



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY-SECOND MEETING OF THE  
ASIA/PACIFIC AIR NAVIGATION PLANNING AND  
IMPLEMENTATION REGIONAL GROUP (APANPIRG/22)**

Bangkok, Thailand, 5-9 September 2011

**Agenda Item 3: Performance Framework for Regional Air Navigation Planning  
and implementation issues**
**3.4 CNS/MET**
**SUB-REGIONAL INITIATIVES TO IMPROVE AIR TRAFFIC MANAGEMENT (ATM)  
AND IMPLEMENT INTERIM ARRANGEMENTS DURING VOLCANIC INCIDENTS**

(Presented by Indonesia, Malaysia, the Philippines,  
Singapore, Thailand and IATA)

**SUMMARY**

This working paper is to inform the meeting of the Special Coordination Meeting (SCM) held in Singapore from 31 January to 1 February 2011 and the table-top exercise via teleconference on 26 August 2011. The intent of the SCM is to support and supplement ICAO Asia Pacific Regional office on ATM initiatives in a smaller scale to reap benefits through nimble and simplified coordination processes among a few States. This could be adopted as a model for other sub-regions to implement initiatives in line with the regional targets, with the aim to harmonise procedures among all the sub-regions.

*Strategic Objectives:*

A: **Safety** – Enhance global civil aviation safety

**Global Plan Initiatives:**

- GPI-1 Flexible use of airspace
- GPI-6 Air traffic flow management
- GPI-7 Dynamic and flexible ATS route management
- GPI-9 Situational awareness

## 1 INTRODUCTION

1.1 The Fourteenth Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group (CNS/MET SG/14) to Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) adopted Decision 14/30 that called on the Meteorological Advisories and Warnings Implementation Task Force (METWARN/I TF) to develop a framework of regional contingency plan for weather phenomenon that includes volcanic ash, tropical cyclone, radioactive cloud and tsunami.

1.2 Similarly, at the Forty-seventh Conference of Directors General of Civil Aviation Asia and Pacific Region (DGCA/47), the conference recognised the need for ATM Contingency Plans to be developed and implemented on a regional basis in consonance with ICAO Annex 11. The Conference requested the Regional Office to consider the establishment of a task force for planning, coordination and implementation of a regional ATM Contingency Plan (Action Item 47/1).

1.3 While waiting for these ICAO initiatives to bear fruit, volcanic eruptions continued to disrupt air traffic in the region. An interim contingency arrangement has to be in place to facilitate air traffic while waiting for the formulation of the regional contingency plans. Therefore, together with IATA, a few States attended a Special Coordination Meeting held in Singapore, to discuss how we could support and supplement the ICAO Regional Office in their development of regional contingency plans and other ATM initiatives.

## 2. DISCUSSION

2.1 The First Special Coordination Meeting (SCM), held in Singapore from 31 January to 1 February 2011, was attended by Indonesia, the Philippines, Singapore, Thailand and IATA. The meeting focused on the following areas:

- Harmonisation of State Contingency plans (e.g. Contingency routes)
- Development of a Sub-Regional Volcanic Ash Contingency Plan
- Establishment of “green routes” (i.e. specified city pairs at specified times)

2.1.1 The States involved discussed on the way forward to develop their respective State ATM Contingency Plans to meet the ICAO Annex 11 requirements. From the SCM some best practices have been identified which will be useful for States to consider when developing their ATM contingency plans. These best practices will be further discussed in a separate working paper which has been tabled under Agenda Item 8: Development of State Contingency Plans.

2.2 The SCM discussed the need and way forward for an interim volcanic ash contingency plan. The idea of having an interim arrangement was first mooted at the Meteorology/Air Traffic Management (MET/ATM) seminar and MET/ATM Task Force (MET/ATM/TF) meeting in Fukuoka, Japan in January 2011. The proposed volcanic ash contingency plan requires each State to provide a Point of Contact (POC) so that sub-regional coordination arrangements can be set up among the States in the event of a volcanic eruption.

2.3 The proposed interim volcanic ash contingency plan consists of teleconferences between nominated POCs of participating States where real time information will be shared for collaborative decision making to be effected. The SCM agreed that this arrangement would be a good interim measure but the teleconferences should be conducted regularly to allow the various POCs to be familiar with the process. Table-top exercises could also take place as a form of training and preparation. The SCM also agreed to support the work of the METWARN/I Task Force, which is tasked to develop the regional contingency plan for weather phenomena.

