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**Agenda Item 8: ATS Contingency Plan**

**ASIA/PACIFIC ATS CONTINGENCY PLANNING**

(Presented by the Secretariat)

**SUMMARY**

This paper presents information on ATS contingency planning in the Asia/Pacific Region.

This paper relates to –

**Strategic Objectives:**

A: *Safety* – Enhance global civil aviation safety

**Global Plan Initiatives:**

GPI-6 Air traffic flow management

GPI-7 Dynamic and flexible ATS route management

**1. INTRODUCTION**

1.1 The Second Meeting of the Regional ATM Contingency Plan Task Force (RACP/TF/2) was held in Bangkok, Thailand from 12 to 15 March 2013.

**2. DISCUSSION**

Silk Road Contingency Route (WP09)

2.1 The RACP/TF/2 discussed a contingency routing system concept north of the Himalayas, known as the ‘Silk Road’ routes joining Europe and East/Southeast Asia, in order to provide alternative regional routes in case in South Asia Major Traffic Flow (MTF-4) airspace was not available. In this case, such a routing system could form part of Level 3 Regional Contingency Planning.

2.2 The Chairperson stated that alternative contingency route systems could be considered along with the current routing structure, so the Task Force could manage their integration in a step-by-step manner. Nonetheless, he emphasized that existing route systems should be considered first, and creation of new routes to be considered only when existing routes were deemed unsuitable.

2.3 India positively acknowledged the Silk Road concept, noting the contingency routes could even eventually be used as standard routes, with the capability of improving efficiency while reducing fuel usage and emissions.

Asia/Pacific Regional ATS Contingency Plan

2.4 The RACP/TF/1 meeting (Bangkok, 17 – 19 April 2012) had formed a Contingency Plan Review Team that considered relevant portions of Level 1 (internal State) and Level 2 (Inter-State) ATM Contingency Plans, and identified areas where ATM contingency planning required improvement, in order to support the development of a Level 3 (Regional) ATM Contingency Plan, based on Basic Planning Elements agreed by the Task Force.

2.5 A questionnaire was developed by the Contingency Plan Review Team asking Administrations to provide information on a number of key areas:

- The number of ATS units with Level 1 (Internal State) Contingency Plans;
- Coordination, testing, review and amendment of Contingency Plans;
- The addressing of Category A and Category B causal events in Contingency Plans;
- Draft Basic Plan Elements (BPE) incorporated in Contingency Plans; and
- The existence of any formal Level 2 (Inter-State) Contingency Plan agreements, and their inclusions.

2.6 Each responding Administration’s overall contingency readiness was categorized as Robust, Marginal or Incomplete for both Level 1 and Level 2 plans, according to the following scale:

- Robust (80 - 100% implementation);
- Marginal (40 – 79% ); and
- Incomplete (0 – 39%).

Level 1 (Domestic or Internal State) Plans

2.7 Of the 15 responding Administrations there were six with Robust Level 1 plans, eight Marginal and one Incomplete. The reported Regional status of each of the four key areas relating to Level 1 contingency plans was also analysed, and the results expressed as a percentage of ‘complete’ implementation, as were the individual elements within each key area.

2.8 Overall Regional implementation of all four of the key areas examined was found to be Marginal. Of the 20 elements within the four key areas, one was Incomplete, 14 were Marginal and five were Robust.

2.9 **Table 1** provides a summary of the overall reported Regional Level 1 contingency plan readiness of States. While the analysis revealed that specific areas and elements of required improvement differ between Administrations, the table provided a potential order of priority for further action by the Task Force.

<b>Level 1 Plans - Summary Regional Contingency Readiness (%)</b>			<b>AVG</b>
<b>Addressing Category A and B Events</b>	Nuclear Emergency	20	55
	Pandemic	47	
	Staff Availability	53	
	Volcanic Ash Cloud	53	
	Inundation	53	
	National Security	53	

	Earthquake	67	
	ATM/CNS System Failure or Degradation	93	
<b>Level 1 Plans</b>	Percentage of ATSU with Level 1 Plan	63	63
<b>Coordination, Testing and Review</b>	Internal Coordination of Plans	67	74
	Regular Testing	67	
	Routine and Event Driven Review	87	
<b>DRAFT Basic Plan Elements</b> (No. of sub-elements)	Airspace (1)	47	75
	Communications Facilities and Procedures (4)	65	
	Pilot/Aircraft Operator Procedures (5)	72	
	Aeronautical Support Services (2)	77	
	ATM Procedures (7)	78	
	Contact Details (2)	80	
	Plan Management (2)	87	
	Administration (2)	90	

