Centres, in conjunction with the Office of the HATC, shall establish LOAs with neighbouring States for route restrictions or the provision of services (to the extent possible) for international air traffic over the high seas or for domestic operations.

Contingency Services

During contingency periods, where a level ATS staffing is available it may be deemed necessary to provide basic services in the form of basic flight monitoring operations.

Flight monitoring service

Where it is determined that an enroute flight monitoring service can be provided, contingency services, when available, will acknowledge the following:

- when initial contact is made on the frequency;
- emergency communications; and
- when advised of changing to another frequency.

This flight monitoring system along with radar and ADS/CPDLC information will be used to assist in establishing aircraft positions during recovery from the contingency and return to the provision of normal air traffic services.

The ATS provider may not be able assure the provision of aerodrome control services. Limited aerodrome information may be provided from selected control tower locations.

Local contingency plans will detail the specific availability.

Resumption of service

Individual plans will outline the process followed to resume normal service.

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