2.4 A teleconference facilitated by IATA was held on 27 April 2011 and participated by Indonesia, Singapore and Thailand. The teleconference also served as a practice session for the POCs as agreed during the SCM. The discussed items during the teleconference included an Order of Business template that would be used in future teleconference in the event of significant volcanic eruptions. The template can be found in Annex A. Discussions during the teleconference also identified other issues which would help to improve and streamline the interim arrangement. These include trigger conditions, follow-up teleconference frequency and the need to include other expert State agencies in the teleconference to enhance the information sharing and decision making.

2.5 It was agreed that the affected State with any significant volcanic eruption will be the Incident Manager. There will also be a Coordination Manager which will be on a rotational basis among the POCs from the various States (e.g. 6 monthly) to assist the Incident Manager. During such events, the States agreed that the affected State should concentrate on handling the crisis and provide any pertinent information to the Coordination Manager for dissemination. The duties of the Coordination Manager can be summarised as follows:

- Collect any queries from POCs which would be consolidated and referred to the Incident Manager.
- Collect relevant information from the Incident Manager and disseminate to the other POCs.

2.6 A second teleconference, including a table top exercise, was held on 26 August 2011 and was participated by Indonesia, Malaysia, the Philippines, Singapore and Thailand. The table top exercise scenario was based on a simulated volcanic eruption incident (Mount Soputan) in Sulawesi Indonesia. The simulated volcanic ash plume from the simulated volcanic eruption would spread across a region to the east and south-east of Jakarta International Airport (Soekarno-Hatta). Flights between South East Asia and Australasia would be disrupted by the simulated volcanic ash plume.

2.7 As shown in the Table below based on the agreed template between the States, the Incident State, the primary Coordinating Manager and the alternate Coordinating Manager was appointed. As the simulated volcanic incident occurred in Sulawesi Indonesia, Indonesia was designated as the Incident Manager. Singapore was designated as the primary Coordinating Manager and Malaysia was designated as the alternate Coordinating Manager.

Incident State	Coordinating Manager	
	Primary	Alternate
Indonesia	Singapore	Malaysia
Malaysia	Thailand	Philippines
Philippines	Indonesia	Singapore
Singapore	Malaysia	Thailand
Thailand	Philippines	Indonesia

2.8 The broad objective of the table top exercise was to enable participating States to familiarize themselves with the collaborative decision making practices required for the exchange of information between aviation stakeholders involved in flights disrupted by the simulated volcanic eruption. Discussions during the teleconference also took on board the need for additional flexibility, standardization as well as coordination among the various aviation stakeholders. The teleconference allowed decisions about events to be taken by those best positioned to make them on the basis of most comprehensive, up-to-date and accurate information. This in turn will augment airspace users to make decisions with the latest information available, thereby enabling flights to be dynamically optimised and minimise disruptions due to the volcanic ash plume.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) Note the co-operation and arrangements between States to develop interim arrangements in the absence of a harmonized contingency plans to minimise flight disruptions in the event of volcanic eruption;

- b) Note the success of the table top exercise conducted on 26 August 2011; and
- c) Discuss whether the concept adopted by the States involved in the SCM, could be applicable to the regional contingency plan.

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## ANNEX A

INTERIM ARRANGEMENT FOR VOLCANIC ASH INCIDENTS TELE-  
CONFERRING**(DRAFT TEMPLATE)****Order Of Business**

- 1) Introduction of Participants (In alphabetical order of States)
- 2) Update of Volcanic Ash Advisories from VAAC and other information of volcanic activity by the affected State
- 3) Sharing of MET information (MET assessment from State MET services, pilot reports and any other sources of information) among participants.
- 4) Sharing of perceived impact/impact to operations, at airports and air routes among participants.
- 5) Discuss and agree on:
  - a) Area affected by the volcanic ash that should be avoided by flights
  - b) Routes affected
  - c) Alternate routes to circumnavigate the affected area and the impact to capacity on these routes.
  - d) Establishment of ad-hoc routes and horizontal separation minima for these routes if required
  - e) Interim coordination arrangements and follow-up reporting frequency
- 6) Any Other Business