**Table 1** – Level 1 Plans - Summary of Reported Regional Readiness

Level 2 (Inter-State) Plans

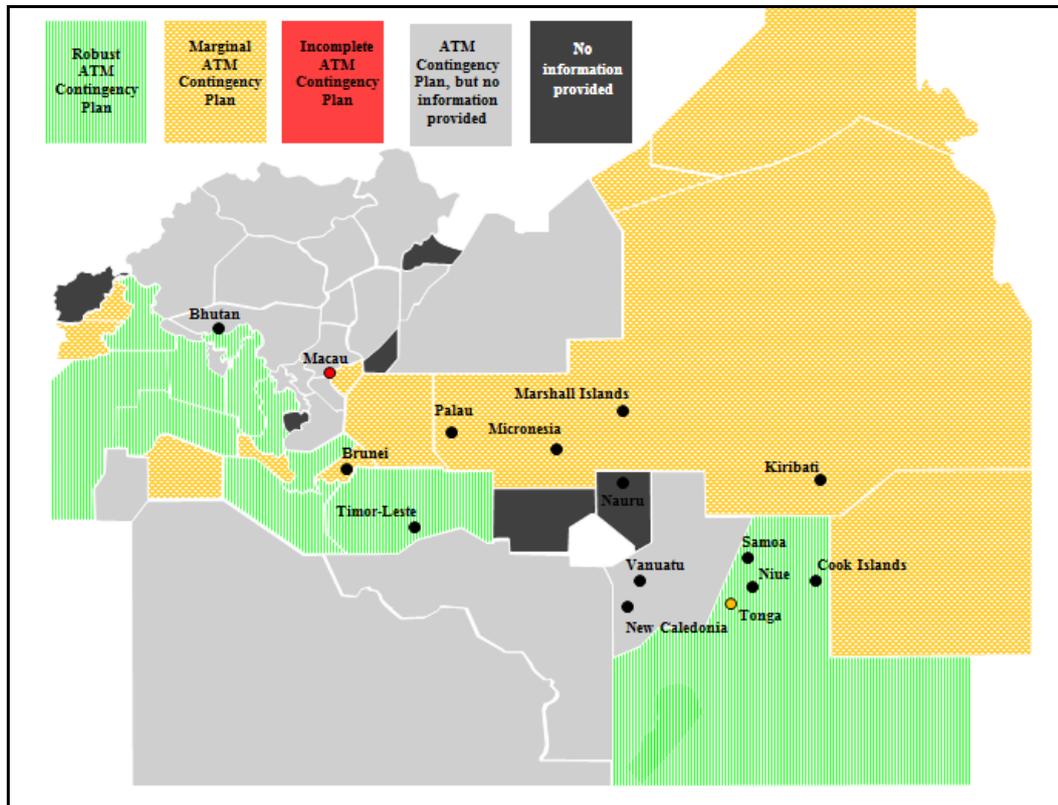
2.10 Analysis of the 15 questionnaire responses indicated that 4 Administrations had Robust Level 2 plans, 5 Marginal and 6 Incomplete. The analysis indicated where States have reported that bi-lateral Level 2 contingency plans are in place.

2.11 Table 2 summarized the Regional Level 2 contingency readiness determined by State responses to the questionnaire, also expressed as a percentage of ‘complete’ implementation and presented in a potential order of priority for consideration by the Task Force (**Table 2**).

