



International Civil Aviation Organization

**The Twenty-Second Meeting of the APANPIRG ATM/AIS/SAR Sub-Group  
(ATM/AIS/SAR/SG/22)**

Bangkok, Thailand, 25 – 29 June 2012

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**Agenda Item 4: Review outcome of relevant meetings**

**RACPTF OUTCOMES**

(Presented by the Secretariat)

**SUMMARY**

This paper presents information from the First Meeting of the Regional ATM Contingency Plan Task Force (RACP/TF/1, Bangkok, Thailand from 17 to 19 April 2012).

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-1 Flexible use of airspace

GPI-3 Harmonization of level systems

GPI-6 Air traffic flow management

GPI-7 Dynamic and flexible ATS route management

**1. INTRODUCTION**

1.1 The First Meeting of the Regional ATM Contingency Plan Task Force (RACP/TF/1) was held in Bangkok, Thailand from 17 to 19 April 2012. The meeting was chaired by Mr Rosly Saad, Chief Air Traffic Control Officer, Civil Aviation Authority of Singapore.

1.2 The meeting was attended by 36 participants from Bangladesh, Hong Kong China, India, Indonesia, Malaysia, Nepal, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States and Viet Nam. The meeting developed one (1) Decision.

**2. DISCUSSION**

Global ATM Contingency Strategies

2.1 RACP/TF/1 noted that European contingency planning had been delegated to the European Organisation for the Safety of Air Navigation (EUROCONTROL), with no current direct ICAO involvement.

2.2 It was agreed that the Middle East (MID) Regional Contingency Plan may not be useful as a template for Asia/Pacific, as it contained all of that region's Level 1 plans, which would necessitate frequent updates of the Regional Plan.

### Meteorological Nexus

2.3 The RACP/TF acknowledged that significant work had already been done on Volcanic Ash Cloud (VAC) contingency responses, noting the METWARN/I Special Coordination Meeting (SCM) in Singapore (31 January to 1 February 2011) involving Indonesia, Malaysia, Philippines, Singapore and Thailand, and the follow-up teleconference and table-top exercise on 26 August 2011. The METWARN/I TF recognized that this initiative could be adopted as a model for other sub-regions, with the aim to harmonize procedures among all the sub-regions.

2.4 The link between the RACP/TF and METWARN/I TF was discussed, including the requirement for each of these Task Forces to develop an understanding of the other's needs. While primarily considered in response to VAC, this link was also a necessary facilitator to the contingency response to other catalysts such as nuclear emergencies (radioactive cloud).

2.5 The RACP/TF Chair and Secretariat took the opportunity to meet the OPMET/M TF/10 - METWARN/I TF being held at the same time as the RACP/TF/1 to discuss and clarify the linkage specified in the RACP/TF TOR, and to briefly outline the initial ATM perception of the link<sup>1</sup> between these bodies. This included consideration of ATM requirements for information type coding, frequency of information update, and dynamic notification of affected airspace.

2.6 The meteorological expert from India stressed the need for improved and increased ATM reporting of significant meteorological information from pilots. Although Annex 3, Section 5.8 required the reporting and distribution of Special Air Report and Air Reports on a regular basis, the reception of such reports had largely been irregular and sporadic. The reasons for the non-availability of regular reports (other than the automated type provided by data-link) needed to be investigated.

2.7 The Australian meteorological expert advised that there were a number of bodies currently working on the needs and requirements of ATM and meteorological agencies on a global basis. The OPMET/M/TF would provide the RACP/TF with an update on this work.

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<sup>1</sup> The Secretariat participated in the final day of the METWARN/I TF/2 meeting, and noted the following items of interest to RACP/TF:

- i. Information on a framework for a regional contingency plan for weather phenomena that included volcanic ash, tropical cyclone, radioactive cloud and Tsunami, including general principles and requirements was discussed. The METWARN/I TF Secretariat would present a working paper on regional contingency planning for weather phenomena to RACP/TF/2.
- ii. The meeting was advised that at the Fourth meeting of the Meteorological Warnings Study Group (MWSG/4), a recommendation would be made that States arrange to receive Tsunami warnings directly from the responsible National body or from the appropriate International Tsunami Warning Centre. The METWARN/I meeting noted that any contingency planning for tsunami and other phenomena such as tropical revolving storms and volcanic activity needed to take into account protection of ATM facilities, navigation aids and ATS surveillance installations, and the consequential effect on aerodromes and ATM.

