

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**



**REPORT OF THE THIRD MEETING OF THE REGIONAL ATM CONTINGENCY  
PLAN TASK FORCE (RACP/TF/3)**

BANGKOK, THAILAND, 12 – 15 November 2013

The views expressed in this Report should be taken as those of the  
Meeting and not the Organization

Approved by the Meeting  
and published by the ICAO Asia and Pacific Office, Bangkok

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## INTRODUCTION

### Meeting

1.1 The Third Meeting of the Regional ATM Contingency Plan Task Force (RACP/TF/3) was held in Bangkok, Thailand from 12 to 15 November 2013 at the Kotaite Wing of the ICAO Asia and Pacific Regional Office.

### Attendance

2.1 The meeting was attended by 35 participants from Australia, Bangladesh, Cambodia, India, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Sri Lanka, Thailand, United States, Viet Nam and IATA. A list of participants is at **Appendix A** to this report.

### Officers & Secretariat

3.1 Mr. Rosly Saad, Chief Air Traffic Control Officer, Civil Aviation Authority of Singapore, chaired the meeting.

3.2 Mr. Shane Sumner, Regional Officer ATM, ICAO Asia and Pacific Office, was the Secretary for the meeting.

### Opening of the Meeting

4.1 Mr. Shane Sumner, on behalf of Mr. Mokhtar A. Awan, Regional Director of ICAO Asia and Pacific Office, welcomed all the participants to the meeting. In opening the meeting, Mr. Rosly Saad commented that in developing a Regional ATM Contingency Plan the Task Force would be seeing a lot of pieces that needed to be put together, and should ask what it needed to achieve, and what was achievable when an ATS service was not available.

### Documentation and Working Language

5.1 The working language of the meeting and all documentation was English. Eight working papers and one Information Papers (IP) were considered by the meeting. A list of papers is included at **Appendix B** to this report.

**Draft Conclusions, Draft Decisions and Decisions – Definition**

6.1 RACPTF recorded its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** deal with matters that, according to APANPIRG terms of reference, require the attention of States, or action by the ICAO in accordance with established procedures;
- b) **Draft Decisions** deal with the matters of concern only to APANPIRG and its contributory bodies; and
- c) **Decisions** of RACPTF that relate solely to matters dealing with the internal working arrangements of RACPTF.

**List of Decisions and Draft Conclusions/Decisions**

7.1 List of Decisions

**RACP/TF Decision 3/1: Task Force Working Arrangements**

That, tasks required for development of the Regional ATM Contingency Plan are conducted by:

- a) Small Working Groups (SWG) formed for in-meeting development of the Regional ATM Contingency Plan and between-meeting development and harmonization of contingency route structures and flight level allocation schemes; and
- b) the RACP/TF Contingency Plan Review Team, to assist and lead SWG in-meeting activities and conduct ongoing development of the Regional ATM Contingency Plan between meetings, supported by the ICAO Secretariat;

as detailed in **Appendix E** to this report.

7.2 List of Draft Decisions

**Draft Decision RACP/TF 3/2: Amend RACP/TF Terms of Reference.**

That, the amended RACP/TF Terms of Reference in **Appendix I** to this report be adopted.

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## REPORT ON AGENDA ITEMS

### Agenda Item 1: Adoption of Agenda (WP01)

1.1 The provisional agenda was adopted by the meeting.

### Agenda Item 2: Review Outcomes of Related Meetings

#### Contingency Planning Review (Flimsy 1)

2.1 Noting that there had been a significant change in the RACP/TF participants for this meeting, and the need therefore to refresh the meeting's understanding overall of the work done so far, a review paper was prepared ad hoc to brief the meeting on previous developments. Topics included Annex 11 Requirements for Contingency Plans, the history of the formation of RACP/TF, the hierarchy and categorization of contingency plans agreed by the task force and the concepts of capacity reduction when managing contingency events and of harmonized contingency route structures.

2.2 It was noted by the meeting that, unlike the cases of North America and Europe, the Asia/Pacific Region did not have the benefit of a network Air Traffic Flow Management (ATFM) capability that would help to manage contingency events and that while it may be easy to identify contingency routes they would not necessarily always work. It was considered that it would be more useful to try to harmonize contingency routes on a sub-Regional basis. One key to managing Level 2 (inter-State) contingency arrangements was flexibility.

#### Related Meeting Outcomes (WP/02)

2.3 The Combined 3<sup>rd</sup> Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOCG/3) and the 20<sup>th</sup> Meeting of the South East Asia ATS Coordination Group (SEACG/20), held in Bangkok, Thailand, from 18 – 22 February 2013 had noted that, with respect to Large Scale Weather Deviations (LSWD), the tripartite agreement between Hong Kong China, Singapore and Thailand should include appropriate ATFM measures distributed via Airport-Collaborative Decision Making (A-CDM) to ensure maximum utilization of airport and en-route capacity during LSWD contingency procedures on ATS routes L642 and M771, with the results reported to SEACG/21, which will be held in Bangkok, Thailand, from 17 to 20 February 2014.

2.4 It was suggested that, while weather deviation events may not normally be a matter for contingency planning as such, RACP/TF may consider whether there is value in including management of LSWD events in Level 2 (inter-State) contingency arrangements. The existing multi-State LSWD contingency arrangements in the South China Sea Area were discussed, and the meeting supported the addressing of LSWD considerations in the Regional ATM Contingency Plan. This would possibly include consideration of triggers for implementation of LSWD contingency measures, such as deviations by a minimum number of aircraft more than a prescribed distance from cleared route within a specified time period.

2.5 The 24<sup>th</sup> Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/24, Bangkok, Thailand, 24 to 26 June 2013) had, in its **Conclusion 24/54**, endorsed the Asia/Pacific Seamless ATM Plan, which was available on the ICAO Asia/Pacific Regional Office web-page: <http://www.icao.int/APAC/Pages/edocs.aspx> . The Seamless ATM Plan included a number of references to contingency responses, systems, operations, and plans. **Appendix C** to this report provides relevant excerpts.

2.6 It was suggested that the endorsement of the Seamless ATM Plan by APANPIRG/24, including its PASL (Preferred ATM Service Levels) Phase 1 expectations relating to ATM

contingency systems and operations, should be considered for incorporation in regional contingency planning. The Seamless ATM plan highlighted the need for ATC training in contingency procedures and for the development of Level 2 contingency arrangements.

2.7 In considering the outcomes of meetings related to its work, the 2<sup>nd</sup> meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/2, Hong Kong, China, 1 to 4 October 2013) had noted that ATFM/SG/1 (Tokyo, Japan, 8 – 10 December 2010) had broadly discussed the current Status of ATFM initiatives and considered that each of the Major Traffic Flows (MTF) should have ATFM planning regardless of traffic density, to cater for contingency operations in addition to traffic loading

2.8 The ATFM/SG consideration that ATFM planning should cater for contingency operations would possibly require the establishment of a linkage between the Regional ATM Contingency Plan and the Regional Framework for Collaborative ATFM. This would be further explored by the Secretariat.

### **Agenda Item 3: Review the status of Asia/Pacific ATM Contingency Plans**

#### Asia/Pacific Region Contingency Readiness (WP03)

3.1 RACP/TF/1 (Bangkok, Thailand, 17 – 19 April 2012) had formed a Contingency Plan Task Force Review Team to review relevant portions of Level 1 (internal State) and Level 2 (Inter-State) ATM Contingency Plans, to identify areas where ATM contingency planning required improvement and to support the development of a Level 3 (Regional) ATM Contingency plan, based on Basic Planning Elements agreed by the Task Force. Responses to the review questionnaire had been provided by only 15 Administrations.

3.2 The updated results of the State and Regional ATM contingency readiness analysis, including any information received since RACP/TF/2, are provided at **Appendix D**.

3.3 No mechanism had been established to further update the information or analysis post RACP/TF/2.

3.4 It was suggested that RACP/TF should consider further activities to improve the overall understanding of Regional ATM contingency readiness, including updating information from Administrations assessed as having either *marginal* or *incomplete* contingency planning in place, and to gather information from non-respondent States.

3.5 Unless changes were made to the Questionnaire there would be no need for Administrations assessed as having *robust* Level 1 and Level 2 Contingency Plans to report further. There was, however, an on-going need for monitoring and analysis of contingency readiness, any improvement among Administrations assessed as having *marginal* or *incomplete* Level 1 or Level 2 plans, and to obtain information from those that did not respond to the survey. The meeting agreed that it was necessary to pursue non-respondent States for information for analysis as this was likely to be required by APANPIRG.

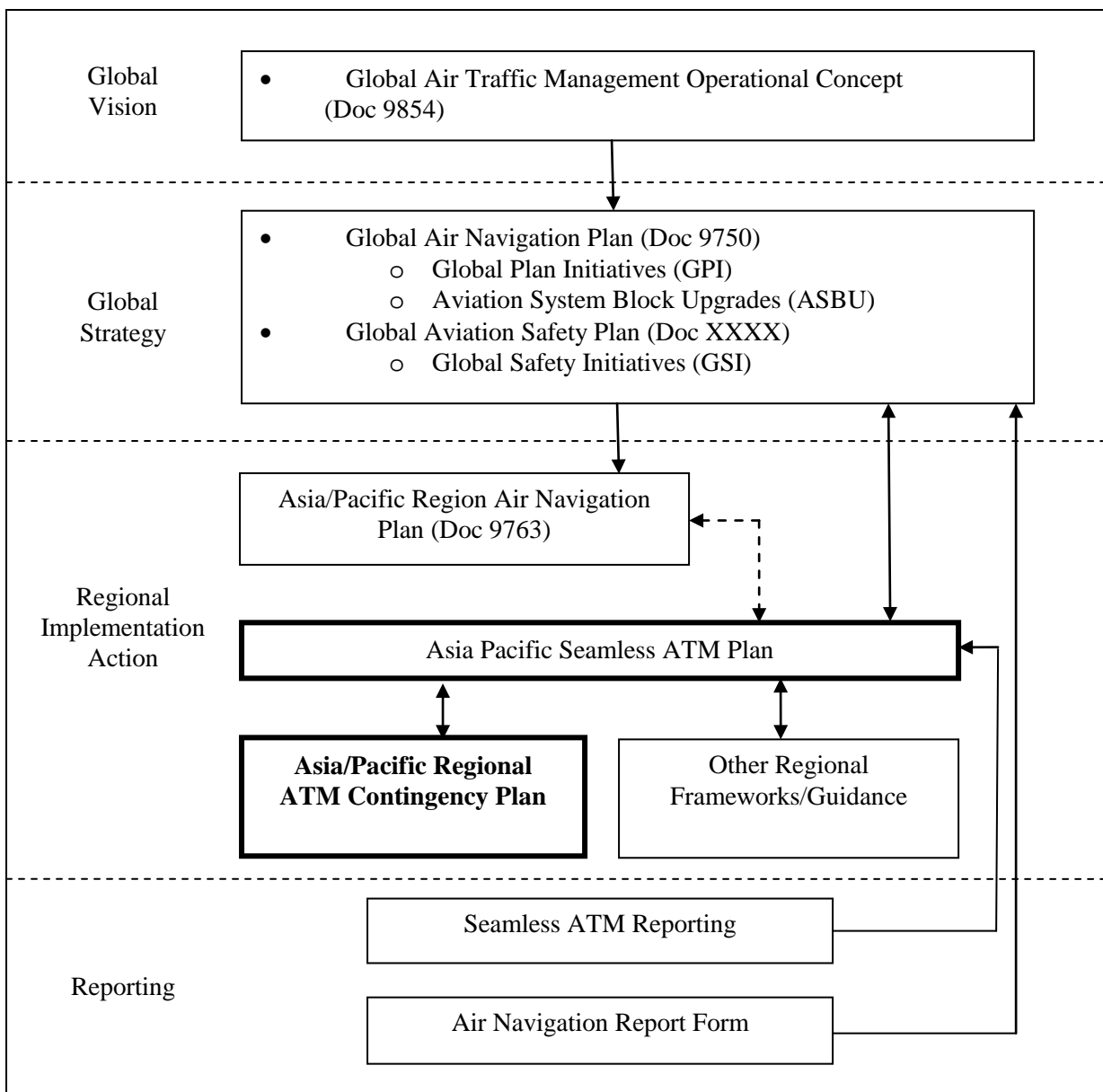
**Agenda Item 4: Asia/Pacific Regional ATM Contingency Plan**

RACP/TF Working Arrangements (WP/04)

4.1 To facilitate the development of the Regional ATM Contingency Plan the Secretariat proposed that RACP/TF should better define its working arrangements, timelines and targets, and that further tasks to be conducted both during and between Task Force meetings were defined and clearly assigned.

4.2 It was also important that the meeting had a clear perception of where the Regional ATM Contingency Plan would be positioned in the hierarchy of Air Navigation planning documents.

4.3 Figure 1 illustrates the linkages between Asia/Pacific Regional implementation planning Documents, and their relationship to global vision and strategy documents



**Figure 1: Regional Planning Documents and Linkages.**



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4.4 While the RACP/TF Terms of Reference (TOR) do not specify a timeframe for completion of the Regional ATM Contingency Plan, the meeting should set specific goals to drive progress.

4.5 The following schedule and work plan were agreed by the meeting:

**RACP/TF/3 – 12 – 15 November 2013**

*Conceptualizing*

- Agree to the draft framework for the Regional ATM Contingency Plan;
- Form appropriate teams of RACP/TF participants and, where necessary, other ATM experts to conduct in-meeting activities and between-meeting drafting of the Plan;
- Construct the initial framework of the document; including early drafts of:
  - Table of Contents;
  - Scope;
  - Executive Summary;
  - Abbreviations and Acronyms;
  - ATM Contingency Principles and Practices;
  - Current Situation;
  - Performance Improvement Plan;
  - Research and Future Development;
  - Milestones, Timelines, Priorities and Actions; and
  - Appendices
- Agree to a process for improving the collection, analysis and reporting of Regional ATM Contingency Readiness;

**RACP/TF/4 – 29 April – 2 May 2014 (this meeting has been scheduled);**

*Plan Draft and Development*

- Analyse, amend where necessary and agree to the first draft of the Plan; and
- Assess and incorporate outcomes from other Regional and Global groups.

**RACP/TF/5** – September/October 2014 (dependent on scheduling of APANPIRG/25)

*Final Draft*

- Target meeting for agreeing to the final draft of the Plan for consideration by ATM/SG/3

**RACP/TF/6**

– Reserve meeting

- Opportunity for a further meeting if required to finalize any elements of the plan that required further work after RACP/TF/5.

4.6 This proposed schedule would permit the final adoption of the Plan by APANPIRG/26 in September 2015, in alignment with the expected finalization of the Asia/Pacific Regional Framework for Collaborative ATFM and the implementation date of the Seamless ATM Plan's Phase 1 Preferred ATM Service Levels. It was expected that RACP/TF would subsequently be dissolved, with on-going contingency planning matters managed by the ATM Sub-Group.

4.7 RACP/TF/1 had formed a Contingency Plan Review Team, initially being a small group of ATM specialists from India, Indonesia, Singapore and Thailand formed under the following RACP/TF Decision.

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

*That, an ATM Contingency Plan 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.*

4.8 The initial task of the Team was completed, but no task was assigned for the on-going assessment of Regional contingency readiness. The Basic Plan Elements were in draft form, and may have required amendment as the Regional ATM Contingency Plan was further developed.

4.9 The development of the Regional ATM Contingency Plan would require that work is conducted between meetings to continue drafting the plan for consideration and further work at Task Force meetings. It was proposed that the Review Team is tasked with this work, and its membership confirmed and expanded to include any additional expertise that may be available.

4.10 RACP/TF/2 had made the following Decision relating to the formation of SWG:

***RACP/TF Decision 2/1: Small Working Groups***

*That, RACP/TF forms Small Working Groups to formulate contingency route structures and Flight Level Allocation Schemes (FLAS) for Level 2 Contingency Plans.*

4.11 RACP/TF/3 and later meetings would need to do other work on development of the Regional ATM Contingency Plan during the course of the meeting. It is proposed that where required the meeting would break into the SWG to conduct this in-meeting work, in addition to the contingency route structure and FLAS tasks currently assigned to them. It would therefore be appropriate that the

SWG continue on a geographical/sub-Regional basis, with each ideally including either a member of the Review Team, or the meeting Chair or ICAO Secretariat. During the in-meeting work the composition of the SWG would be changed according availability of attendees from particular States. Some States would require representation on more than one SWG.