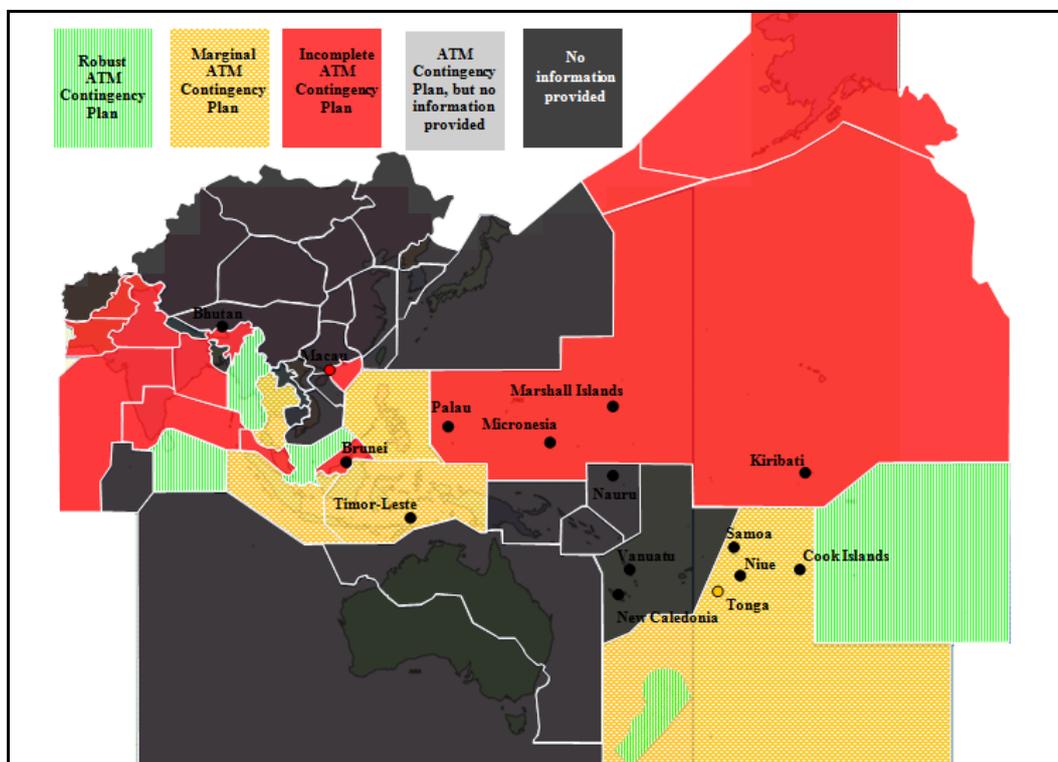
<b>Level 2 Plans – Summary of Overall Regional Readiness (%)</b>	
Delegation of ATC Separation	33
Formal Inter-State Agreements (LoA or MoU)	47
Contingency Route Structure	47
Flight Level Allocation Scheme	47
Minimum Longitudinal Spacing	47
Frequency Transfer Arrangements	60
Delegation of FIS and SAR Alerting Services	60

**Table 2** – Level 2 Plans – Summary of Regional Readiness

2.12 A map representation of Asia/Pacific States' Level 1 and Level 2 contingency readiness is at **Figure 1** and **Figure 2**.



**Figure 1:** Level 1 Planning



**Figure 2:** Level 2 Planning

### Planning Strategy

2.13 The RACP/TF noted that States would be at different levels of preparedness, but the role of the Task Force was to assist States to enhance their capability. The meeting also noted that the Task Force needed to work on Level 2 plans, as Level 3 planning mainly involved the harmonisation of Level 2 plans.

2.14 The Secretariat presented a proposed strategy for development of sub-Regional and Regional ATM Contingency Plans. It was proposed that, in order to develop a Regional ATM Contingency Plan, bi-lateral Level 2 (inter-State) plans and multi-lateral Level 2 or Level 3 (sub-Regional) plans should be formulated first, then progressively linked together to form the Regional Plan.

2.15 As a first step in the development of Level 3 plans, Level 2 plans should be constructed among “clusters” of States, providing the opportunity for small groups of States to identify contingency routes and develop FLAS for inclusion in the Level 2 Plan for later harmonization with other Level 2 Plans.

2.16 It was proposed that an initially limited number of Small Working Groups (SWG) should be formed within the Task Force to develop harmonized contingency route structures and FLAS for Level 2 Plans. Additional SWG would later be formed to expand the route and FLAS structures into other parts of the Asia/Pacific Region. Following the creation of a harmonized route structure and FLAS the SWGs would then be utilized to develop and harmonize general scheme inclusions.

2.17 The strategy proposed that in formulating contingency route and FLAS structures the SWG should consider:

- a) major routes used by overflying traffic;
- b) RNAV and conventional routes;
- c) climb and descent routes, either published or temporary, to permit aircraft to arrive at or depart from international airports, remaining clear of all other departing or arriving aircraft and being established clear of the FLAS before commencing descent or climb; and
- d) bands of levels within FLAS (for example F280 and below, F290 and above) to permit local or short haul traffic to climb and descend clear of long-haul/transiting traffic.