### Proposed Contingency Plan Structure

2.8 The meeting discussed the outcomes from the ATM/AIS/SAR/SG/21 meeting, including the proposed three tiered arrangement of contingency plans, consisting of domestic plans (Level 1 plans, forming the lower tier), bi-lateral plans such as those already existing between several States (Level 2 plans) and Sub-Regional or Regional Plans (Level 3).

2.9 ICAO Annex 11 had requirements for the development of contingency arrangements (guidance material was contained in Attachment C to the Annex). Contingency arrangements were based on Safety Management System (SMS) principles, so States should ensure they complete a full threat assessment of their ATM systems, from deliberate acts to unplanned events such as fire, natural catastrophes or sub-contractor malpractice.

2.10 A proposed framework for the Regional ATM Contingency Plan was provided:

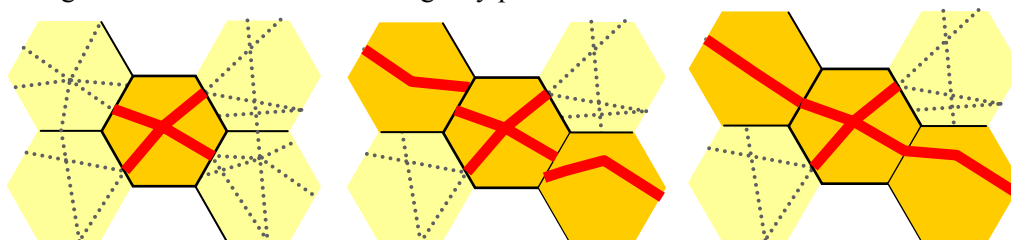
a) A hierarchy of contingency plans:

- i. **Level 1**, for domestic plans having little or no effect on external air navigation service providers;
- ii. **Level 2**, for coordinated contingency plans involving two or more States; and
- iii. **Level 3**, for sub-Regional or Regional contingency plans, detailing contingency arrangements affecting airspace users or services provided outside the contingency airspace.

b) Categories of contingency plans:

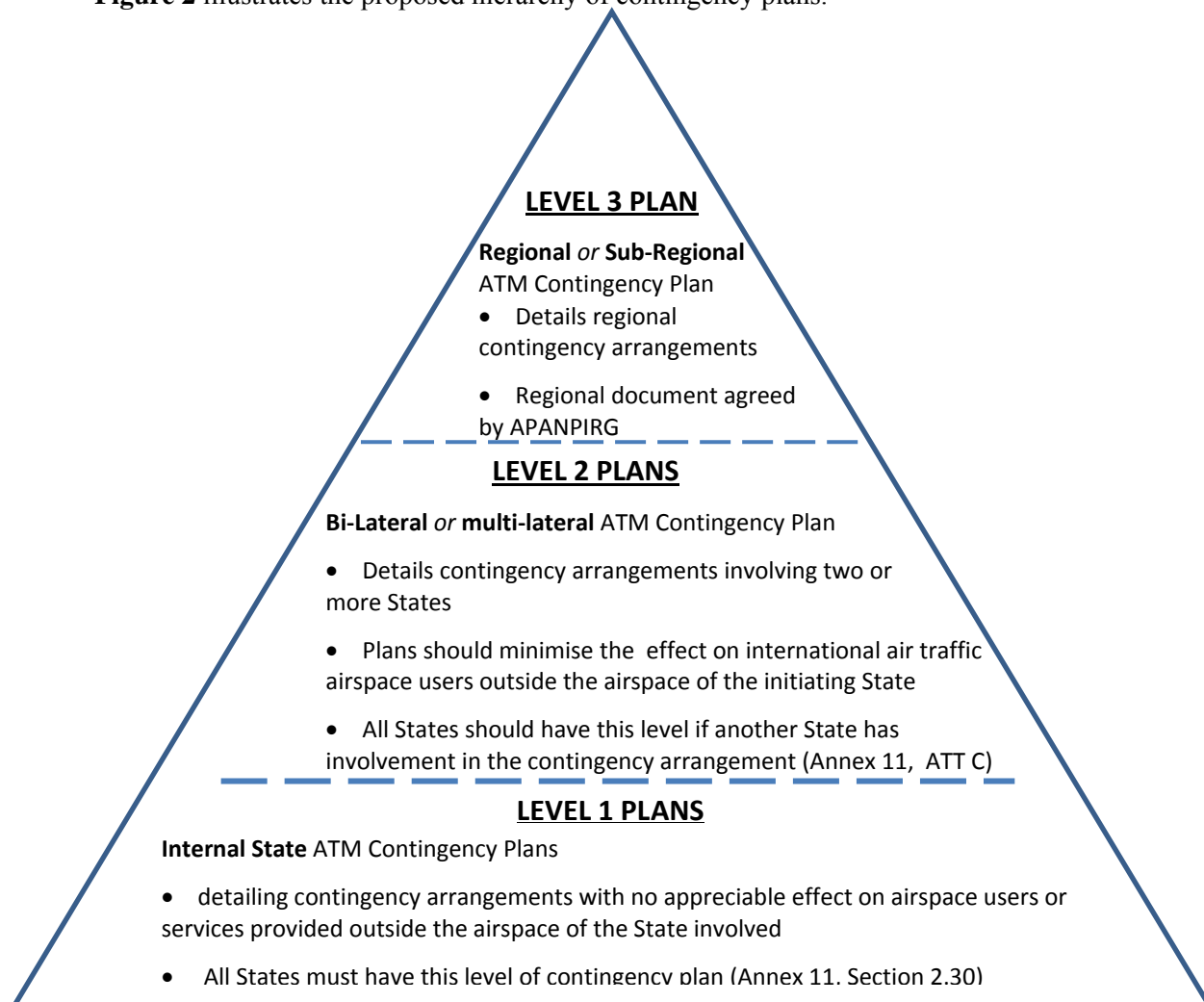
- iv. **Category A – Airspace Safe, but Restricted or No ATS**, due to causal events such as industrial action, pandemic, earthquake, nuclear emergency affecting the provision of ATS, or ATM system failure or degradation;
- v. **Category B – Airspace Not Safe**, due to causal events such as VAC, nuclear emergency, military activity; and
- vi. **Category C – Airspace Not Available**, due to causal events such as pandemic, national security – normally a political decision.

2.11 The meeting discussed this hierarchical approach at length, noting that Level 1 (internal State) plans would not be part of the Regional ATM Contingency Plan, but could be referred to in that document. Level 2 (Inter-State) planning, which involved or affected other States, was considered to be a priority for the RACP/TF analysis, as it was these that needed to be harmonised to allow a seamless Level 3 (Regional) Plan. Moreover, it was recognised that Level 1 and 2 plans needed to address all three categories of contingency response (A, B or C), even if the category B procedures were simple and of a tactical nature to deal with a changing situation. **Figure 1** demonstrates the outcomes of either fragmented or harmonized contingency plans.



**Figure 1:** Contingency Plan Harmonisation (single FIR, fragmented dual and harmonised dual activation showing ATS contingency routes in red).

2.12 **Figure 2** illustrates the proposed hierarchy of contingency plans.



**Figure 1:** Hierarchy of Contingency Plans

2.13 A proposed set of standardized Basic Plan Elements (BPE) were presented for discussion, including Administration, Plan Management, Airspace, ATM Procedures, Pilot/Operator Procedures, Communications Facilities and Procedures, Aeronautical Support Services including AIS and MET, and Contact Details. The meeting agreed that the BPE would be developed in use until the RACP/TF/2 meeting, at which the draft BPE would be formally presented for consideration of incorporation into the draft Regional ATM Contingency Plan.

2.14 It was agreed by the meeting that a key part of the future Regional ATM Contingency Plan was the development of Principles and Practices that would further harmonise State Contingency responses as far as practical. However, it was not considered necessary to include every word from either the model or later Level 1 plans in the Regional Plan.