4.12 RACP/TF agreed to the following Decision:

**RACP/TF Decision 3/1: Task Force Working Arrangements**

That, tasks required for development of the Regional ATM Contingency Plan are conducted by:

- c) Small Working Groups (SWG) formed for in-meeting development of the Regional ATM Contingency Plan and between-meeting development and harmonization of contingency route structures and flight level allocation schemes; and
- d) the RACP/TF Contingency Plan Review Team, to assist and lead SWG in-meeting activities and conduct ongoing development of the Regional ATM Contingency Plan between meetings, supported by the ICAO Secretariat;

as detailed in **Appendix E** to this report.

Draft Regional ATM Contingency Plan (WP05)

4.13 A draft framework for the Regional ATM Contingency Plan was presented to the meeting for review and further development. the framework was intended to provide for development of a Plan that included:

- Scope and objectives of the plan;
- Executive Summary;
- Abbreviations and Acronyms;
- Principles and Practices;
- Current Situation;
- Performance Improvement Plan;
- Research and Further Development;
- Milestones, Timelines, Priorities and Actions; and
- Appendices detailing;
  - Basic Plan Elements;
  - Contingency Contacts;
  - Templates for Level 1 (internal State) Contingency Plans and Level 2 (inter-State) Contingency Arrangements
  - Contingency Routes and Flight Level Allocation Schemes;
  - Pilot and ATC Procedures; and
  - Volcanic Ash Cloud and Radioactive Cloud Contingency Plans.

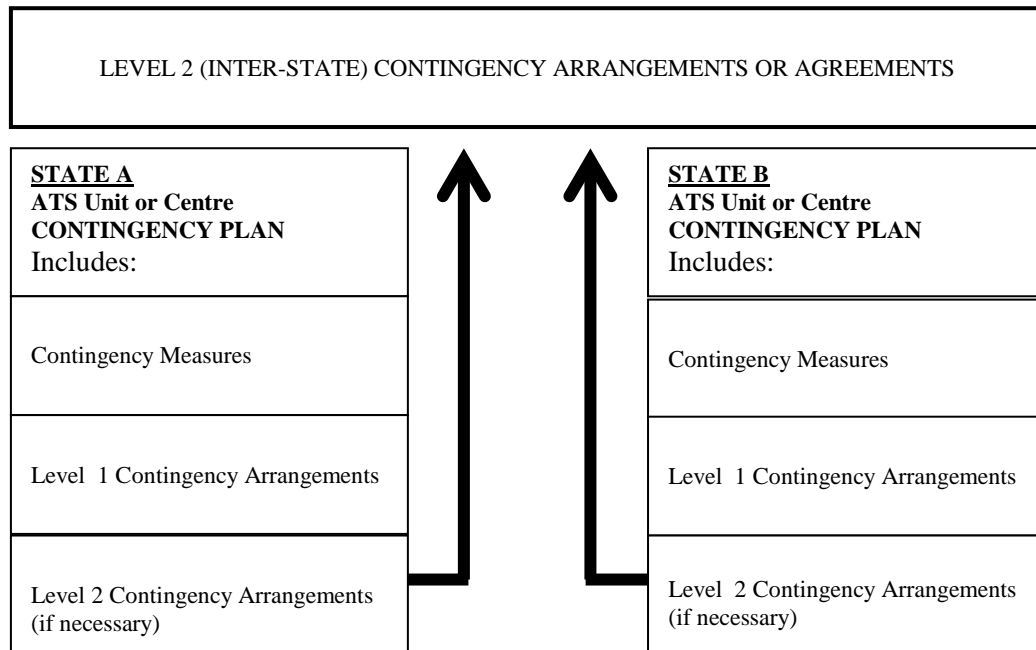
4.14 The RACP/TF SWG considered 4 key aspects of the draft Plan; Objectives, Contingency Planning Principles, Basic Plan Elements, and Milestones, Timelines, Priorities and Actions. The revised sections of the draft document, which will be further developed between meetings by the Contingency Plan Review Team, are provided at **Appendix F** to this report, with changes and discussion points highlighted. Notable changes and discussion points included:

- Objectives:
  - the Plan should state the objective of the continuation of aircraft operations between unaffected FIRs, through affected FIRs;
  - The requirements included in the plan to in order meet its objectives must cover all events resulting in disruption to normal ATS and normal aircraft movement.
- Contingency Planning Principles:
  - the overriding contingency planning principle of safety over efficiency having primacy over optimal levels and routes;
  - there was a need to clearly establish (and justify) a benchmark for lateral separation of contingency routes that are not vertically separated in the FLAS.
  - there was a need to define airspace classification requirements during contingency events;
  - Further explanation of what events may constitute Level 1 or Level 2 contingency arrangements was required;
  - The plan should define any exclusion from contingency airspace, e.g. VFR or non-scheduled aircraft. Communications, Navigation and Surveillance capabilities required for access to contingency airspace should be defined in the plan, and the exclusion of non-conforming aircraft clearly stated;
  - The plan should include consideration of ground-based navigation aid requirements;
  - Alternate aerodromes should be included in contingency plans
  - The plan should include priorities for access to contingency airspace, and provisions for the tactical definition and coordination of additional routes/FLAS to accommodate high priority non-scheduled flights such as those engaged in humanitarian aid, medical evacuation, flood and fire relief and SAR.
  - Contingency FLAS should, wherever practicable, include consideration of allocating the optimum flight levels to routes used by long-haul aircraft, depending on the traffic density on the route.

- Basic Plan Elements:
  - Preparation time for an adjacent FIR to activate contingency procedures should be considered. Priority 1 should be the immediate handling of the situation, with priority 2 being the activation of the contingency plan;
  - the draft pilot/operator procedure to climb or descend well to the right of route may require further consideration, particularly input from IATA;
  - ATM procedures should specify where there was a reduced level of service;
  - there was uncertainty about the practicality of using ADS-C and CPDLC for communications in contingency airspace;
  - there was uncertainty about the assigning of meteorological services to an adjacent State;
  - the Plan should define *SAR Alerting* as a contingency plan element, rather than *SAR*;
  - Contingency Plans should be made readily and easily available via electronic means to ensure rapid response to events;
  - Provisions for testing and review of plans, and any post activation review should be included. The need for reporting to Regional Office was discussed, and would be further explored;
  - Contingency plans and associated procedures must be included in ATS refresher training programs;
  - Airspace classification, separation and CNS requirements should be included among BPE, in addition to any other relevant sections of the Plan; and
  - Procedures for joining or departing a contingency route should be included in plans.
  
- Milestones, Timelines, Priorities and Actions.
  - It was neither necessary nor desirable to prioritize contingency events for plan development.
  - Milestones and timelines for the plan would be proposed by the Contingency Review Team for consideration by the next meeting. Milestones could include, for example:
    - by XX date all airspace sectors above F245 should have a contingency plan for Category A events; and
    - by XX date all States will have a contingency plan for category B events.

4.15 There was a need for periodic updates of State contingency plan status. A concerted effort was required to gather contingency readiness information from non-respondent States, to both gauge Regional contingency readiness and better determine regional priorities.

4.16 It was apparent that there was some uncertainty among meeting participants regarding the differences between Level 1 and Level 2 plans. While formal multi-State Level 2 plans were a consideration, it was more practicable to consider each contingency plan individually to ascertain if any neighbouring State would be either affected or involved, thus requiring an inter-State contingency plan arrangement or agreement. **Figure 2** illustrated the concept.



**Figure 2:** Contingency Plan and Level 2 Contingency Arrangements.

4.17 A draft template for Level 2 (inter-State) contingency arrangements also presented to the meeting. It was decided that the focus should be on the development of the Regional Plan and the Contingency Plan Template, with the contingency arrangement template being better formed when these two documents had matured.

Level 1 Contingency Plan Template (WP/06)

4.18 The meeting was reminded that its TOR required that the Task Force developed a Regional ATM Contingency Plan that, where practical, provides contingency planning templates for States. A draft Level 1 contingency plan template was provided for discussion and review by the meeting. When finalized the template would form an appendix to the Regional ATM Contingency Plan.

4.19 There was considerable discussion of the difficulty involved in determining whether a contingency plan was either Level 1 or Level 2, noting that the any Level 1 contingency measures having an effect on a neighbouring State would require a Level 2 arrangement to be in place. The meeting agreed that, rather than developing separate templates for Level 1 or Level 2 plans, a single template should be developed that included Level 1 contingency *measures* and, where necessary, any Level 2 *arrangements*.

4.20 The meeting considered items for inclusion in a contingency plan template including *inter alia*:

- The requirement for convening a contingency plan Central Coordination Committee (CCC) would be dependent on the scale of the contingency response. Contingency plan activation in the airspace of a regional domestic control tower would not necessarily require the participation of the CCC, but may require post-activation reporting to it.
- Plan testing and review, post activation notification requirements, and appendices providing activity logs and reporting forms should be included in the template.
- The template should include provision for sub-plans.
- Any need for guidance in the use of the template would be further considered by the Review Team.

4.21 The current draft of the template which will form the basis of further work by the Contingency Plan Review Team is provided at **Appendix G**, including changes made and discussion notes added during the meeting.

4.22 The meeting was reminded that Annex 11 required that States have contingency plans in place, and that States without contingency plans complying with these requirements should continue to develop their contingency plans with a view to later modification to conform with the Regional Plan, rather than waiting for the Plan and its templates to be produced.

#### Contingency Routes and Flight Level Allocation Schemes (WP/07)

4.23 The matter of harmonized contingency route structures had been raised at RACP/TF/1 and RACP/TF/2, and a number of single or multi-State contingency route plans had been produced.

4.24 While there was a clear need for each State's ATS contingency routes to be understood and agreed by neighbouring States, the benefits and need for fully *harmonized* contingency routes needed to be clearly defined. The circumstances and likelihood of contiguous FIRs of neighbouring States simultaneously experiencing disrupted or withdrawn ATS needed to be discussed and understood.

4.25 The meeting noted that the development of contingency route structures did not constrain states from making changes as required to ATS routes or airspace, with subsequent amendment to contingency routes.

4.26 The meeting discussed whether it was either practicable or desirable to develop a fully harmonized Regional network of contingency routes, recognizing it was unlikely that there would be a circumstance of neighbouring States simultaneously experiencing an ATM contingency event. A fully harmonized network of contingency routes/FLAS may could also reduce the flexibility that would be essential in tactical management of contingency situations. It was further recognized that managing the routing of aircraft that must first join a contingency route from the normal ATS route network and then re-join that network after exiting the affected airspace could be flexibly achieved through robust and up-to-date contingency coordination processes and contact details.

4.27 The meeting considered the work being undertaken by the ATFM/SG which would lead to a networked ATFM solution for the Region, providing far more practicable, efficient, flexible and dynamic contingency routing solutions.

4.28 There remained a need in cases of small clusters of States to harmonize to the extent practicable their contingency route and FLAS schemes. The SWG examined the contingency routes provided to date, and made a number of modifications. The State and sub-Regional contingency route plans as discussed, agreed or modified at the meeting are provided at **Appendices H-1 to H-10**. Finalized contingency routes and FLAS would be further considered for inclusion in the Regional ATM Contingency Plan.

4.29 During the work of SWG South East Asia 3 Viet Nam, Philippines and Singapore exchanged views on the relevant contingency plan contents and their intention for initial contingency coordination. The 3 States would further discuss details for considering the signing of an ATS Contingency Agreement by end 2014

#### **Agenda Item 5: RACP/TF Task List**

##### RACP/TF Task List (WP/08)

5.1 The meeting also reviewed the RACP/TF Terms of Reference and agreed to minor amendments to reflect the recently renamed ATM Sub-Group (ATM/SG), to which the Task Force reports, and Meteorological Hazards Task Force (MET/H TF), to which RACP/TF has a link. The meeting agreed to the following draft Decision:

**Draft Decision RACP/TF 3/2:** Amend RACP/TF Terms of Reference.

That, the amended RACP/TF Terms of Reference in **Appendix I** to this report be adopted.

5.2 The meeting updated the task list which is included as **Appendix J** to this report.

#### **Agenda Item 6: Any Other Business**

6.1 There was no other business conducted at the meeting.

#### **Agenda Item 7: Date and Venue of the Next Meeting**

7.1 RACP/TF/4, 29 April 2014 to 2 May 2014, venue TBA.

#### **Closing of the Meeting**

8.1. In closing the meeting, the Chairman summarised the positive progress that had been achieved by the meeting and thanked the meeting participants for their contributions.

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**List of Participants**

	<b>Name</b>	<b>Title/Organization</b>	<b>TEL/FAX/E-MAIL</b>
1.	<b>AUSTRALIA (1)</b>		
	1. Mr. Paul Reidy-Crofts	Senior Advisor ATM Planning Airservices Australia PO Box 1093 Tullamarine, Victoria 3043 Australia	Tel: +61-3 9235 7424 Fax: +61-3-9235 7595 E-mail: paul.reidy-crofts@airservicesaustralia.com
2.	<b>BANGLADESH (3)</b>		
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	3. IMD. Majibur Rahman Miaji	Aerodrome Officer Civil Aviation Authority of Bangladesh D-4/8, CAAB R/A, Kawlar Kurmitola, Dhaka – 1229 Bangladesh	Tel: +880-1913 575762 E-mail: miajimdmajiburrahman@yahoo.com
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	<b>Name</b>	<b>Title/Organization</b>	<b>TEL/FAX/E-MAIL</b>
3.	<b>CAMBODIA (1)</b>		
	5. Mr. Lorn Thyrieth	Deputy Director, Air Navigation Standard and Safety Department State Secretariat of Civil Aviation Cambodia 62 Norodom Blvd, Phnom Penh Cambodia	Tel: +855 11 333361 Fax: +855 23 224259 Email: thyriethlorn@gmail.com
4.	<b>INDIA (1)</b>		
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	<b>Name</b>	<b>Title/Organization</b>	<b>TEL/FAX/E-MAIL</b>
5.	<b>INDONESIA (3)</b>		
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	8. Mrs. Theresia Damayanti	Air Navigation Inspector Directorate General of Civil Aviation Gedung Karya Building 23 <sup>rd</sup> Fl. Jl. Medan Merdeka Barat No. 8, Jakarta 10110 Indonesia	Tel: +62 813 8171 5594 Fax: +62 21 350 7569 E-mail: dama_th07@yahoo.com
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6.	<b>LAO PDR (2)</b>			
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*International Civil Aviation Organization*

**The Third Meeting of the Regional ATM Contingency Plan Task Force  
(RACP/TF/3)**

Bangkok, Thailand, 12 – 15 November 2013

**LIST OF WORKING PAPERS (WPs) AND INFORMATION PAPERS (IPs)**

(Presented by the Secretariat)

**WORKING PAPERS**

<b>NUMBER</b>	<b>AGENDA</b>	<b>WORKING PAPERS</b>	<b>PRESENTED BY</b>
WP/1	1	Provisional Agenda	Secretariat
WP/2	2	Related Meeting Outcomes	Secretariat
WP/3	3	Review the Status of Asia/Pacific ATM Contingency Plans	Secretariat
WP/4	4	RACP/TF Working Arrangements	Secretariat
WP/5	4	Draft Regional ATM Contingency Plan	Secretariat
WP/6	4	Template for Level 1 Contingency Plans	Secretariat
WP/7	4	Sub Regional Contingency Routes and Flight Level Allocation Schemes	Secretariat
WP/8	5	Task List	Secretariat