2.18 The Secretariat provided a proposed template for inter-State contingency plan arrangements. The meeting was reminded that ICAO Annex 11 Attachment C required that, in support of the requirement for contingency planning, States should develop appropriate contingency plans in consultation with other States, whenever the effects of the service disruption are likely to affect the services in adjacent airspace.

2.19 It was noted that contingency arrangements between States may take the form of Operational Letters of Agreement (LOA), Memoranda of Understanding (MOU), or other instruments as appropriate to agree and formalize procedures to be implemented in the event of a disruption or potential disruption to a State’s air traffic service provision, and that such contingency arrangements may include provisions for contingency route structures, flight level allocation schemes (FLAS), minimum longitudinal spacing, frequency transfer arrangements, and delegation of ATC separation and/or FIS and SAR alerting services if appropriate.

2.20 The meeting noted that the creation of contingency planning procedures were not just for the benefit of the airlines, but also the neighbouring ANSPs, as without such plans these ANSPs would be adversely affected.

2.21 The meeting discussed aspects of delegation of services, noting that there were three likely outcomes:

- a) Delegation of services to another State/ANSP when that provider has a level of communications, surveillance and flight data processing that can support the delegated service – in this case the controlled airspace class is likely to remain unchanged, albeit with the possibility of Special Use Airspace (SUA) being imposed if restrictions are required; or
- b) Contingency services (not ATC) assistance by another State/ANSP in terms of monitoring progress of aircraft on procedural contingency operations using Traffic Information Broadcasts by Aircraft (TIBA) and possibly providing alerting services - in this case the controlled airspace is likely to change to class F (advisory), with the possibility of SUA being imposed if restrictions are required; or
- c) No contingency services, with aircraft on procedural contingency operations using Traffic Information Broadcasts by Aircraft (TIBA) – in this case the controlled airspace should be changed to class G (uncontrolled), with the possibility of SUA being imposed if restrictions are required.

2.22 The meeting discussed whether there was any need for a stand-alone Volcanic Ash Contingency Plan, or whether it was more appropriate that the Volcanic Ash Contingency Plan (VACP) be referenced within the Regional ATM Contingency Plan. Moreover, the meeting discussed whether the State level planning for volcanic ash would form part of the State ATM Contingency Plan or would be a separate document. Additionally, States needed to be cautious in considering whether they needed specific volcanic ash procedures, bearing in mind that any State could be affected by volcanic activity, irrespective of whether they had volcanoes in their territory.

2.23 IATA emphasised that volcanic ash events quite often covered a large area, and needed to be managed by a tactical response. The Chairperson noted that the key was the close coordination mechanisms required, especially among ANSPs and with airlines.

2.24 The meeting agreed that the ATM VACP should be made available on the Asia/Pacific Regional Office internet website, and referenced in the Regional ATM Contingency Plan.

#### Regional ATM Contingency Plan Proposed Framework

2.25 The meeting was reminded that the RACP/TF TOR require that the Task Force develops a Regional ATM Contingency Plan that:

- a) took into account the varying levels of contingency response necessary, commensurate with precipitating events;
- b) took into account the varying levels of State contingency capability;
- c) provided principles for Regional ATM Contingency planning;
- d) detailed recommended regional contingency practices to events such as severe meteorological and geological phenomena, health emergencies (pandemics, etc.), military conflicts and industrial relations issues; and
- e) where practical, provided contingency planning templates for States.

2.26 A proposed framework for the Regional ATM Contingency Plan and its Basic Plan Elements (BPE) was presented by the Secretariat. The framework was intended to provide for:

- Scope and objectives of the plan;
- Analysis of current contingency planning status;
- Principles and Practices of ATM Contingency Planning;
- A Performance Improvement Plan;
- Milestones, timelines, priorities and actions; and
- Appendices detailing:
  - Basic Planning Elements (BPE);
  - Contingency Contacts;
  - Contingency Routes and Flight Level Allocation Schemes;
  - Pilot and ATC Procedures; and
  - Templates for Volcanic Ash Cloud and Radioactive Cloud Contingency Plans.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss the status of trans-regional contingency planning; and
- c) discuss any relevant matters as appropriate.

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