



International Civil Aviation Organization

The First Meeting of the ICAO Asia/Pacific Regional Air Traffic Management Contingency Plan Task Force (RACPTF/1)

Bangkok, Thailand, 17 – 20 April 2012

Agenda Item 6: Asia/Pacific Regional ATM Contingency Plan

Proposed Framework for Regional ATM Contingency Plan

(Presented by the Secretariat)

SUMMARY

The Asia/Pacific Regional ATM Contingency Plan Task Force (RACP/TF) was formed for planning, coordination and implementation of a regional ATM contingency plan.

This paper presents a proposed framework for the Asia/Pacific Regional ATM Contingency Plan for consideration by the Task Force.

This paper relates to –

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:

- GPI-6 Air traffic flow management
- GPI-7 Dynamic and flexible ATS route management
- GPI-8 Collaborative airspace design and management
- GPI-16 Decision support systems and alerting systems
- GPI-18 Aeronautical information
- GPI-19 Meteorological Systems
- GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 Contingency plans provide for the safe, orderly flow of international air traffic in the event of disruptions of ATS and related supporting services, and the continued availability of major world air routes within the air transportation system in such circumstances.

1.2 Annex 11 specifies the requirement for the development of contingency arrangements as follows:

2.30 Contingency arrangements

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.

Note 1.— Guidance material relating to the development, promulgation and implementation of contingency plans is contained in Attachment C.

Note 2.— Contingency plans may constitute a temporary deviation from the approved regional air navigation plans; such deviations are approved, as necessary, by the President of the ICAO Council on behalf of the Council.

1.3 Annex 11 Attachment C contains guidance material related to contingency planning, including Contingency Plan status, responsibilities, preparatory action, coordination, and Contingency Plan development, promulgation and activation.

1.4 Responsibility for instituting measures to ensure the safety of international civil aviation operations and, where possible, for making provisions for alternative facilities and services, rests with the State(s) normally responsible for providing ATS and related services in particular portions of airspace. This includes the airspace over the high seas until, and unless, the responsibility is temporarily reassigned by ICAO.

1.5 Timely introduction of contingency arrangements requires decisive initiative and action, which 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.

1.6 Detailed contingency coordination requirements should be determined by States and/or ICAO, as appropriate, keeping in mind that States which anticipate or experience disruption of ATS and/or related services should advise, as early as practicable, the ICAO Regional Office and other States whose services might be affected.

2. DISCUSSION

2.1 Contingency Plans should be formulated for three levels of ATS contingency:

a) **Level 1 - Domestic Contingency Plans** – detailing contingency arrangements with no appreciable effect on airspace users or services provided outside the airspace of the State involved. All States must have this level of contingency plan. While there should be no requirement for the ICAO Regional Office to hold copies of domestic contingency plans, a brief outline of the plan's effective date and its points-of-contact should be coordinated and regularly updated.

b) **Level 2 - Inter-State Contingency Plans** – detailing contingency arrangements which may involve two or more States agreeing to such items as limited cross-boundary route structures, increased longitudinal separation, timed entry to airspace, flight level allocation schemes and/or provision of ATS on behalf one of the States during periods of reduced or withdrawn ATS in the airspace of that State. With the exception of the State/s entering into the contingency agreement, these plans should be limited to those arrangements with no appreciable effect on airspace users or services provided outside the airspace of the State normally responsible for provision of ATS. As in the case of domestic contingency plans, there should also be no requirement for the Regional Office to hold a copy of any inter-State plan. However, the outline provided should include details of the parties entering into the agreement, in addition to the same details required for domestic contingency plans. Regional Office should be informed of any activation of these plans.

c) **Level 3 - Sub-Regional/Regional Contingency Plans** – detailing contingency arrangements affecting airspace users or services provided outside the airspace of the State involved. Sub-Regional/Regional Contingency Plans should normally only be promulgated for airspace above F245. Regional Office should hold the most recent copy of any Sub-Regional or Regional Contingency Plan, and be made aware of any activation of such plans.

2.2 Contingency plans should be constructed to manage a hierarchy of contingency categories, their causal events, the consequent contingency plan levels, and applicable basic plan elements (see para 2.3):

a) **Category 1 – Airspace Safe, but Restricted or No ATS.**

Example Causal Events: Industrial action, pandemic, earthquake, nuclear emergency, ATM system failure or degradation (Level 1 and 2 plans).

b) **Category 2 – Airspace Not Safe.**

Example Causal Events: Volcanic ash cloud, nuclear emergency, military/armed conflict (Level 1 and 2 plans).

c) **Category 3 – Airspace Not Available.**

Example Causal Events: pandemic, nuclear emergency, military/armed conflict, political (Level 1, 2 and 3 plans).

2.3 Contingency Plans should consist of a standardized set of Basic Plan Elements for each contingency category and plan level, depending on the circumstances, including:

Element 1: Administration

- a) Record of signatories, version control and records of amendment.
- b) Definition of the objectives, applicable airspace and operations, and exclusions.