**INFORMATION PAPERS**

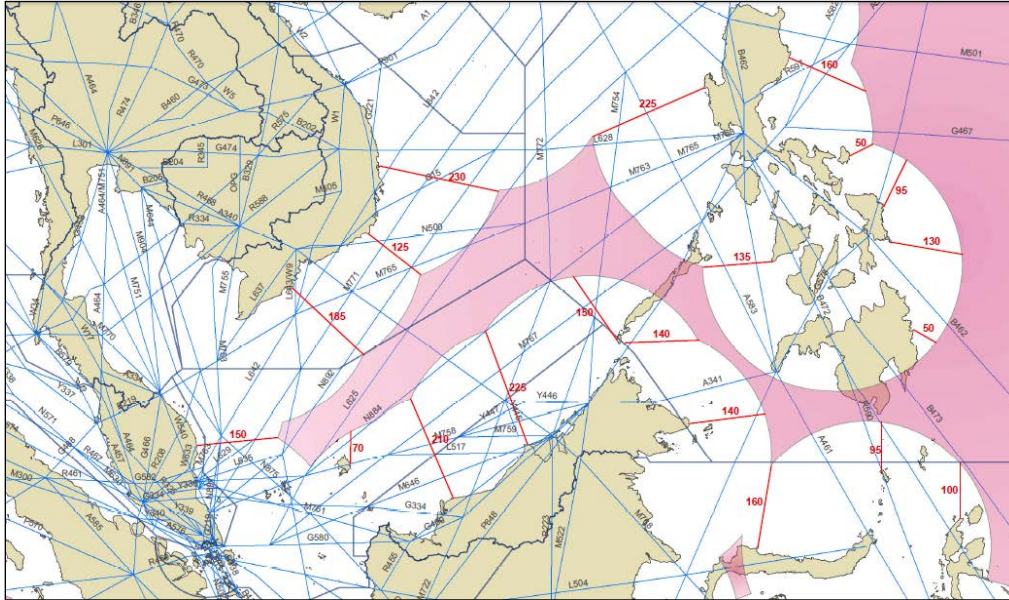
<b>NUMBER</b>	<b>AGENDA</b>	<b>INFORMATION PAPERS</b>	<b>PRESENTED BY</b>
IP/1	-	List of Working Papers (WPs) and Information Papers (IPs)	Secretariat

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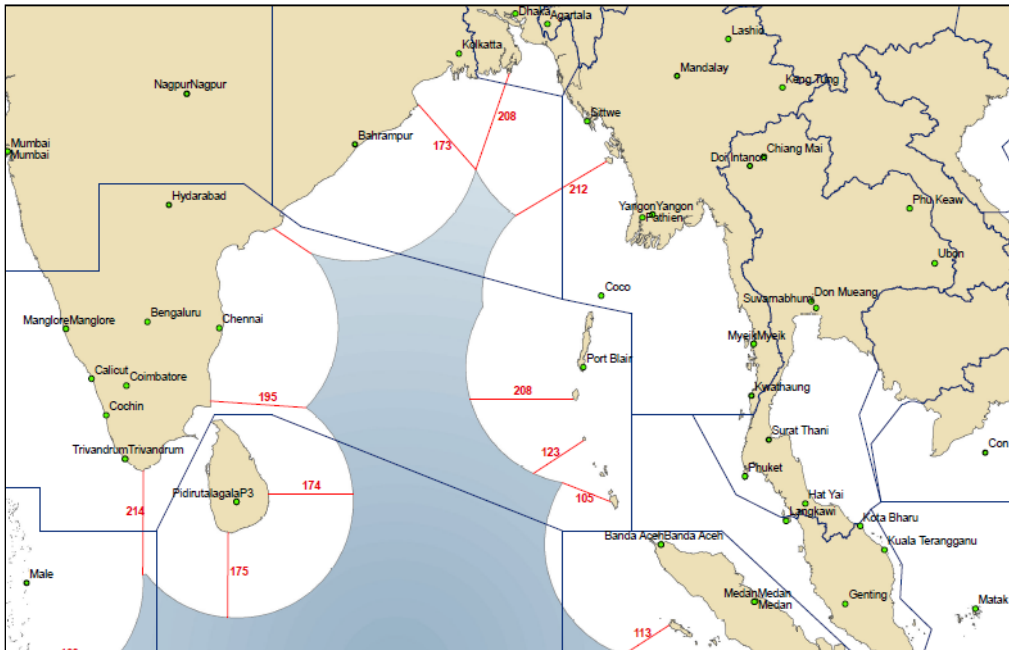
**ATM Contingency References – Seamless ATM Plan**

**CURRENT SITUATION**

Airspace and FIR Analysis



**Figure 3: South China Sea ATS surveillance gaps (as at June 2013)**



**Figure 4: Bay of Bengal ATS surveillance gaps**

6.8 The main areas of the Asia/Pacific region lacking ATS surveillance and communication coverage which need to be rectified due to traffic density, weather deviations and contingency responses are as follows:

- a) highest priority: South China Sea airspace between Viet Nam, Brunei Darussalam and the Philippines (**Figure 3**);
- b) high priority: Bay of Bengal airspace between the Indian subcontinent and the Andaman Islands (**Figure 4**);
- c) medium priority:
- d) lower priority: Coral Sea between Papua New Guinea and Australia

## **PERFORMANCE IMPROVEMENT PLAN**

### **Preferred ATM Service Levels (PASL)**

*Note: prior to the implementation, the applicability of PASL should be verified by analysis of safety, current and forecast traffic demand, efficiency, predictability, cost effectiveness and environment to meet expectations of stakeholders.*

### **PASL Phase I (expected implementation by 12 November 2015)**

#### ATM Systems

7.31 The efficacy, continuity and availability of ATM services should be supported by adherence with regional planning and guidance material regarding ATM automation and ATM contingency systems.

#### Human Performance

The following should be established to support human performance in the delivery of a Seamless ATM service. The systems should consider all the elements of the SHEL Model (Software, Hardware, Environment and Liveware – humans), in accordance with the ICAO Human Factors Digest No. 1 and related reference material:

- d) human performance-based training and procedures for staff providing ATS, including:
  - the application of tactical, surveillance-based ATC separation;
  - control techniques near minimum ATC separation;
  - responses to ATM contingency operations and safety net alerts; and
  - the importance of an effective safety reporting culture.

## **RESEARCH AND FUTURE DEVELOPMENT POSSIBILITIES**

### Research and Development

8.2 The need for concepts beyond current technology and systems had been reinforced at APANPIRG/23. With the end goal of a globally interoperable ATM system in mind, the region will have to consider planning for a long term supporting concept and infrastructure. States should not overlook the need to include the development of future ATM concepts that will ensure the safety and fluidity of air transportation over the next few decades. The following are possible areas that should be considered for

future development, in order to continue pursuance of seamless ATM beyond ASBU Block 0 implementations and global interoperability:

- c. Collaborative Air Navigation Services - This concept is consistent with the following Seamless ATM Principles: 9 (*Cross-border/FIR cooperation for use of aeronautical facilities and airspace, collaborative data sharing, airspace safety assessment and ATM Contingency planning*) and 15 (*Collaboration by ANSPs for evaluation and planning of ATM facilities*). The AN-Conf/12 endorsed Recommendation 5/1, regarding collaboration in airspace organization and routing, which emphasised, *inter alia*, the need to take advantage of improved models for inter-regional coordination and collaboration to achieve seamless air traffic management and more optimum routes through airspace (**Appendix 2**);

## **Appendix C: Seamless ATM Principles**

### Aviation Regulations, Standards and Procedures

7. The use of high-fidelity simulators to train controllers on the optimal application of ATC separations and procedures that support Seamless ATM applications, emergency and contingency responses, testing of software releases, and may serve as a backup ATM platform.

### ATM Coordination

9. Cross-border/FIR cooperation for use of aeronautical facilities and airspace, collaborative data sharing, airspace safety assessment and ATM Contingency planning.

		Examples		Regional Preparedness (percentage)																												Reported Contingency Plan Status															
Reported Contingency Plan Status		1	1	0	Alghanistan	Australia	Bangladesh	Bhutan	Brunei Darussalam	Cambodia	China	Hong Kong, China	Macao, China	Cook Islands	DPR Korea	Fiji	French Polynesia	India	Indonesia	Japan	Kiribati	Korea, Republic of	Laos PDR	Malaysia	Nauru	Nepal	New Zealand	Pakistan	Palau	Papua New Guinea	Philippines (excluding east)	Sambo	Singapore	Solomon Islands	Sri Lanka	Thailand	Timor - Leste	Tonga	U.S.A	Viet Nam	Yemen	Regional Preparedness (percentage)	Reported Contingency Plan Status				
Level 1 Plans		Level 1 Plans																												Level 1 Plans																	
Level 1 Plans	Percentage of ATSU with Level 1 Plan	2	1	1	2						2	2			2	0	1	0						2	2	2		0	2	0	0	2	2	63	25												
	Coordination, Testing and Review	Internal Coordination	1	1	0	1					0	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	73	26	Internal Coordination									
		Regular Testing	1	0	0	1					1	0	1	1	0	1	1	1	1	1	0	1	1	0	1	1	1	0	1	0	0	1	1	73	26	Regular Testing											
		Routine and event driven review	1	0	0	1					1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	93	33	Routine and event driven review											
Category 1 and 2 Events	ATM/CNS System Failure or Degradation	1	1	1	1					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	66	36	ATM/CNS System Failure or Degradation											
	Staff Availability	1	1	1	1					1	0	1	1	0	1	1	1	1	0	0	1	1	0	1	0	0	1	1	1	1	1	1	1	60	21	Staff Availability											
	Volcanic Ash Cloud	1	0	0	1					0	0	1	0	1	0	1	1	0	1	0	1	1	1	1	0	1	1	0	0	0	1	1	60	21	Volcanic Ash Cloud												
	Earthquake	1	0	0	1					0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	73	26	Earthquake											
	Inundation	1	1	0	1					0	0	1	1	0	1	1	1	1	0	0	1	1	0	1	0	1	0	1	1	1	1	1	1	60	21	Inundation											
	Nuclear Emergency	1	1	0	1					0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	1	20	7	Nuclear Emergency											
	Pandemic	1	1	0	1					1	0	1	0	0	1	0	1	0	1	0	1	0	1	1	0	1	0	1	0	1	0	1	1	53	19	Pandemic											
National Security	1	1	0	1					0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	60	21	National Security												
DRAFT Basic Plan Elements (No. of sub-elements)	Administration (2)	2	1	0	2					0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	97	35	Administration (2)											
	Plan Management (2)	2	1	0	2					2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	93	33	Plan Management (2)											
	Airspace (1)	1	1	0	1					0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	0	0	53	19	Airspace (1)											
	ATM Procedures (7)	7	2	1	4					3	0	5	7	7	7	7	7	6	5	7	6	7	6	5	7	6	7	6	6	4	0	0	0	82	29	ATM Procedures (7)											
	Pilot/Aircraft Operator Procedures (5)	5	2	1	3					5	0	3	5	4	3	5	4	5	4	5	3	5	5	4	5	3	5	5	1	2	2	2	2	76	27	Pilot/Aircraft Operator Procedures (5)											
Communications Facilities and Procedures (4)	4	2	1	2					2	0	4	4	4	4	4	4	4	4	4	2	4	1	2	4	1	2	2	2	0	0	0	0	68	24	Communications Facilities and Procedures (4)												
Aeronautical Support Services (2)	2	2	0	1					0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1	1	1	80	29	Aeronautical Support Services (2)												
Contact Details (2)	2	2	0	0					0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1	1	1	80	29	Contact Details (2)												
LEVEL 1 PLANS SCORES		39	21	6	27					20	5	31	36	32	29	37	35	26	22	35	22	32	26	26	75	27	LEVEL 1 PLANS SCORES																				
Level 1 Readiness (Incomplete, Marginal or Robust)		R	M	I	M					M				R	R	R							M				R		R	M																Level 1 Readiness (Incomplete, Marginal or Robust)	
Level 2 Plans		Level 2 Plans																												Level 2 Plans																	
Level 2 Inclusions	Formal Inter-State Agreements (LoA or MoU)	1	1	0	1					0	0	1	1	0	1	1	0	1	1	0	1	1	1	1	0	1	0	0	0	1	1	1	53	19	Formal Inter-State Agreements (LoA or MoU)												
	Contingency Route Structure	1	0	0	1					0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	53	19	Contingency Route Structure											
	Flight Level Allocation Scheme	1	0	0	1					0	0	1	0	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	53	19	Flight Level Allocation Scheme											
	Minimum Longitudinal Spacing	1	0	0	1					0	0	1	0	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	53	19	Minimum Longitudinal Spacing											
	Frequency Transfer Arrangements	1	1	1	1					0	0	1	0	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	67	24	Frequency Transfer Arrangements											
	Delegation of ATC Separation	1	1	0	0					0	0	1	0	0	1	0	0	1	0	0	1	1	0	1	0	1	0	1	0	1	0	0	0	38	12	Delegation of ATC Separation											
	Delegation of FIS and SAR Alerting Services	1	1	1	1					0	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	67	24	Delegation of FIS and SAR Alerting Services											
Level 2 Plan Scores		7	4	2	6					0	0	7	5	0	7	3	0	6	6	6	5	4	1	54	19	Level 2 Plan Scores																					
Level 2 Plan Readiness		R	M	I	R					I	I			R	I	M							I			R		M	I																	Overall State Readiness	
<p><b>Level 1 Plans</b>                  0 - 15 = Incomplete                  16 - 29 = Marginal                  30 - 39 = Robust</p> <p><b>Level 2 Plans</b>                  Incomplete: 0 - 2                  Marginal: 3 - 5                  Robust: 6 - 7</p> <p><b>Decision 1/1 - ATM Contingency Plan Review Team Formation</b></p> <p>That, an ATM Contingency Plan Task Force Review Team be established from the Task Force, 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.</p>																																															

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**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**DRAFT**



**ASIA/PACIFIC ATM CONTINGENCY PLAN**

**DRAFT** Version 0.1, MONTH YEAR

This Plan was developed by the Asia/Pacific Regional ATM Contingency  
Plan Taskforce

Approved by APANPIRG/XX and published by the  
ICAO Asia and Pacific Office, Bangkok

## OBJECTIVES

**Discussion Note:** *These objectives are paraphrased from the TF TOR. Do we need to amend or add more?*

### Plan Objectives

2.1 The objectives of the Plan are to

- i. provide a contingency response framework for Asia/Pacific States;
- ii. ensure timely, harmonized and appropriate responses to events that affect the provision of Air Traffic Services (ATS), or in which ATS is involved; and
- iii. provide a greater degree of certainty for airspace and aerodrome users during contingency operations.

2.2 In order to meet these objectives the Plan:

- i. Reviews the status of ATM Contingency Plans and contingency preparedness of Asia/Pacific Region States;
- ii. Identifies and recommends areas where ATM contingency planning requires improvement to comply with ICAO Standards and Recommended Procedures defined in Annex 11 *Air Traffic Services* and accepted best practices;
- iii. ~~makes recommendations for improvement;~~
- iv. analyses contingency procedures in use in other ICAO Regions and harmonizes with similar work in adjacent airspaces;
- v. takes into account the varying levels of contingency response necessary for a range of precipitating events;
- vi. provides principles for ATM contingency planning;
- vii. details recommended contingency responses to events such as ~~but not limited to~~ severe meteorological and geological phenomena, pandemics, ~~military conflicts~~ national security and industrial relations issues; and

**Discussion Note:** *The wording above should ensure that it covers all events resulting in disruption to normal ATS and normal aircraft movement.*

- viii. provides contingency planning templates for States.

2.3 Uniform policy and guidance for responding to reasonably foreseeable operational restrictions.

2.3.1 Guidance to ensure that actions taken are commensurate with the nature and duration of the operational restriction.