2.15 The meeting was further invited to consider a general scheme including such items as standardized minimum lateral and longitudinal spacing, Flight Level Allocation Scheme (FLAS), standardized ATS and pilot phraseologies and procedures, and a template for Inter-State and sub-Regional plans. The Indonesia Air Traffic Services Contingency Plan Part 1 – Jakarta FIR was proposed as the basis for a template for Inter-State planning (although it was recognised that the template may not be suitable for all States, and could be further developed over time).

2.16 The meeting noted that temporary delegation of airspace in a contingency situation did not mean that full Air Traffic Control (ATC) services would be provided, and that there were possible legal, communication and ATS surveillance issues associated with this. In spite of this, delegation where necessary was viewed by the meeting as a positive, especially if data sharing could be instigated. The Secretariat clarified that States were under no obligation to delegate airspace and that sovereign rights were not affected by such arrangements. However, it was also stressed that provision should be made for the continuation of aircraft operations on regional air routes within international airspace (over the High Seas) or of undetermined sovereignty.

2.17 The Secretariat presented information previously provided by Indonesia, Philippines, Singapore and Thailand to the Eighteenth meeting of the South East Asia ATM Coordination Group (SEACG/18, May 2011). Proposed Sub-Regional Contingency Plan concepts including identifying major traffic flows and designating them as contingency routes, use of FLAS, and apportioning segments of the contingency FIR to adjacent air traffic service providers for the provision of Flight Information Services and minimization of communication hand-overs. The meeting agreed that this approach was an appropriate step to development of a Regional ATM Contingency Plan.

#### State ATM Contingency Plans

2.18 Viet Nam presented information on the current status of ATM Contingency Planning, including a summary of the contents of the plan adopted on 11 April 2012. The meeting noted that the creation of airspace sectors for contingency should have the same communications practices applied to them as normal ATS Sectors, so that boundaries should not be placed along air routes or at the convergence of complex route systems.

2.19 India presented their ATM Contingency Plan, including the procedures and contingency route structure for safe and orderly flow of international air traffic using a Flight Level Allocation Scheme (FLAS). India's ATM Contingency Route structure had been coordinated with affected neighbouring states in the Middle East Region, and with Indonesia. The meeting noted that as a FLAS was normally an integral part of a contingency plan, by definition that would mean no non-Reduced Vertical Separation Minimum (RVSM) aircraft could be present. India confirmed that in the event of a Category A contingency situation (degraded or no ATS available), military aircraft would be requested to operate below FL280.

2.20 It was noted that while the Regional Office needed to be informed of plan activations affecting international air traffic, it was understood that the Regional Office could not have a tactical role as manager of contingency operations, but would be available for strategic advice and information. Moreover, it was recognised that the tactical operation of Level 2 or 3 plans was ideally conducted by Sub-regional Air Traffic Flow Management (ATFM) units, as was the case at EUROCONTROL or the FAA's Command Centre.

2.21 The meeting was provided with information on the status of contingency plans for Asia/Pacific States, and the results of the 2006 Asia/Pacific Contingency Plan Survey. The updated contingency plan status information is at **Attachment A**. A matrix intended to track any bi-lateral or multi-lateral contingency plans in the region and updated from the on-going analysis of information by the RACP/TF was also presented, and is appended as **Attachment B**.

### Task Force Terms of Reference

2.22 The meeting noted the APANPIRG/22 (5-9 September 2011) discussion on the need for the Task Force to consider contingency matters beyond the basic Annex 11 requirements, which were duly reflected in the RACP/TF Terms of Reference (TOR). The meeting was also apprised of APANPIRG's concerns about the effectiveness of the Task Force unless it operated in a similar way to the PBN Task Force, in conducting a gap analysis of State contingency plans and assessing them as either 'incomplete', 'marginal' or 'robust' status.

2.23 The meeting discussed concerns that the level of resources required for in assessing State Contingency Plans could be significant, given that each State may have more than one Level 1 plan building up to the Level 2 plan. The meeting noted that the RACP/TF TOR directed the Task Force to review the current status of ATM Contingency Plans and the contingency preparedness of Asia and Pacific Region States, and identify areas where ATM contingency planning requires improvement.

2.24 There was considerable discussion on the need for a Task Force Review Team to be established. As the Task Force Review Team would necessarily require access to current contingency plans, significant concern was expressed about the willingness of States to participate, as their contingency plans may include sensitive information, such as that related to national security.