Element 2: Plan Management

- c) List of States and FIRs affected, and the agreed methods of notification in the event of activation of the plan.
- d) Details of the arrangements in place for management of the plan, including provisions for a Central Coordinating Committee to authorize and oversee the activation of the plan and arrange for ATS restoration in the event of an extended outage, an ATM Operational Contingency Group for 24 hour coordination of operational and supporting activities under the plan, and the terms-of-reference, structure and contact details for each.

Element 3: Airspace

- e) Procedures and determinants for implementation and activation of Special Use Airspace including, where necessary, Restricted or Prohibited Areas in territorial airspace, or Danger Areas over the high seas.

Element 4: ATM Procedures

- f) Details of re-routing to avoid the whole or part of the airspace concerned, normally involving establishment of:
 - i. additional routes or route segments with associated conditions for their use; or
 - ii. a simplified route network through the airspace concerned, together with a Flight Level Allocation Scheme, to ensure that a standard minimum vertical separation is applied where less than a specified minimum lateral separation exists between routes.
- g) Details of how domestic traffic, departing and arriving flights and SAR, humanitarian and State aircraft flights will be managed during the contingency period.
- h) Procedures for transition from normal services levels to contingency services, and resumption of normal service.
- i) Provisions for reduced levels of service, if any, within the affected airspace.
- j) Establishment of arrangements for controlled access to the contingency area to prevent overloading of the contingency system.

- k) Procedures for adjacent service providers to establish longitudinal separation at the entry point, and to maintain such separation through the airspace; and/or
- l) Reassignment of responsibility for providing air traffic services over the high seas or in delegated airspace.
- m) Coordination and frequency transfer procedures for aircraft entering and leaving the affected airspace.

Element 5: Pilot/Operator Procedures

- n) Requirements for flight plan submission during the contingency period, including contingency route planning requirements, and arrangements if airspace is closed when no contingency route is available;
- o) Emergency procedures, including In-flight requirements for broadcast of position and other information, and for continuous listening watch, on specified pilot-pilot and GUARD VHF frequencies;
- p) Requirements for display of navigation and anti-collision lights;
- q) Requirements for climbing and descending well to the right of the centreline of specifically identified routes;
- r) Requirements for all operations to be conducted in accordance with IFR, including operating at IFR flight levels from the relevant Table of Cruising Levels in Appendix 3 of Annex 2, except where modified by a Flight Level Allocation Scheme.

Element 6: Communications Facilities and Procedures

- s) Provision and operation of adequate air-ground communications, AFTN and ATS direct speech links;
- t) Specification of radio frequencies to be used for particular contingency routes.
- u) Log-on and connection management for CPDLC aircraft, where appropriate;
- v) Use of ADS-C automatic position reporting in lieu of voice position reporting to ATS.

Element 7: Aeronautical Support Services including AIS and MET

- w) AIP Information regarding the Contingency Planning, and notification by NOTAM of anticipated or actual disruption of air traffic services and/or supporting services, including associated contingency arrangements, as early as practicable and, in the case of foreseeable disruption, not less than 48 hours in advance
- x) Reassignment to adjacent States of the responsibility for providing meteorological information and information on status of navigation aids.

Element 8: Contact Details

- y) Contact details for the RCC responsible for the affected FIR, and coordination arrangements.
- z) Contact details of adjacent States and other international organisations participating in the contingency plan.

2.4 In formulating a framework for the Regional ATM Contingency Plan the RACP/TF should consider a general scheme, which may be varied where appropriate by Inter-State or Sub-Regional plans. The general scheme should include such items as:

- a) Standardized minimum longitudinal times/distances between consecutive same-level aircraft;
- b) Minimum lateral separation between contingency routes, except where vertical separation is arranged for converging or crossing routes;
- c) Flight Level Allocation Schemes (FLAS), providing for a minimum of 2,000 feet vertical separation between same-track aircraft not separated by the minimum longitudinal time/distance, or aircraft on routes not separated by the minimum lateral distance;
- d) Standardized ATS and pilot phraseologies;
- e) Construction of a template for Inter-State and Sub-Regional plans. The Indonesia Air Traffic Services Contingency Plan Part 1 – Jakarta FIR (**Attachment A**) is currently the approved model contingency plan for the ASIA/PAC Region, and should be used as the basis for a regional template;

2.5 The RACP/TF should consider the possibility of forming a review team to assess Level 1 and 2 plans, in terms of the eight Basic Planning Elements proposed in paragraph 2.3, in order to assess whether the plans are *robust*, *marginal* or *incomplete*¹. A draft Decision is proposed as follows:

Decision 1/1: ATM Contingency Plan Review Team Formation

That, an ATM Contingency Review Task Force Team be established from the Task Force that reviews and assesses Level 1 (national) and Level 2 (bi-lateral) ATM Contingency Plans, using Basic Planning Elements agreed by the Task Force.

¹ Terms used to assess State PBN Plans

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss and modify the suggested plan framework as required;
- c) discuss the proposed Decision to create an ATM Contingency Plan Review Team to assess and rate State Plans using the proposed Basic Plan Elements as either *robust*, *marginal* and *incomplete* status; and
- d) discuss any relevant matters as appropriate.

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