2.3.1.1 Short, medium, long term actions.

2.3.1.2 Prevent overload of the contingency system.

2.3.1.3 Guidance for implementation and resumption.

2.4 The Plan should state the objective of the continuation of aircraft operations between unaffected FIRs, through affected FIRs;

*Discussion Note: consider moving 2.4 higher in the list of objectives*

2.5 The plan should state the testing process and practices

2.6 x

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## **MILESTONES, TIMELINES, PRIORITIES AND ACTIONS**

### ***Discussion Note;***

*The development and implementation of the plan requires that we have milestones, timelines and priorities. Actions perhaps should be kept under consideration.*

*As a first task, we should determine our priorities: what are the current problems in contingency readiness in the region, and which should have the highest priority for improvement? This should be reflected in the Plan. We may even consider an appendix that lists each state (the analysis), and provides priorities for their implementation of contingency plans*

*For example:*

*By XXX Date all ~~upper~~ airspace sectors above F245 should have a contingency plan for category A events.*

*By XXX date all States will have a contingency plan for category B events.*

*Etc.*

9.1 Category A and B events should be considered for prioritization in the following descending order of priority order, unless otherwise ;

- ATM System Failure;
- National Security, Industrial action and Staff Availability;
- Natural disasters like Inundation, Flood, Cyclone, Tsunami, Earthquake, Pandemic etc;

*What's the difference between inundation and flood?*

- Volcanic Ash Cloud (noting that the SWG members' States did not have active volcanoes);
- Nuclear emergency

### ***Discussion Notes:***

*Ensure the above are included elsewhere. It is not necessary to prioritise.*

*What's the difference between inundation and flood?*

9.2 ~~Concerted effort was required to gather contingency readiness information from non-respondent States, to then better determine regional priorities.~~

*Discussion Note: The above is a task for the TF (now included in TF Task List)*

9.3 Periodic updates of contingency plan status

## APPENDIX X: ATM Contingency Planning Principles

### Level 1 (Internal State) Contingency Plans –

*Discussion Note: Further explanation required – what events may constitute level 1 and not level 2?*

1. All ATS units, including ATC Sectors, Units, Centres and supporting Flight Information and Briefing Offices should have a Contingency Plan.
2. Contingency Plans should define the following where applicable:

- A Contingency Route Structure supported by a Flight Level Allocation Scheme;

***Discussion Notes:***

*Exclusions? Should there be exclusions, or exemptions from complying with the route/FLAS, or should the plan specify that aircraft such as State aircraft, non-rvsm aircraft be excluded. What about humanitarian, medical evacuation, FFR, etc?*

*Priorities for access should be applied.*

*The plan should allow for the tactical definition and coordination of additional routes/FLAS to accommodate humanitarian, medical, FFR where necessary.*

*Navigation and RVSM capability should be included in plans as basis for access or exclusion.*

- Minimum longitudinal, lateral and vertical spacing between consecutive aircraft;
- Means of communication and frequency transfer arrangements;
- Details of delegation of contingency air traffic services arrangements (if any);
- Details of delegation of FIS and SAR Alerting Services (if any)
- Contingency points of contact
- xxxxxxxxxxxx

3. xxxxx

### Level 2 (Inter-State) Contingency Plans – identify events

- ~~4. Level 2 Contingency Plans should be included in bi-lateral or multi-lateral agreements between States in all cases where activation of any Level 1 Contingency Plan will impact upon a neighbouring State's ATSU. Question??~~
5. Contingency plans are required to ensure the safe transit of international traffic in the event of disruption or withdrawal of ATS, or.....
6. Contingency Flight Level allocation scheme planning should include consideration of allocating the optimum flight levels to routes used by long haul aircraft, depending on the traffic density on the route, wherever practicable. afford priority for the highest allocated levels to long haul routes.

7. Contingency routes must be vertically separated whenever in lateral conflict.
8. the overriding contingency planning principle of safety over efficiency having primacy over optimal levels and routes;
9. there is a need to clearly establish (and justify) a benchmark for lateral separation of contingency routes that are not vertically separated in the FLAS.
10. there is a need to define airspace classification requirements during contingency events;
11. Define ground and airborne navigation requirements if necessary
12. ALTN Aerodromes where necessary

13. xxxxxxxxxxxxxxxx

Heading

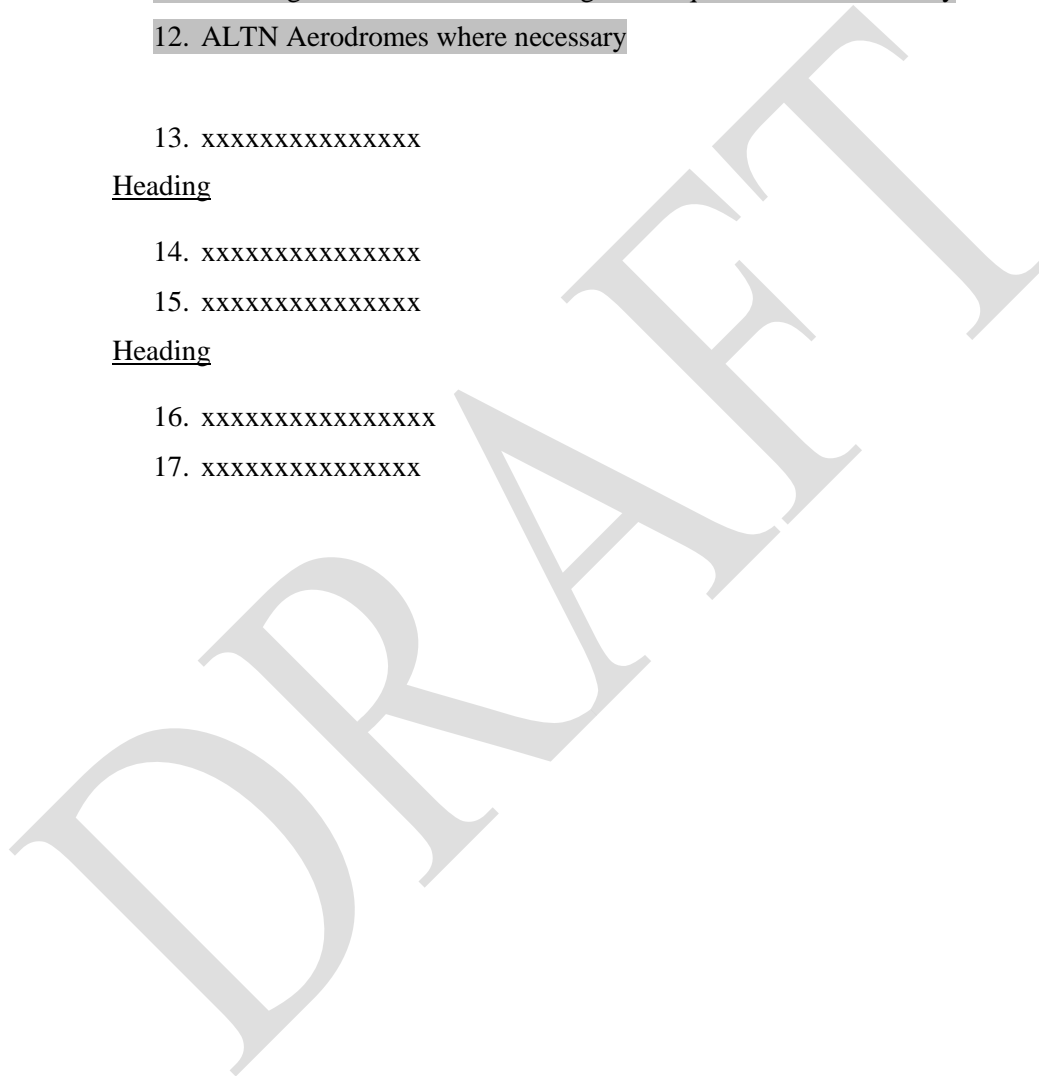
14. xxxxxxxxxxxxxxxx

15. xxxxxxxxxxxxxxxx

Heading

16. xxxxxxxxxxxxxxxx

17. xxxxxxxxxxxxxxxx



## APPENDIX X: Basic Plan Elements

### 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 any pre-activation, activation and termination of the plan.

*Discussion Note: To reflect that some contingency events arise without the opportunity to pre-activate*

- 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.

- e) Details of testing and reporting including post activation review – propose a regional calendar for testing and review.

*Discussion Note: What requirement should there be for reporting of the activation of contingency arrangements/plans to contingency arrangement activation to ICAO Regional Office? What benefit? How handled? What follow up?*

New Entry below

Following the activation of the Plan (either live or testing), a Post-Activation Review (PAR) should be completed within XX days

- input from all parties affected by or involved in the response to the contingency is sought and considered during the PAR
- a report on the PAR is completed within 28 days of the event
- the PAR report contains recommendations to redress deficiencies and implement improvements as appropriate
- each recommendation is reviewed as appropriate and lessons learnt are incorporated into training or other educative material.

Element 3: Airspace

**Discussion Notes:**

*Plan to include guidance on what/how to test and review??*

*Inclusion of contingency plans/procedures in ATS refresher training programs*

*How to share lessons learned with other states?*

Element 3: Airspace

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

g) Airspace classification and associated separation and CNS requirements

**Discussion Note:** *Classification, separation and CNS requirements are or may be stated elsewhere in the doc, but should also be included in BPE*

h) Airspace considerations for Large Scale Weather Deviations need to be considered. (RACP/TF/3 WP/02 discussion)

Element 4: ATM Procedures

i) 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.



- j) Details of how domestic traffic, departing and arriving flights and SAR, humanitarian and State aircraft flights will be managed during the contingency period.
- k) Procedures for transition from normal services levels to contingency services, and resumption of normal service.
- l) **Procedures for joining or departing a contingency route**
- m) Provisions for reduced levels of service, if any, within the affected airspace.
- n) Establishment of arrangements for controlled access to the contingency area to prevent overloading of the contingency system.
- o) Procedures for adjacent service providers to establish longitudinal separation at the entry point, and to maintain such separation through the airspace; and/or
- p) Reassignment of responsibility for providing air traffic services over the high seas or in delegated airspace.
- q) Coordination and frequency transfer procedures for aircraft entering and leaving the affected airspace.

Element 5: Pilot/Operator Procedures

- r) 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;
- s) 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;
- t) Requirements for display of navigation and anti-collision lights;
- u) Requirements for climbing and descending well to the right of the centreline of specifically identified routes;

- v) 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

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

Element 7: Aeronautical Support Services including AIS and MET

- aa) 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
- bb) Reassignment to adjacent States of the responsibility for providing meteorological information and information on status of navigation aids.

Element 8: Contact Details

- cc) Contact details for the RCC responsible for the affected FIR, and coordination arrangements.

- dd) Contact details of adjacent States and other international organisations participating in the contingency plan.

– preparation time for an adjacent FIR to activate contingency procedures. Priority 1 should be the immediate handling of the situation, with priority 2 being the activation of the contingency plan;

– the draft pilot/operator procedure to climb or descend well to the right of route

may require further consideration, particularly input from IATA;

- ATM procedures should specify where there was a reduced level of service;
- there was uncertainty about the practicality of using ADS-C and CPDLC for communications in contingency airspace;
- there was uncertainty about the assigning of meteorological services to an adjacent State;
- the Plan should define *SAR Alerting* as a contingency plan element, rather than *SAR*;
- Contingency Plans should be made readily and easily available via electronic means to ensure rapid response to events;

DRAFT

# **Air Traffic Management Contingency Plan**

**[ATS UNIT NAME]**

Version X.X

Effective: [DD Month YYYY]

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## **FOREWORD**

### **(EXAMPLE)**

1.1 This Contingency Plan forms part of the overall national contingency planning for [STATE], in accordance with the provisions of Annex 11 to the Convention on Civil Aviation, ICAO Doc 9462 *ATS Planning Manual* and Doc 9673 *Asia and Pacific Regions Air Navigation Plan*, and the *Asia/Pacific Region ATM Contingency Plan*. The Plan, and any activation of the Plan, is authorized by [AUTHORITY].

1.2 The Plan provides for the safe continuation of international air traffic through the [XXXX] FIR during periods when ATS may be disrupted or unavailable, or when airspace may be affected by volcanic ash cloud, radioactive cloud, severe weather events or military activity.

1.3 The Plan has been developed in close cooperation and collaboration with airspace users, military authorities and civil aviation authorities responsible for adjacent FIRs.

1.4 The plan will be activated by NOTAM as far in advance as is practicable. In the event that such prior notification is impracticable the PLAN will be activated by the designated authority using the most expeditious alternative means available.

.





## ATM CONTINGENCY PLAN FOR [ATS UNIT]

### 1. OBJECTIVE

1.1 The Air Traffic Management (ATM) Contingency Plan for the [ATS UNIT] details arrangements to ensure the continued safety of air navigation in the event of partial or total disruption of air traffic services in the [AIRSPACE/SERVICE DESCRIPTION] in accordance with ICAO Annex 11 – *Air Traffic Services*, Chapter 2, paragraph 2.29. The Contingency Plan provides the ATS procedures and contingency route structure using existing airways in most cases that will allow aircraft operators to transit the [AIRSPACE DESCRIPTION].

1.2 [DESCRIBE HERE THE SCOPE OF THE PLAN, E.G. IF THE PLAN RELATES ONLY TO THE TRANSIT OF INTERNATIONAL AIR TRAFFIC]

1.3 xxxxx

### 2. [ATS UNITS, CENTRES, STATES AND FIRS AFFECTED]

2.1 In the event that the [AUTHORITY] activates this Contingency Plan, the civil aviation authorities of the [XXXX ADJACENT ATS UNITS, CENTRES, STATES OR FIRS AFFECTED] will be notified in accordance with the [LETTER OF AGREEMENT, MEMORANDUM OF UNDERSTANDING OR OTHER CONTINGENCY ARRANGEMENT]. The adjacent [ATS UNITS, CENTRES STATES OR FIRS] directly affected by this Contingency Plan are as follows:

- a) [STATE]  
  
[FIR/ACC/ATS UNIT]  
[FIR/ACC/ATS UNIT]
- b) [STATE]  
  
[FIR/ACC/ATS UNIT]  
[FIR/ACC/ATS UNIT]
- c) [STATE]  
  
[FIR/ACC/ATS UNIT]  
[FIR/ACC/ATS UNIT]
- d) [STATE]  
  
[FIR/ACC/ATS UNIT]  
[FIR/ACC/ATS UNIT]
- e) [STATE]  
  
[FIR/ACC/ATS UNIT]  
[FIR/ACC/ATS UNIT]

2.2 The contact details of the civil aviation authorities, organizations and ATS units are contained in **Appendix X**. These details should be kept up to date and relevant information provided to the [AUTHORITY] as soon as practicable.

### 3. MANAGEMENT OF THE CONTINGENCY PLAN

3.1 The contingency measures set out in this Plan are applicable in cases of foreseeable events caused by unexpected interruptions in ATS caused by natural occurrences or other circumstances, which, in one way or another, may impair or totally disrupt the provision of ATS and/or of the related support services in the [AIRSPACE].

3.2 The following arrangements have been put in place to ensure that the management of the Contingency Plan provides for [INTERNATIONAL IF SO LIMITED] flights to proceed in a safe and orderly fashion through the Upper Airspace of the Jakarta FIR.

#### Central Coordinating Committee

3.3 As soon as practicable in advance of, or after a contingency event has occurred, the [AUTHORITY] shall convene the Central Coordinating Committee (CCC) comprised of representatives from:

**Discussion Note:** *This depends on the scale of the plan. E.g. a remote regional control tower would not necessarily require re-convening of a CCC*

- 1) [REGULATORY AUTHORITY OR ORGANIZATION]
- 2) [AIR NAVIGATION SERVICE PROVIDER]
- 3) [MILITARY AUTHORITY]
- 4) [OTHER RELEVANT NATIONAL AUTHORITY]
- 5) [AIRSPACE USER REPRESENTATIVE/S]
- 6) [AIRPORT AUTHORITIES]
- 7) [METEOROLOGICAL AUTHORITY]
- 8) [AIRPORT AUTHORITY]
- 9) [OTHER RELEVANT AUTHORITIES/AGENCIES]

3.4 The CCC shall oversee the conduct of the Contingency Plan and in the event that the [SERVICE] is disrupted for an extended period, make arrangements for and facilitate the temporary relocation of the [SERVICE] to the [ALTERNATE FACILITY OR ATS UNIT/CENTRE] and the restoration of [SERVICE]. The terms of reference for the CCC will be determined by the [AUTHORITY].

3.5 Contact details of the members of the CCC are provided in **Appendix X**.

#### Plan Testing and Review

### Notification to the CCC

#### ATM Operational Contingency Group

3.6 The ATM Operational Contingency Group (AOCG) will be convened by the CCC with a primary responsibility to oversee the day to day operations under the contingency arrangements, and coordinate operational ATS activities, 24 hours a day, throughout the contingency period. The terms of reference of the AOCG will be determined by the CCC. The AOCG will include any necessary specialist personnel from the following disciplines:

- Air Traffic ~~Control~~ Services (ATS)
- Aeronautical Telecommunication (COM)
- Aeronautical Meteorology (MET)
- Aeronautical Information Services (AIS)
- ATS equipment maintenance service provider

The mission of the AOCG shall include:

- i) review and update of the Contingency Plan as required;
- ii) keep up to date at all times of the contingency situation;
- iii) organize contingency teams in each of the specialized areas;
- iv) keep in contact with and update the ICAO Asia and Pacific Regional Office, the IATA Regional Office and other airspace users;
- v) exchange up-to-date information with the adjacent ATS authorities concerned to coordinate contingency activities;
- vi) notify the designated organizations of the contingency situation sufficiently in advance and/or as soon as possible thereafter;
- vii) take necessary action for issuing NOTAMs according to this plan or as otherwise determined by the particular contingency situation. Where the contingency situation is sufficiently foreseeable the relevant NOTAMs will be issued 48 hours in advance of the contingency event s. NOTAM templates are provided in **Appendix X**.
- viii) maintain an activity log using the form in Appendix X

## **4. CONTINGENCY ROUTE and FLIGHT LEVEL STRUCTURE**

4.1 In the event of disruption of the ATC services provided by [ATS UNIT, CENTRE OR FIR], contingency routes will be specified to ensure safety of flight and to facilitate limited flight operations commensurate with the prevailing conditions. Existing ATS routes form the basis of the contingency routes to be used, and a flight level allocation scheme (FLAS) introduced to minimize potential points of conflict and to limit the number of aircraft operating simultaneously in the system under reduced air traffic services. The contingency route structure [FOR INTERNATIONAL FLIGHTS if necessary] is detailed in **Appendix X**. Additional contingency routes may be introduced as and when circumstances require, such as in the case of volcanic ash cloud, radioactive cloud or severe weather event.