2.25 It was further suggested that to support the work of the Task Force Review Team, a questionnaire (**Attachment C**) should be circulated, requesting States to provide the relevant portions of their Contingency Plans needed for assessment of their plans against the draft BPE, without the need to divulge information beyond the scope or requirements of the review.

2.26 The meeting agreed to the formation of the Contingency Task Force Review Team which, with the support of the Secretariat, would work via electronic communication to assess and analyse Level 1 and Level 2 Contingency Plan readiness using the draft BPEs, and report back to the RACP/TF/2. India, Indonesia, Singapore and Thailand offered to be members of the Contingency Task Force Review Team. The meeting agreed to the following Decision:

#### **Decision 1/1: ATM Contingency Plan Review Team Formation**

That, an ATM Contingency Task Force Review Team be established from the Task Force, that reviewed 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.

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

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) note Decision 1/1, regarding the formation of the ATM Contingency Plan Review Team; and
- c) discuss any relevant matters as appropriate.

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**APAC State Contingency Plan Status (last updated: 4 May 2012)**

<b>Territory</b>	<b>Plan</b>	<b>APAC Version</b>	<b>Web-site</b>	<b>Contact Details</b>	<b>Info Updated</b>	<b>Notes</b>
Afghanistan						
Australia	Yes	22 July 2010				
Bangladesh	Yes	11 May 2009	No	Azad Zahirul Islam <a href="mailto:datsaero@caab.gov.bd">datsaero@caab.gov.bd</a> <a href="mailto:ncusapcaab@yahoo.com">ncusapcaab@yahoo.com</a>	19/4/2012	
Bhutan						
Brunei Darussalam						No FIR
Cambodia						
China	Yes					
Hong Kong, China	Yes	TBA	No	Benjamin Fong <a href="mailto:bysfong@cad.gov.hk">bysfong@cad.gov.hk</a>	17/4/2012	
Macau, China	No					No FIR
Cook Islands						Cook Sector (Auckland)
Fiji	Yes	23 October 2008				
French Polynesia	Yes					Tahiti FIR and Noumea Sector
India	Yes	June 2011	No	A K Jain –GM (ATM) Airports Authority of India. 'ARUN KUMAR JAIN' <akjaincra@gmail.com>	17/4/2012	Delhi, Chennai, Mumbai, Kolkota FIRs
Indonesia	Yes	01 August 2007	No	1. Wisnu Darjono, Deputy Director of ATM, DGCA Indonesia Email: <a href="mailto:wdtu@indosat.net.id">wdtu@indosat.net.id</a> 2. Saeful Bahri, Chief of ATS Section Email : <a href="mailto:saeful21@hotmail.com">saeful21@hotmail.com</a> 3. Indra Gunawan <a href="mailto:Ind124gunawan@yahoo.com">Ind124gunawan@yahoo.com</a> <a href="mailto:Ind124gunawan@dephub.go.id">Ind124gunawan@dephub.go.id</a>		To be updated 2012

Territory	Plan	APAC Version	Web-site	Contact Details	Info Updated	Notes
Japan	Yes					
Kiribati						No FIR
Korea, DPR						
Korea, Republic of	Yes	2012.2	No	Hyung Hoon Jung <늑대1마리 <hlwolf@naver.com>	18/4/2012	
Lao PDR						
Malaysia	Yes	April 2005	No	Airspace Unit Air Traffic Management Sector Department of Civil Aviation Level 4 Podium Block B No. 27 Persiaran Perdana Federal Government Administration Centre 62618 Putrajaya MALAYSIA  Mr Muddatstir Bin Mashor <a href="mailto:muddatstir@dgca.gov.my">muddatstir@dgca.gov.my</a>	18/4/2012	Paper version. Subject to review
Maldives	Yes	August 2005				Paper version
Marshal Islands						No FIR (Oakland)
Nauru						
Micronesia, Fed States of						No FIR (Oakland)
Mongolia						
Myanmar	Yes	2009				
Nepal	Yes	July 2008				Paper version
New Zealand	Yes					
Pakistan	Yes	24 October				Paper/scanned