4.2 [INSERT IF RELEVANT In regard to domestic operations, if circumstances dictate, all flights shall be temporarily suspended until a full assessment of the prevailing conditions has been determined and sufficient air traffic services restored. A decision to curtail or restart domestic operations will be made by the CCC].

4.3 Aircraft on long-haul international flights and special operations (e.g. Search and Rescue (SAR), State aircraft, humanitarian flights, etc), shall be afforded priority for levels at FL290 and above. Domestic and regional operators should plan on the basis that FL290 and above may not be available.

4.4 International operators affected by the suspension of all operations from [STATE OR FIR] airports will be notified by the relevant airport authority when operations may be resumed, and flight planning information will be made available pertaining to that airport. International flights who have received such approval may be required to flight plan via domestic routes to join international contingency routes.

4.5 International operators may elect to avoid the [AIRSPACE] by using ATS routes [DESCRIBE ATS ROUTES OR ADJACENT AIRSPACE].

## **5. AIR TRAFFIC MANAGEMENT AND CONTINGENCY PROCEDURES**

### Reduced ATS And Provision of Flight Information Services (FIS)

5.1 During the contingency period ATS including ATC may not be available, particularly communications and ATS surveillance services. In cases where services are not available, a NOTAM will be issued providing the relevant information, including an expected date and time of resumption of service. The contingency plan provides for limited flight information and alerting services to be provided by [ATS UNIT/S OR CENTRE/S].

5.2 [DESCRIBE ANY DIVISION OF RESPONSIBILITY OF ADJACENT ATS UNITS OR CENTRES FOR SERVICE PROVISION IN THE CONTINGENCY AIRSPACE]. [DESCRIBE THE LEVEL OF SERVICE AVAILABLE]. A chart depicting the airspace arrangement is provided in **Appendix X**.

### ATS Responsibilities

5.3 During the early stages of a contingency event, ATC may be overloaded and tactical action taken to reroute aircraft on alternative routes not included in this Plan.

5.4 In the event that ATS cannot be provided in the [AIRSPACE] a NOTAM shall be issued indicating the following:

- a) time and date of the beginning of the contingency measures;
- b) airspace available for landing and overflying traffic and airspace to be avoided;
- c) details of the facilities and services available or not available and any limits on ATS provision (e.g., ACC, APPROACH, TOWER and FIS), including an expected date of restoration of services if available;
- d) information on the provisions made for alternative services;

- e) any changes to the ATS contingency routes contained in this Plan;
- f) any special procedures to be followed by neighbouring ATS units not covered by this Plan;
- g) any special procedures to be followed by pilots; and
- h) any other details with respect to the disruption and actions being taken that aircraft operators may find useful.

5.5 In the event that the [XXXX International NOTAM Office is unable to issue the NOTAM, the alternate International NOTAM Office at [INSERT ALTERNATE] and/or [INSERT ALTERNATE] will take action to issue the contingency NOTAM upon notification by the [AUTHORITY].

5.6 Maintain a record using the form in Appendix X

Aircraft Separation Spacing??

5.7 Aircraft separation criteria will be applied in accordance with the *Procedures for Air Navigation Services-Air Traffic Management* (PANS-ATM, Doc 4444) and the *Regional Supplementary Procedures* (Doc 7030).

5.8 The longitudinal separation will be 15 minutes. However, this may be reduced to 10 minutes in conjunction with application of the Mach number technique where authorized by the [AUTHORITY] and agreed in the appropriate LOA or other Contingency Arrangement.

5.9 The route structure provides for lateral separation of 100 NM and in cases where this is less, and for crossing routes, a minimum vertical separation of 2000 ft will be applied.

5.10 In the event that [ATS UNIT, CENTRE, FIR OR STATE] ATC services are terminated, a Flight Level Allocation Scheme (FLAS) utilizing, where necessary, RVSM separation minimum shall apply. Non RVSM-approved aircraft shall not operate in contingency airspace. Details of the flight level assignment on the contingency routes are contained in Appendix 1D.

Flight level restrictions

5.11 Where possible, aircraft on long-haul international flights shall be afforded priority for cruising levels.

Airspace Classifications

5.12 Depending on the degree of disruption airspace classifications may be changed to reflect the reduced level of services. Changes to airspace classification will be notified by NOTAM.

Aircraft position reporting

5.13 ~~Pilots will continue to make or broadcast routine position reports in line with normal ATC reporting procedures.~~

5.14 The primary means of communication will be by VHF or HF radio except for aircraft operating Automatic Dependent Surveillance - Contract (ADS-C) and Controller-Pilot Data Link Communications (CPDLC) systems. When CPDLC has been authorized for use by the relevant ATC authority this will become the primary means of communication, with HF as secondary. ADS-C shall replace any requirement for voice position reporting to ATC for aircraft so equipped, and in this case

CPDLC or HF will be the secondary means of communication. Traffic Information Broadcast by Aircraft (TIBA) procedures shall apply in [DESCRIBE AIRSPACE/CIRCUMSTANCES]. Details of communications requirements are provided in **Appendix X**.

VFR operations and other exclusions/exemptions, etc

5.15 VFR flights shall not operate in the [DESCRIBE AIRSPACE] during contingency operations, except in special cases such as State aircraft, Medivac flights, and any other essential flights as authorized by the [AUTHORITY].

Procedures for ATS Units

5.16 The ATS units providing ATC services will follow their unit emergency operating procedures and activate the appropriate level of contingency procedures in line with the operational Letter of Agreement. These procedures include the following:

- a) Where ATS provided by the [ATS UNIT, CENTRE, FIR OR STATE] the may be reduced or disrupted by a short-notice contingency event, ATC will inform pilots of the emergency condition and advise if it is likely that the ACC will be evacuated and ATS suspended. In the event of it becoming necessary to evacuate the ACC building, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication;
- b) during the period the contingency procedures are in effect, flight plan and other aircraft movement messages must continue to be transmitted by operators to the [ATS UNIT, CENTRE, FIR OR STATE] via the AFTN using normal procedures;
- c) on notification by [AUTHORITY], the ATS authorities operating the [NEIGHBOURING ATS UNITS, CENTRES, FIRS OR STATES] will activate the contingency procedures in accordance with their respective operational Letter of Agreement or other Contingency Arrangement;
- d) prior to entry to the [AFFECTED AIRSPACE] during contingency operations prior authorization must be obtained from [AUTHORITY], and flights must comply with the ATC clearance and communications instructions issued by the ATC authority responsible for the airspace immediately adjacent to the contingency airspace.
- e) Coordination of aircraft boundary estimates and flight levels by the adjacent ATC authority responsible for aircraft entering the [AFFECTED AIRSPACE] shall be in accordance with the respective operational Letter of Agreement or other Contingency Arrangement.
- f) the ACC responsible for aircraft entering the [AFFECTED AIRSPACE] will instruct pilots to maintain the last flight level assigned and speed (MACH number if applicable) while operating in the [AFFECTED AIRSPACE];
- g) the ACC responsible for aircraft entering the [AFFECTED AIRSPACE] will not authorize any change in flight level or speed (MACH number, if applicable unless specifically authorized under the operational Letter of

Agreement or Contingency Arrangement.

- h) the ACC responsible prior to aircraft entering the [AFFECTED AIRSPACE] will inform aircraft that they must establish contact with the first ATS unit after transiting the [AFFECTED AIRSPACE] not less than 10 minutes before the estimated time of entry to the [NEXT AIRSPACE/FIR],  
-
- i) the ACC responsible prior to aircraft entering the Jakarta FIR will inform aircraft that they must communicate with the next (downstream) ATC unit 10 minutes before the estimated time of entry into the next FIR; and
- j) aircraft may also chose to avoid the [AFFECTED AIRSPACE], and the controlling authorities of the adjacent FIRs concerned will promulgate any necessary alternative contingency routes by NOTAM.
- k) [DETAIL ANY ROUTE OR AIRSPACE –SPECIFIC ARRANGEMENTS]

Transition to and from contingency scheme

5.17 During times of uncertainty when airspace closures seem possible, aircraft operators should be prepared for a possible change in routing while en-route, familiarization of the alternative routes outlined in this Contingency Plan, as well as those which may be promulgated by a State via NOTAM or AIP.

5.18 In the event of airspace closure that has not been promulgated, ATC should, if possible, broadcast to all aircraft in their airspace, what airspace is being closed and to stand by for further instructions.

5.19 ATS providers should recognize that when closures of airspace or airports are promulgated, individual airlines might have different company requirements as to their alternative routings. ATC should be alert to respond to any request by aircraft and react commensurate with safety.

Transfer of control and coordination

5.20 The transfer of control and communication should be at the common FIR boundary between ATS units unless there is mutual agreement between adjacent ATS units and authorization given to use alternative transfer of control points. These will be specified in the respective LOAs.

5.21 The ATS providers concerned should review the effectiveness of current coordination requirements and procedures in light of contingency operations or short notice of airspace closure, and make any necessary adjustments to the Contingency Plan and LOAs.

## **6. PILOTS AND OPERATOR PROCEDURES**

Filing of flight plans

6.1 Flight planning requirements detailed in [STATE] AIP continue to apply during contingency operations, except where modified by the ATS route and requested flight levels detailed in this plan.

### Overflight approval

6.2 Aircraft operators must obtain over-flight approval from the [AUTHORITY] prior to operating flights through the [AFFECTED AIRSPACE]. During the period of activation of this Contingency Plan the adjacent ATS authority will provide normal ATC clearances for aircraft to enter the Jakarta FIR on the basis that operators have obtained prior approval, and the responsibility remains with the operator to ensure such approval has been obtained.

### CNS Capability

#### Pilot operating procedures

5.22 Pilots will continue to make or broadcast routine position reports in line with normal ATC reporting procedures-

***Discussion Note:*** This was moved here from section 5, but may need to be reflected in both sections.

6.3 Pilots of aircraft operating in the [AFFECTED AIRSPACE] during contingency operations shall comply with the following procedures:

- a) all aircraft proceeding along the ATS routes established in this Contingency Plan will comply with the instrument flight rules (IFR) and will be assigned a flight level in accordance with the flight level allocation scheme applicable to the route(s) being flown as specified in Appendix 1D;
- b) flights are to flight plan using the Contingency Routes specified in Appendix 1D, according to their airport of origin and destination;
- c) aircraft are to operate as close as possible to the centre line of the assigned contingency route;
- d) a continuous communications watch shall be maintained on the specified contingency frequency as specified in Appendix 1F
- e) aircraft position reports and other information as necessary shall be broadcast in accordance with TIBA procedures defined in AIP [STATE];
- f) aircraft navigation and anti-collision lights shall be displayed;
- g) except in cases of emergency or for reasons of flight safety, pilots are to maintain during their entire flight within [AFFECTED AIRSPACE], the last assigned flight level, mach number and SSR transponder code. If no transponder code has been assigned, aircraft shall squawk code [XXXX].
- h) aircraft are to reach the flight level last assigned by the responsible ACC at least [XX] minutes before entering the [AFFECTED AIRSPACE] or as otherwise instructed by the ATC unit acting in accordance with the operational Letter of Agreement or other Contingency Arrangement;



- i) pilots are to include in their last position report prior to entering the [AFFECTED AIRSPACE], the estimated time over the entry point of the [AFFECTED AIRSPACE] and the estimated time of arrival over the relevant exit point;
- j) pilots are to contact the next adjacent ACC as soon as possible, and in any event not less than ten (10) minutes before the estimated time of arrival over the relevant exit point from the [AFFECTED AIRSPACE];
- k) pilots are to strictly adhere to the ICAO Traffic Information Broadcasts by Aircraft (TIBA), reproduced in **Appendix X**, on the specified VHF and HF frequencies listed in **Appendix X**. When necessitated by emergency conditions or flight safety requirements, pilots are to transmit blind on these frequencies, their current circumstances and the commencement and completion of any climb and descent or deviation from the cleared contingency route;
- l) whenever emergencies and/or flight safety reasons make it impossible to maintain the flight level assigned for transit of [AFFECTED AIRSPACE], pilots are to climb or descend well to the right of the centerline of the contingency route, and if deviating outside the [AFFECTED AIRSPACE], to immediately inform the ACC unit responsible for that airspace. Pilots are to broadcast details of any level change including aircraft identification, aircraft position and route, vacated flight level, intended flight level, flight level passed and cruising flight level maintained on [FREQUENCY];
- m) pilots are to maintain own longitudinal separation of 15 minutes from preceding aircraft at the same cruising level; and
- n) not all operational circumstances can be addressed by this Contingency Plan and pilots are to maintain a high level of alertness when operating in the contingency airspace and take appropriate action to ensure safety of flight.

#### Interception of civil aircraft

6.4 Pilots need to be aware that a contingency routing requiring aircraft to operate off normal traffic flows may result in interception by military aircraft. Aircraft operators must therefore be familiar with international intercept procedures contained in ICAO Annex 2 –*Rules of the Air*, paragraph 3.8 and Appendix 2, Sections 2 and 3.

6.5 Pilots are to comply with instructions given by the pilot of the intercepting aircraft. In such circumstances, the pilot of the aircraft being intercepted shall broadcast information on the situation.

6.6 If circumstances lead to the closure of the [AFFECTED AIRSPACE] and no contingency routes are available, aircraft will be required to remain clear of the [AFFECTED AIRSPACE]. As much warning as possible will be provided by the appropriate ATS authorities in the event of the complete closure airspace..

6.7 Pilots shall continuously guard the VHF emergency frequency 121.5 MHz and should operate their transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where secondary surveillance radar (SSR) is used for ATS purposes. Transponders should be set on the last discrete code assigned by ATC or select code [XXXX] if no code was assigned.

## 7. COMMUNICATION PROCEDURES

### Degradation of Communication - Pilot Radio Procedures

7.1 When operating within the contingency airspace, pilots should use normal radio communication procedures where ATS services are available. These will be in accordance with the communication procedures in this Plan or as otherwise notified by NOTAM.

7.2 If communications are lost unexpectedly on the normal ATS frequencies, pilots should try the next applicable frequency, e.g. if en-route contact is lost then try the next appropriate frequency, that is, the next normal handover frequency. Pilots should also consider attempting to contact ATC on the last frequency where two-way communication had been established. In the absence of communication with ATC, the pilot should continue to make routine position reports on the assigned frequency, and also broadcast positions in accordance with the TIBA procedures.

### Communication frequencies

7.3 A list of frequencies to be used for the contingency routes and the ATS units providing FIS and air-ground communication monitoring for the Jakarta FIR is detailed at Appendix 1F

## 8. AERONAUTICAL SUPPORT SERVICES

### Aeronautical Information Services (AIS)

8.1 [DETAIL THE AVAILABILITY OR ALTERNATE ARRANGEMENTS FOR AIS]

8.2 XXXXXXXXXX.

### Meteorological Services (MET)

8.3 [DETAIL THE AVAILABILITY OF METEOROLOGICAL SERVICES AND THE METHODS OF DISTRIBUTION OF INFORMATION DURING CONTINGENCY OPERATIONS.]

8.4 XXXXXXXXXX..

## 9. SEARCH AND RESCUE

### Notification and Coordination

9.1 The SAR authority responsible for the [AFFECTED AIRSPACE] is the [XXXXXX] Rescue Coordination Centre (RCC)

IDD	XXXXXXXXXXXX
Fax	XXXXXXXXXXXX
AFTN	XXXXXXXXXX

9.2 [INSERT SAR ALERTING ARRANGEMENTS AS NECESSARY. MAY INCLUDE CONSIDERATION OF NEIGHBOURING ATS UNITS PROVIDING FULL FLIGHT FOLLOWING, OR LIMITED TO RESPONSE TO IN-FLIGHT EMERGENCIES].

9.3 XXXXXXXX

**SUB-PLANS**

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## LIST OF APPENDICES

Appendix X – Contact Details

Appendix X – Coordinating Bodies

Appendix X – Specimen NOTAMs

Appendix X – International Route Structure for Jakarta  
During Total Disruption

Appendix X – Chart of Contingency Routes

Appendix X – Contingency Frequencies for Control  
and/or Flight Monitoring

Appendix X – Flight Planning

Appendix X – Traffic Information Broadcasts by  
Aircraft Procedures

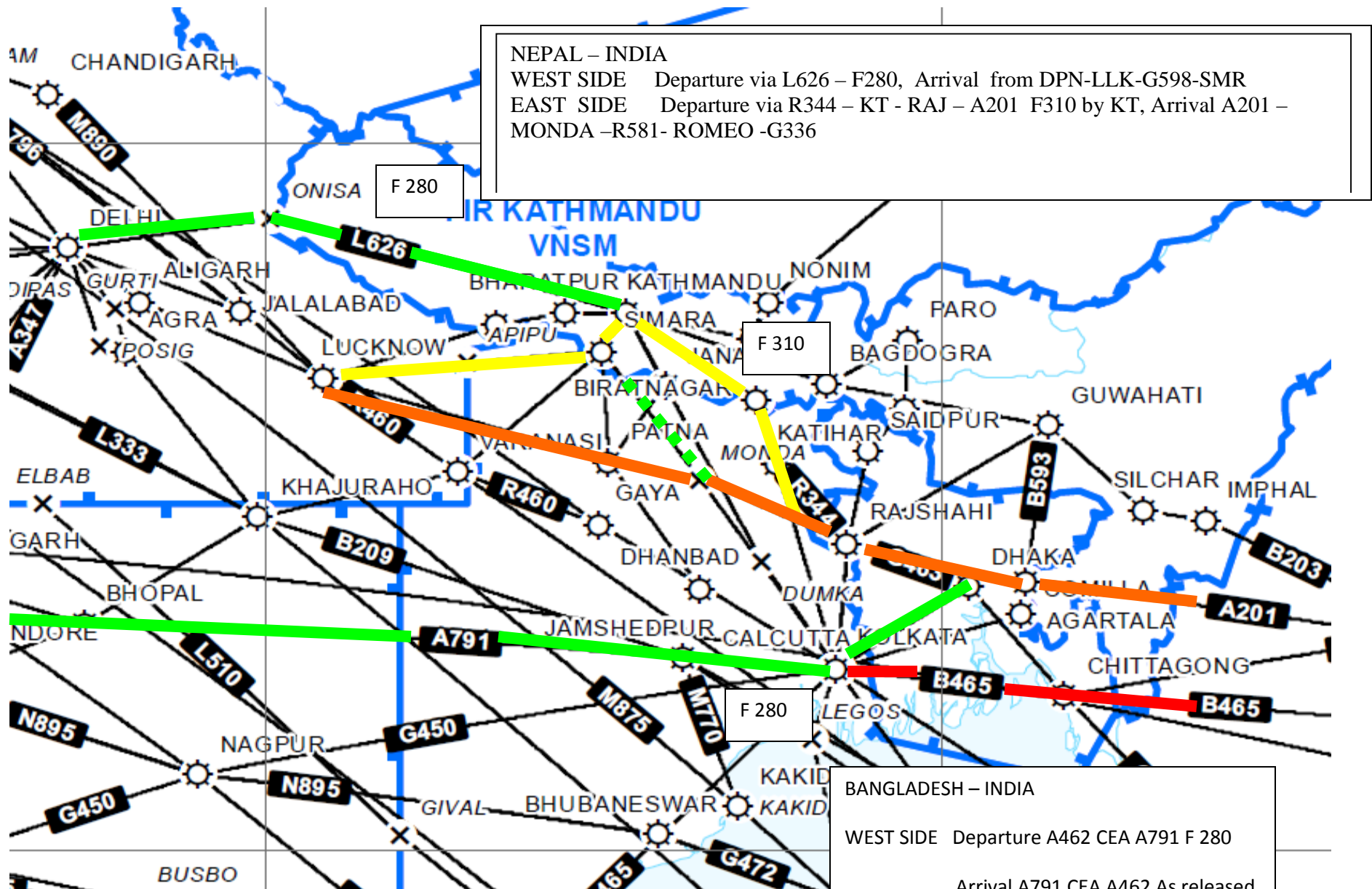
Appendix X – ICAO Interception Procedures

Appendix X – Recording and Reporting Form

Appendix X – Guidance for using the template??



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Appendix H-1 to the Report



NEPAL – INDIA  
 WEST SIDE Departure via L626 – F280, Arrival from DPN-LLK-G598-SMR  
 EAST SIDE Departure via R344 – KT - RAJ – A201 F310 by KT, Arrival A201 – MONDA –R581- ROMEO -G336

BANGLADESH – INDIA  
 WEST SIDE Departure A462 CEA A791 F 280  
 Arrival A791 CEA A462 As released  
 EAST SIDE Departure G 463 CTG B 465 F270  
 Coord MY

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Appendix H-2 to the Report

**Proposed Contingency Plan between Hong Kong China and Philippines on  
RACP/TF/2 (12-15 March 2013)**

	Hong Kong China	Philippines
1. Contingency Routes	Airway A461 - Southeast bound only	
	Airway A583 - Northwest bound only	
2. Proposed Flight Levels <i>subject to Manila final proposal.</i>	A461 - 290, 330, 370 A583 - 310, 350, 390 See Map 1	A461 - 290, 310, 330 A583 - 300, 320, 340
3. Separation standards	As stated in Letter of Agreement	
4. Back-up facilities	Back-up Air Traffic Control Centre and Back-up Control Tower (activation in accordance with CAD Emergency Procedure Manual which require a period of approximately 60 mins transition time)	Nil
5. Details of specific procedures	NOTAM	NOTAM
6. Authorization	Assistant Director-General of Civil Aviation (Air Traffic Management) ADG(ATM) or his authorized representative	Director General of Civil Aviation Authority of Philippines
7. Long Term Unavailability of ATS	Pilots to follow Traffic Information Broadcast by Aircraft (TIBA) procedures See Map 2	Not established yet

## Hong Kong FIR Contingency Routes

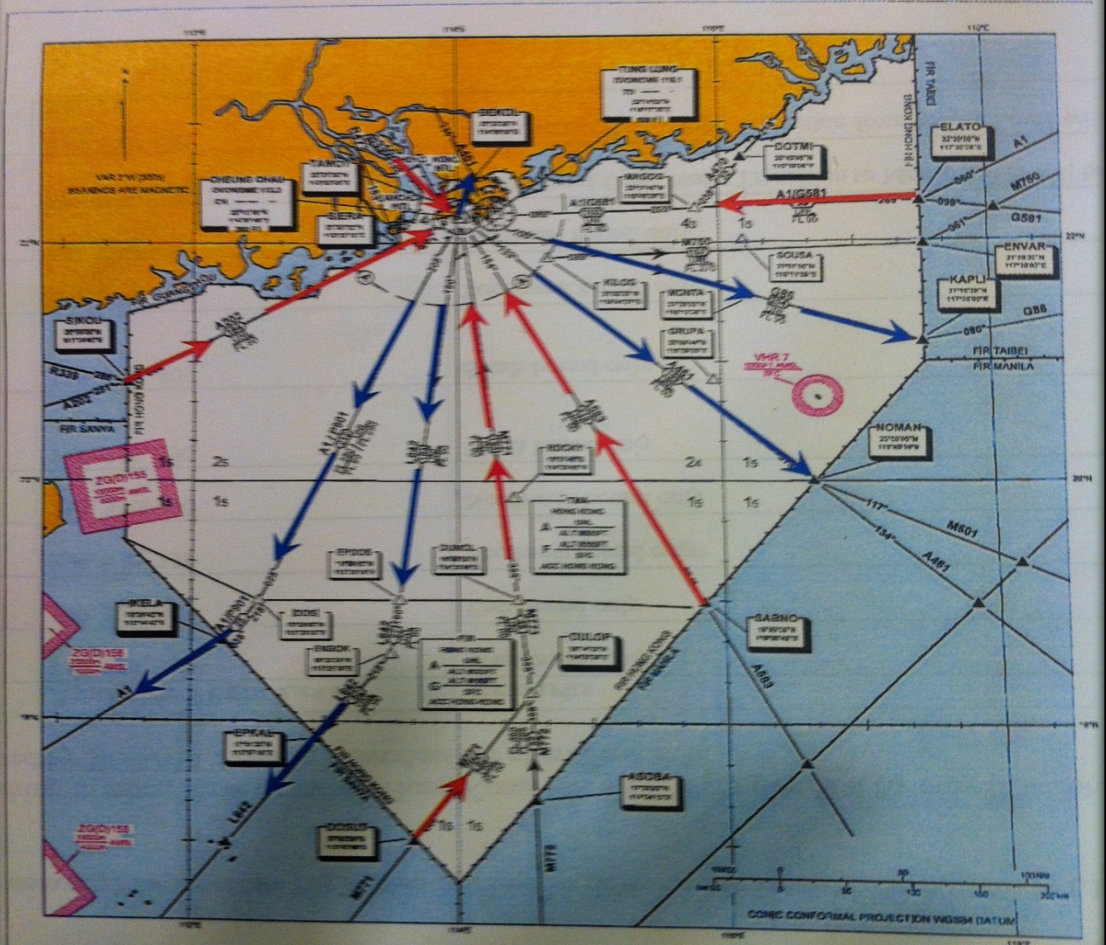
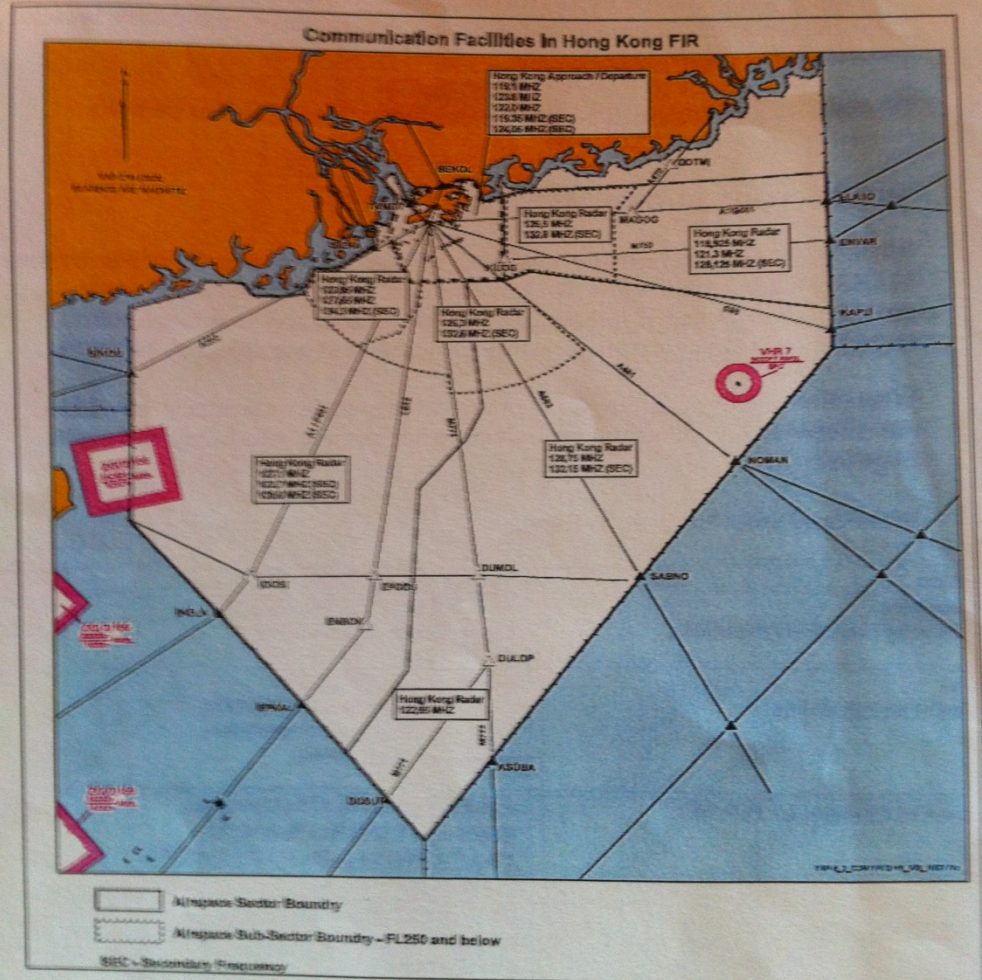


Fig 1



# Contingency Operating Procedures

2.1.2 FIS and SAR alerting will be provided as remaining capability permits.



2.2 Approach Control Service Not Available





भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

ANNEXURE D

**International Route structure and communications for transit of the Chennai FIR  
During Contingency situation**

Contingency Route	ATS Route	Segment	Flight Level (Eastbound)	Flight Level (West bound)	Remarks
CRI-1	M300	IGAMA- ATETA	FL310, FL330,	FL400	
CRI-2	P574	NOPEK- GULAM	FL350, FL370,	FL320	
CRI-9	P762	LULDA-DUGOS	FL270,	FL280	
CRI-10	P628	VATLA- IGREX	FL350	-----	
CRI - 11	P570	BASUR - POMAN	FL290	FL 280	



**International Route structure and communications for transit of the Delhi FIR  
During Contingency situation**

Contingency Route	Route	Segment	Flight Level (Eastbound)	Flight Level (West bound)	Remarks
CRI - 4 / 5	A 791	ASOPO - ARIVO	F 330, F 410	F 300 , F 380	
CRI-6	A 201 -R594-G333/A589	PPT -LLK-DPN-TIGER / LLK-DPN-SAMAR	-----	FL 320, FL 380	
CRI-7	A466-R460- A 201	SAMAR--DPN-LLK-PPT	FL 290	-----	
CRI-8	G452-R460	TIGER--DPN- GGC	FL 350	-----	
CRI-10	P628	VIKIT - IBANI	FL 350	-----	
CRI - 13	L 626 – G 433	ONISA - TIGER	----	FL 280	



International Route Structure and Communication  
For Transit of the KOLKATA FIR  
During Contingency Situation

Contingency Route	ATS Route	Segment	Flight Level (Eastbound)	Flight Level (Westbound)	Remarks
CRI 3	L301	RINDA – MEPOK	FL330 – FL410	FL300 – FL380	
CRI 4 / 5	B465 / A791	APAGO – ARIVO	FL330 – FL410	FL300 – FL380	
CRI 6 / 7	A201	ANSOS – PPT	FL290	FL320 – FL380	
CRI 8	R460 / L507	GGC - TEBOV	FL350	-----	
CRI 10	P628	IKINA - VATLA	FL350	-----	
CRI 15	A 462 / A 791	BEMAK - ARIVO	-----	F 280	



APPENDIX D

International Route Structure and Communications for Transit of the Mumbai FIR During Contingency Situation

Contingency Route	ATS Route	Segment	Flight Level (East bound)	Flight Level (West bound)	REMARKS
CRI-1	M 300	LOTAV-IGAMA	FL310-FL 330	FL400	
CRI-2	P 574	TOTOX-GULAM	FL350-FL370	FL320	
CRI-3	L 301	RASKI-MEPOK	FL330- FL410	FL300-FL380	
CRI-4	A 791 – A 325	ASOPO - TASOP	-----	FL300-FL380	
CRI-5	A 791	TELEM-ASOPO	FL330-FL410	-----	
CRI - 10	P 628	IKINA - IBANI	F1 350	-----	
CRI-11	P 570	KITAL-POMAN	FL290	FL280	
CRI-12	L 894	KITAL-BIBGO	FL330	FL360	
CRI-14	G 465	ELKEL - OTKIR	FL270	-----	