Territory	Plan	APAC Version	Web-site	Contact Details	Info Updated	Notes
		2011				
Palau						No FIR (Oakland)
Papua New Guinea						
Philippines	Working Draft	Draft	No	1. Director General, Civil Aviation Authority of the Philippines <a href="mailto:director_gen@caap.gov.ph">director_gen@caap.gov.ph</a>  2. Directorate, Air Traffic Service, Civil Aviation Authority of the Philippines <a href="mailto:chief_ats@caap.gov.ph">chief_ats@caap.gov.ph</a>	18/4/2012	
Samoa						Samoa Sector (Auckland)
Singapore	Yes	TBA	No	Harrison LIM : <a href="mailto:harrison_lim@caas.gov.sg">harrison_lim@caas.gov.sg</a>	18/4/2012	Contingency plan information shared with Malaysia, Indonesia, Philippines, Thailand.
Solomon Islands						
Sri Lanka	Yes	September 2011		C Mahesh D Silva, Air Navigation Services Inspector <a href="mailto:ansi@caa.lk">ansi@caa.lk</a>	17/4/2012	Level 1 Plan. Copies distributed to India and Indonesia.
Thailand	Yes	January 1999				Paper version
Tonga	Yes					Samoa Sector (Auckland)
U.S.A.	Yes					
Vanuatu	No					
Viet Nam	Yes	11 Apr 2012	No	<a href="mailto:buivanvo@caa.gov.vn">buivanvo@caa.gov.vn</a> <a href="mailto:hungand@caa.gov.vn">hungand@caa.gov.vn</a>	17/4/2012	Requires coordination and agreement with neighbouring States.

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## ATM Contingency Plan Matrix

Date Last Amended: 20 April 2012 (v = bilateral plan in place)

Administration	Afghanistan	Australia	Bangladesh	Bhutan	Brunei	Cambodia	China	Hong Kong	Macao	Cook Islands	DPR Korea	Fiji	India	Indonesia	Japan	Kiribati	Lao PDR	Malaysia	Maldives	Marshall Is	Micronesia	Mongolia	Myanmar	Nauru	Nepal	New Zealand	Niue (NZ)	Pakistan	Palau	PNG	Philippines	ROK	Samoa	Singapore	Solomon Is	Sri Lanka	Thailand	Timor Leste	Tonga	Vanuatu	Viet Nam	USA	France							
Afghanistan	■																																																	
Australia		■																																																
Bangladesh			■										v										v																											
Bhutan				■										v																																				
Brunei					■																																													
Cambodia						■																																												
China							■																																											
Hong Kong, China								■																																										
Macao, China									■																																									
Cook Islands										■																																								
DPR Korea											■																																							
Fiji												■																																						
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Japan															■																																			
Kiribati																■																																		
Lao PDR																	■																																	
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Nauru																								■																										
Nepal																									■																									
New Zealand																											■																							



**Qualitative Self Assessment of  
Level 1 – Domestic Contingency Plans  
Readiness**

Name of State / Administration: \_\_\_\_\_

Level 1 Domestic Contingency Plans details contingency arrangements for air traffic services within the State that is likely to have no appreciable effect on airspace users or services provided outside the airspace of the State involved.

Number of ATS Units within the State

Area / En-route	Approach / Terminal	Aerodrome / Tower	Others

Percentage of ATS Units with Domestic Contingency Plans

Area / En-route	Approach / Terminal	Aerodrome / Tower	Others

Does the State have a broader plan to coordinate the resources of ATS Units at a National Level?

YES       NO

Would the Level 1 Domestic Contingency plans be able to effectively address Category 1 type of events such as industrial actions, pandemic, earthquake, nuclear emergency, ATM system failure or degradation?

YES       NO

If YES, how do you rate the robustness of the plan to address Category 1 type of event?

Incomplete	Marginal	Fairly Robust	Robust	Highly Robust
<input type="radio"/> 1 <input type="radio"/> 2	<input type="radio"/> 3 <input type="radio"/> 4	<input type="radio"/> 5 <input type="radio"/> 6	<input type="radio"/> 7 <input type="radio"/> 8	<input type="radio"/> 9 <input type="radio"/> 10

Point of contact for contingency plan

Name :	
Contact Number :	
Fax:	
Email :	

\* Please include additional sheet for multiple point of contact.