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Appendix H-4 to the Report

**INTERNATIONAL ROUTE STRUCTURE AND COMMUNICATIONS FOR TRANSIT OF THE JAKARTA FIR  
WHEN NO ATS AVAILABLE IN INDONESIAN AIRSPACE**

<b>Contingency Routes Jakarta (CRJ)</b>	<b>ATS Route</b>	<b>Direction</b>	<b>FL Assignment</b>	<b>ACCs</b>	<b>COM (Frequency Details in Appendix X)</b>
CRJ-1	A464 Darwin-KIKEM-KIKOR-TPG- SINJON	Northbound (One-way)	380, 320	Brisbane  Singapore	HF, ADS/CPDLC  HF, VHF, ADS/CPDLC
CRJ-2	A576-G462 SINJON-TPG-SANOS-BLI- SATNA-Darwin	South East bound (One-way)	410, 350, 290	Singapore  Brisbane	HF, VHF, ADS/CPDLC  HF, ADS/CPDLC
CRJ-3	A576 SINJON-TPG-SANOS-BLI- ATMAP-Alice Springs	Southbound (One-way)	410, 350, 290	Singapore  Brisbane	HF, VHF, ADS/CPDLC  HF, ADS/CPDLC
CRJ-4	B470-L511/L895-A585 SINJON-S00 02.4 E104 042.1- ANITO-PKP(L511/L895)- MIMIX(L895)-SAPDA	Southbound (One-way)	410, 350, 290	Singapore  Melbourne	HF, VHF, ADS/CPDLC  HF, ADS/CPDLC
CRJ-5 <sup>2</sup>	B469-G579 LAMOB-DCT-PLB(G579)-PARDI- S00 16.1 E104 09.3-SINJON	Northbound (One-way)	380, 320, 280	Brisbane  Singapore	HF, ADS/CPDLC  HF, VHF, ADS/CPDLC
CRJ-6	R469- B335 SINGAPORE-SAMKO-TAROS- PKU(B335)-POSOD	Two-way	290  280	Singapore  Melbourne	HF, VHF, ADS/CPDLC  HF, ADS/CPDLC

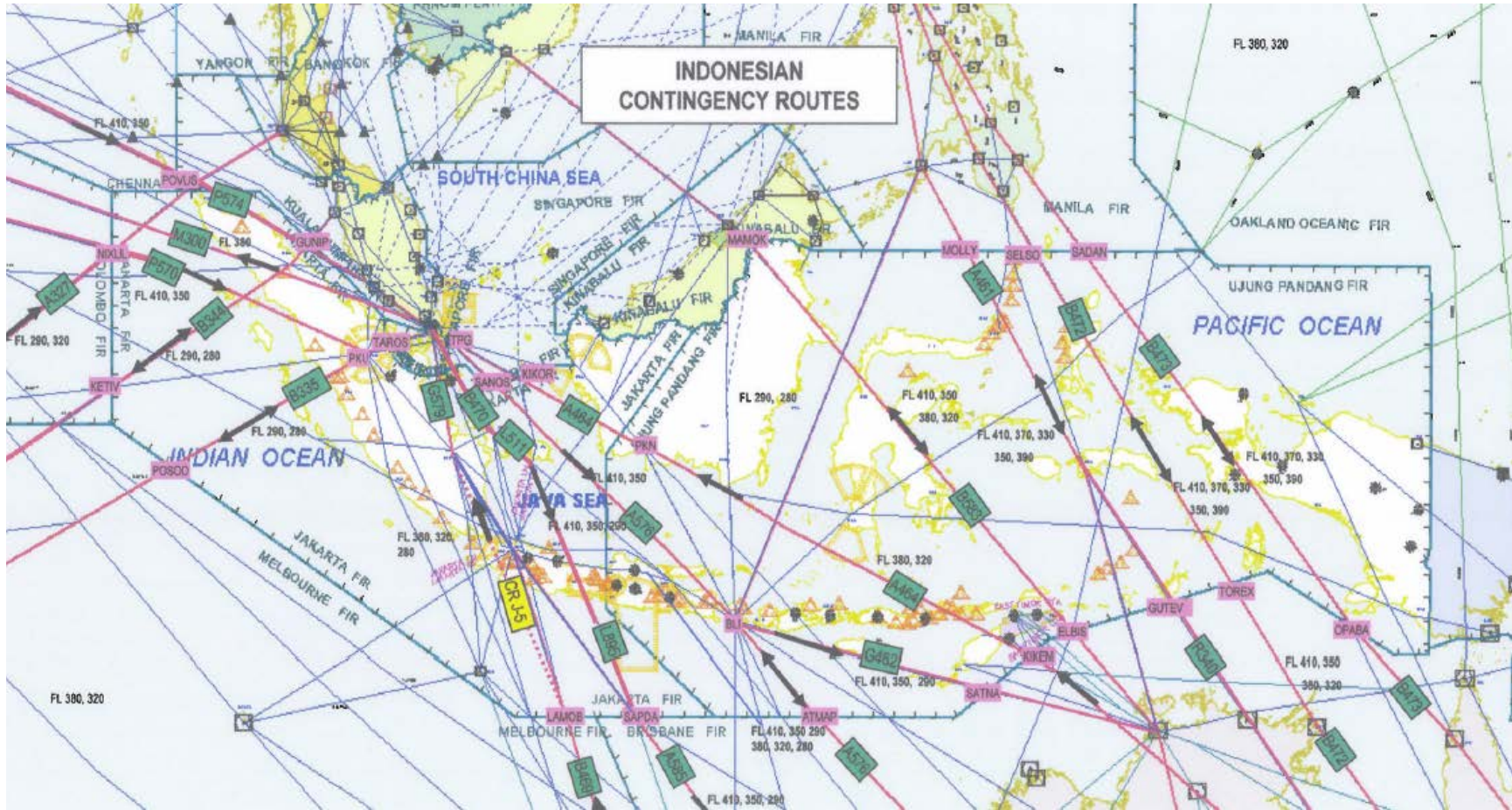
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Appendix H-4 to the Report

CONTINGENCY ROUTES JAKARTA (CRJ)	ATS ROUTES	DIRECTION	FL ASSIGNMENT	ACCS PROVIDING FIS	COM (DETAILS OF FREQUENCIES ARE IN APPENDIX X)
CRJ-7	B344-G468 VPG-GOTLA-MDN(B334)- KETIV-ELATI	Two-way	290	Kuala Lumpur	HF, VHF
			280	Colombo+	HF, ADS/CPDLC
CRJ-8	A327 POVUS - NIXUL	Two-way	290,	Kuala Lumpur	HF, VHF
			320	Colombo+	HF, ADS/CPDLC
CRJ-9	P570-R469 NIXUL – MABIX - PKU(R469) - TAROS-SINJON	Eastbound (One-way)	410, 350	Colombo+	HF, ADS/CPDLC
				Kuala Lumpur	HF, VHF
				Singapore+	VHF
CRJ-10	A576-M300 SINJON-DUMOK(M300)-SALAX- TOPIN	Westbound (One-way)	380	Singapore+	VHF
				Kuala Lumpur	HF, VHF
CRJ-11	P574-R461 ANSAX-PUGER(R461)-VKL	Eastbound (One-way)	410, 350	Chennai+	HF, ADS/CPDLC
				Kuala Lumpur	HF, VHF

+ ACCs not providing FIS in the Jakarta FIR for these routes



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Appendix H-4 to the Report



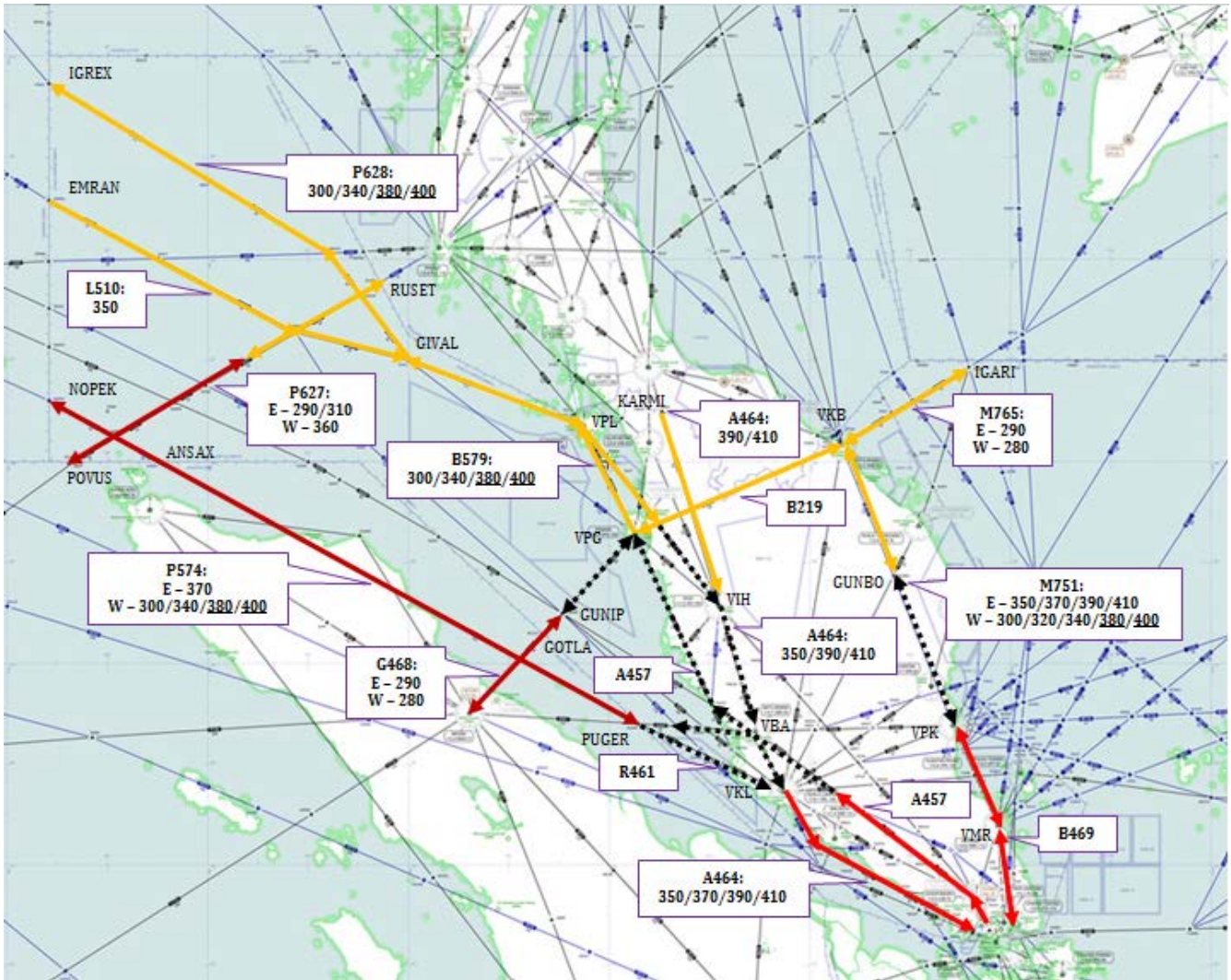
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Appendix H-5 to the Report

**INTERNATIONAL ROUTE STRUCTURE KUALA LUMPUR FIR**

<b>ATS Route (Flight Plan Route)</b>	<b>Direction</b>	<b>Flight Level (FL)</b>	<b>ACC/FIC</b>
L510	Eastbound	350	Chennai ACC;
P628	Westbound	<u>300/340/380/400</u>	Bangkok ACC
P574 NOPEK	Eastbound	370	Chennai ACC;
	Westbound	<u>300/340/380/400</u>	Jakarta ACC
POVUS RUSET	Eastbound	290/310	Bangkok ACC;
	Westbound	360	Jakarta ACC
IGARI	Eastbound	290	Bangkok ACC;
	Westbound	280	Ho Chi Minh ACC
VPL/TAMOS	Eastbound	390/410	Bangkok ACC
	Westbound	<u>300/340/380/400</u>	
VKB VPK	Eastbound	350/370/390/410	Bangkok ACC;
	Westbound	<u>300/320/340/380/400</u>	Singapore ACC

- i. Eastbound/Westbound: to maintain 10 mins separation for aircraft at the same level, on the same route.
- ii. Eastbound (VTSP DEP) joining M751: FL 350/370/390/410; to maintain level by VKB, ATS service by Bangkok ACC.
- iii. Westbound (WSSS DEP) on A457/P574/P628: FL300/340; to maintain level by A/VKL, ATS service by Singapore ACC.
- iv. Westbound (WSSS DEP) on M751: FL300/320/340; to maintain level by VPK.
- v. Westbound Overflight: FL380/FL400.

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- i. Eastbound/Westbound: to maintain 10 mins separation for aircraft at the same level, on the same route.
- ii. Eastbound (VTSP DEP) joining M751: FL 350/370/390/410; to maintain level by VKB.
- iii. Westbound (WSSS DEP) on A457/P574/P628: FL300/340; to maintain level by A/VKL.
- iv. Westbound (WSSS DEP) on M751: FL300/320/340; to maintain level by VPK.
- v. Westbound Overflight: FL380/FL400.



Delegated to Singapore ACC for provision of ATS.

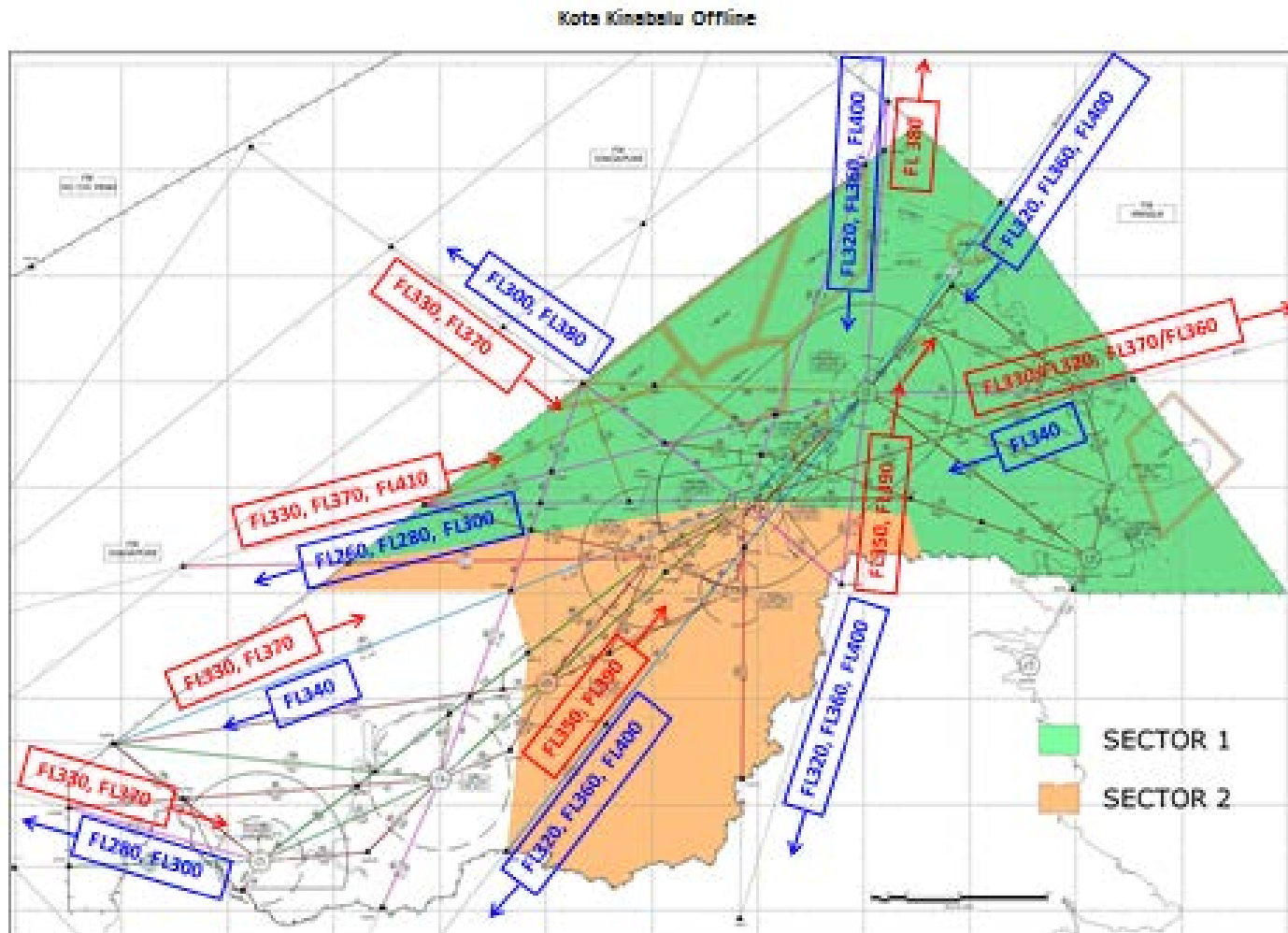


Delegated to Bangkok ACC for provision of ATS.



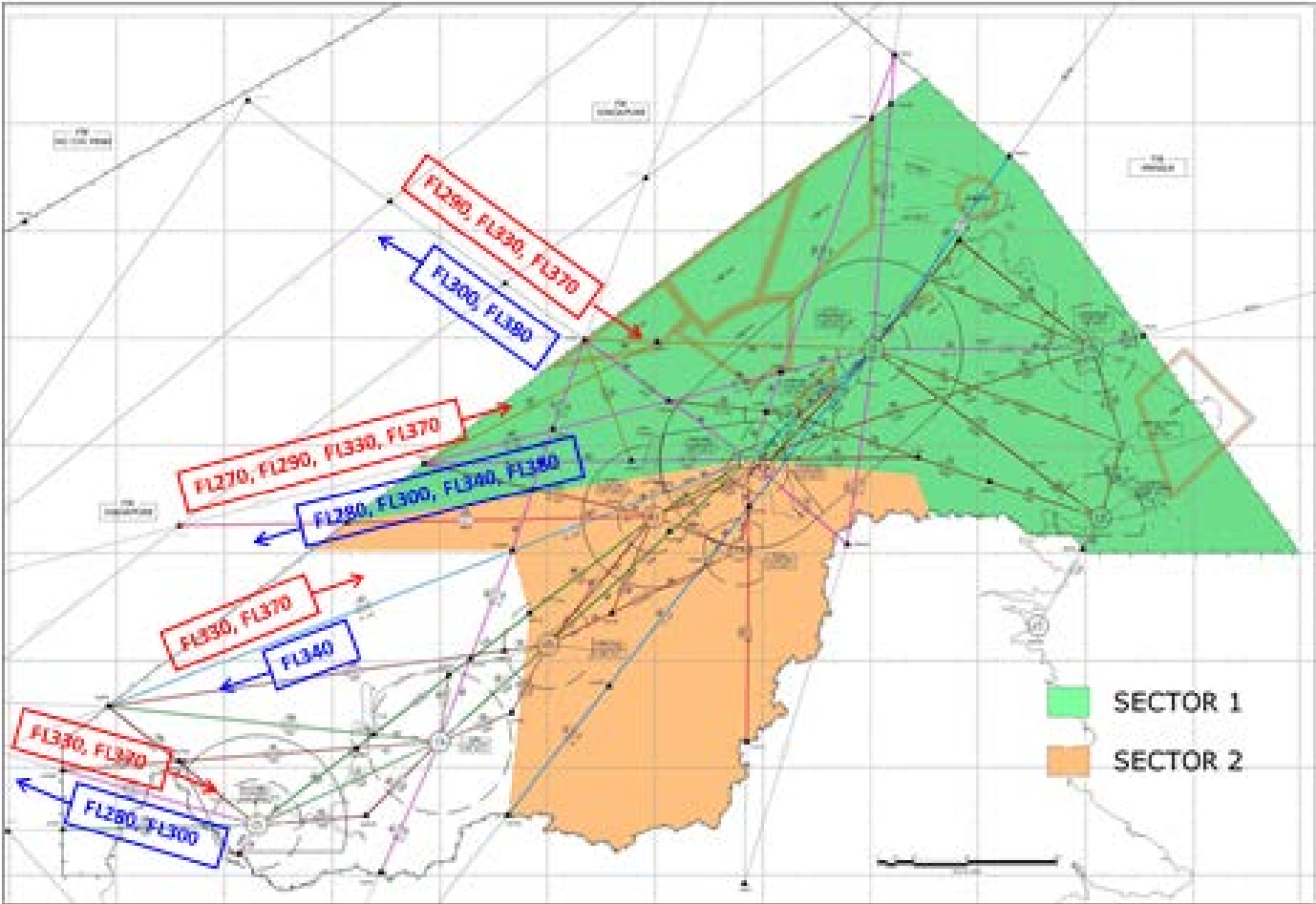
Delegated to Jakarta ACC for provision of ATS.

**INTERNATIONAL ROUTE STRUCTURE KOTA KINABALU FIR**



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Appendix H-5 to the Report

Singapore Offline



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Appendix H-5 to the Report

**KK ACC UNDER TOTAL DISRUPTION**

- All Domestic Routes suspended
- RNP Route M772 suspended
- Singapore ACC to inform Brunei ATC of KK disruption and seek radar assistance
- Singapore ACC to transfer active flights to Brunei Approach on 127.1 or 121.3 MHz
- All flights bound for Sandakan and Tawau must descend to maintain FL310 by OLKIT

**INTERNATIONAL ROUTES STRUCTURE**

- M768 (ASISU-MAMOK) –FL330, FL370
  - Singapore ACC to pass TNR to Makasar ACC at least 30 minutes before TCP MAMOK (ASISU estimate + 23 minutes)
  - Singapore ACC to inform aircraft to establish communication with Makasar ACC 10 minutes prior to TCP MAMOK
  - Singapore ACC to transfer aircraft to Makasar ACC at or before TCP MAMOK (VHF 132.5MHz or HF 11396/6556KHz)
  
- M768 (MAMOK-ASISU) – FL300, FL380
  - Makasar ACC to pass EST to Singapore ACC at least 30 minutes before TCP ASISU(MAMOK estimate + 23 minutes);
  - Makasar ACC to inform aircraft to establish communication with Singapore ACC 10 minutes prior to TCP ASISU;
  - Makasar ACC to instruct aircraft to contact Singapore Radio at or before TCP ASISU(8942/5655KHz).
  - For Northbound Departure from Brunei via M768 – Brunei ATC shall coordinate with Singapore ACC through own link
  - For Southbound Arrival into Brunei via M768 – Singapore ACC must ensure communication link with Brunei is available before accepting such flight
  
- M761/M646/A341(SABIP-VIMAG) – FL330, FL370
  - Singapore ACC to pass VIMAG transfer to Manila ACC at least 30 minutes prior to TCP VIMAG
  - Required level change by Manila ACC (FL330 to FL320 and FL370 to FL360) can only be achieved after passing VSN DVOR
  - Singapore ACC to ensure separation with M768/M758 traffic at same allocated flight level

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- A341/M646/M761 (VIMAG-SABIP)—FL340
  - Manila ACC to pass VIMAG transfer to Singapore ACC (Singapore shall work out KAMIN or SABIP estimate)
  - Manila and Singapore ACC shall maintain flight at FL340 through KK FIR

### **DOMESTIC ROUTES STRUCTURE**

- All flights suspended or
- Case to case basis subject to severity of disruption
- M758 (Westbound) – FL260, FL280, FL300
  - Use diversionary routes Y446/Y447
  - Singapore ACC can climb aircraft once in their FIR
- M758 (Eastbound) – FL330, FL370, FL410
  - Singapore ACC shall provide separation between same level traffic operating M768, M758 and M646
  - For traffic bound for Sandakan or Tawau, descend aircraft to FL310 before crossing OLKIT
- M646 (BRU/VMI/VJN-KAMIN) – FL300
- M646 (KAMIN-VMI/BRU/VJN) –FL330, FL370
- M768 (ASISU/BRU) – FL290
- M768 (BRU/ASISU) – FL280
- M761, M761/W459, M761/W447 (EASTBOUND) – FL330, FL370
- M761, W459/M761, W447/M761 (WESTBOUND) – FL280, FL300
- G580 (EASTBOUND) – FL330, FL370
- G580 (WESTBOUND) – FL280, FL300
  - Singapore ACC can climb aircraft once in their FIR and subject to traffic

### **SINGAPORE ACC UNDER TOTAL DISRUPTION**

- International Routes:
- M768 (Northbound) – FL300, FL380
  - Kinabalu ACC to pass ASISU or XXX transfer to Ho Chi Minh ACC
  - All aircraft to maintain level by TCP ASISU
- M768 (Southbound) – FL290, FL330, FL370
- Ho Chi Minh ACC to pass XXX or ASISU transfer to Kinabalu ACC
- All aircraft to maintain level by TCP XXX
- Singapore ACC shall suspend RNP Route M772
- M646 ?
- M758 ?
- L517/M758 ?
- M761/W459/M761 ?
- M761/W447/M767 ?
- M761 ?

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Appendix H-5 to the Report

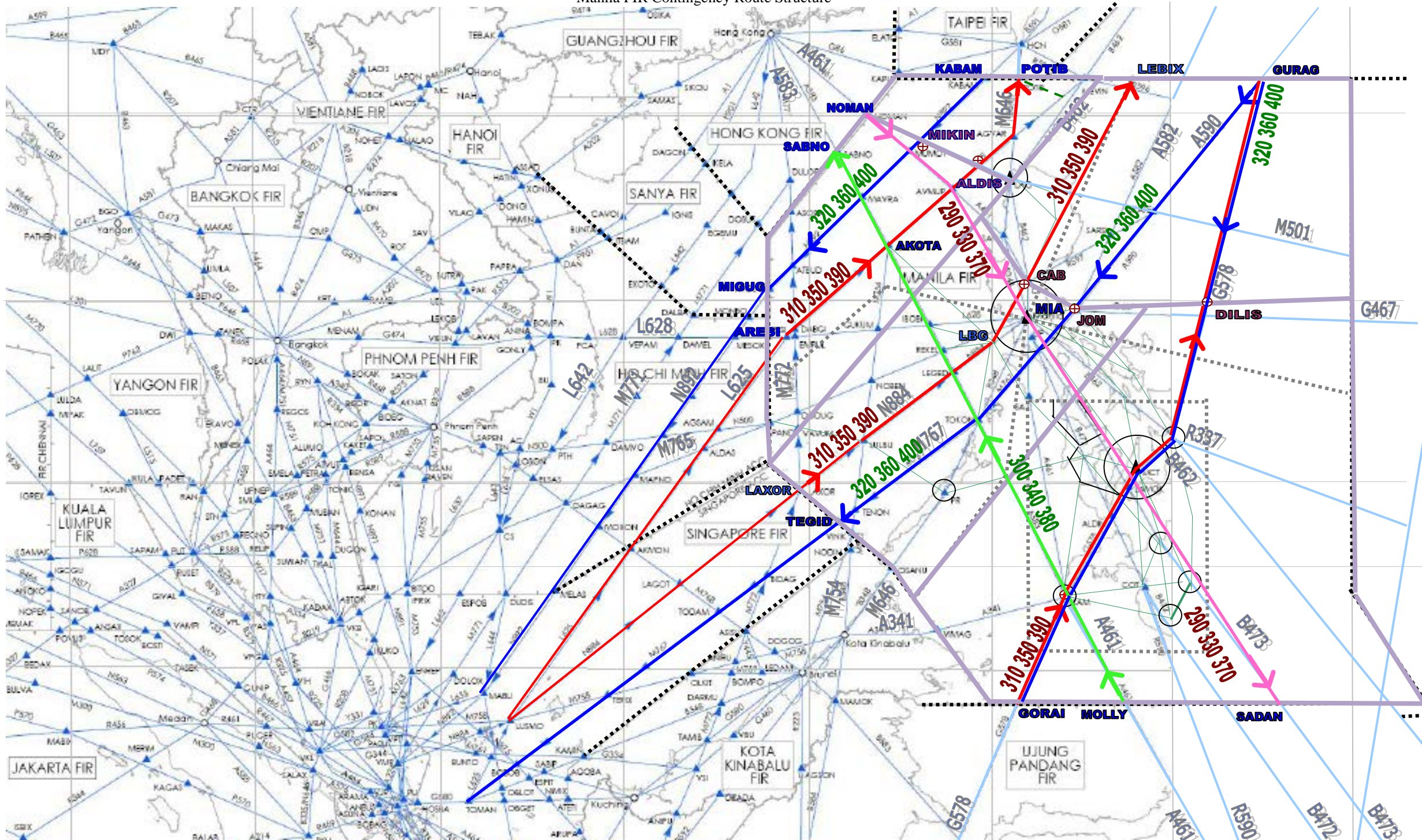
- G580 ?
- G334 ?



RACP/TF/3 WP/07-  
Appendix H-6 to the Report  
Manila FIR Contingency Route Structure

<b>Contingency Routes Manila</b>	<b>ATS Route</b>	<b>Direction</b>	<b>FL Assignment</b>	<b>ACCs</b>	<b>COM</b>
CRM-1	KABAM N892 MIKIN N892 MIGUG	Southwestbound (unidirectional)	320, 360, 400	Taipei Ho Chi Minh	HF, VHF HF,ADS-CPDLC
CRM -2	ARESI L625 AGVAR B348 POTIB	Northeastbound (unidirectional)	310, 350, 390	Ho Chi Minh Taipei	HF,ADS-CPDLC HF, VHF
CRM-3	LAXOR N884 CAB N884 LEBIX	Northeastbound (unidirectional)	310, 350, 390	Singapore Naha	HF,ADS-CPDLC HF,VHF
CRM-4	GURAG A590 JOM M767 TEGID	Southwestbound (unidirectional)	320, 360, 400	Fukuoka Singapore	HF,ADS-CPDLC HF,ADS-CPDLC
CRM-5	GORAI G578 DILIS G578 GURAG	Bidirectional	Northeastbound: 310, 350, 390  Southwestbound: 320, 360, 400	Ujung Pandang  Fukuoka	HF,ADS-CPDLC  HF,ADS-CPDLC
CRM-6	NOMAN A461 AVMUP W16 CIA MIA LIPA B473 SADAN	Southeastbound (unidirectional)	290, 330, 370	Ujung Pandang	HF, ADS-CPDLC
CRM-7	MOLLY A461 ZAM A583 SABNO	Northwestbound (unidirectional)	300, 340, 380	Ujung Pandang	HF, ADS-CPDLC

RACP/TF/3 WP/07-  
Appendix H-6 to the Report  
Manila FIR Contingency Route Structure



RACP/TF/3 WP/07-  
Appendix H-6 to the Report  
Manila FIR Contingency Route Structure

<b>Contingency Route</b>	<b>ATS Route</b>	<b>ADJACENT ACC</b>	<b>COMMUNICATION</b>
CRM-1	KABAM N892 MIKIN	Taipei	VHF: 127.9/ 129.1
	MIKIN N892 MIGUG	Ho Chi Minh	VHF: 120.7 ADS-CPDLC LOG ON: VVTS
CRM -2	ARESI L625 ALDIS	Ho Chi Minh	VHF: 120.7 ADS-CPDLC LOG ON: VVTS
	ALDIS L625 AGVAR M646 POTIB	Taipei	VHF: 127.9/ 129.1
CRM-3	LAXOR N884 CAB	Singapore	HF: 8942/ 5655 ADS-CPDLC LOG ON: WSJC
	CAB N884 LEBIX	Naha	HF: 4666/3455 (TOKYO RADIO) VHF: 123.9 (LEBIX)
CRM-4	GURAG A590 JOM	Fukuoka	HF: 4666/3455 (TOKYO RADIO) ADS-CPDLC LOG ON: RJJJ
	JOM M767 TEGID	Singapore	HF: 8942/ 5655 ADS-CPDLC LOG ON: WSJC
CRM-5	GORAI G578 DILIS	Ujung Pandang	HF: 11396/ 6556 VHF: 128.1 (GORAI) ADS-CPDLC LOG ON: WAAF
	DILIS G578 GURAG	Fukuoka	HF: 4666/ 3455 ADS-CPDLC LOG ON: RJJJ

RACP/TF/3 WP/07-  
Appendix H-6 to the Report  
Manila FIR Contingency Route Structure

CRM-6	NOMAN A461 AVMUP W16 MIA LIPA B473 SADAN	Ujung Pandang	ADS-CPDLC LOG ON : WAAF HF: 11396/ 6556
CRM-7	MOLLY A461 ZAM A583 SABNO	Ujung Pandang	ADS-CPDLC LOG ON : WAAF HF: 11396/ 6556

# **SWG Southeast Asia 1**

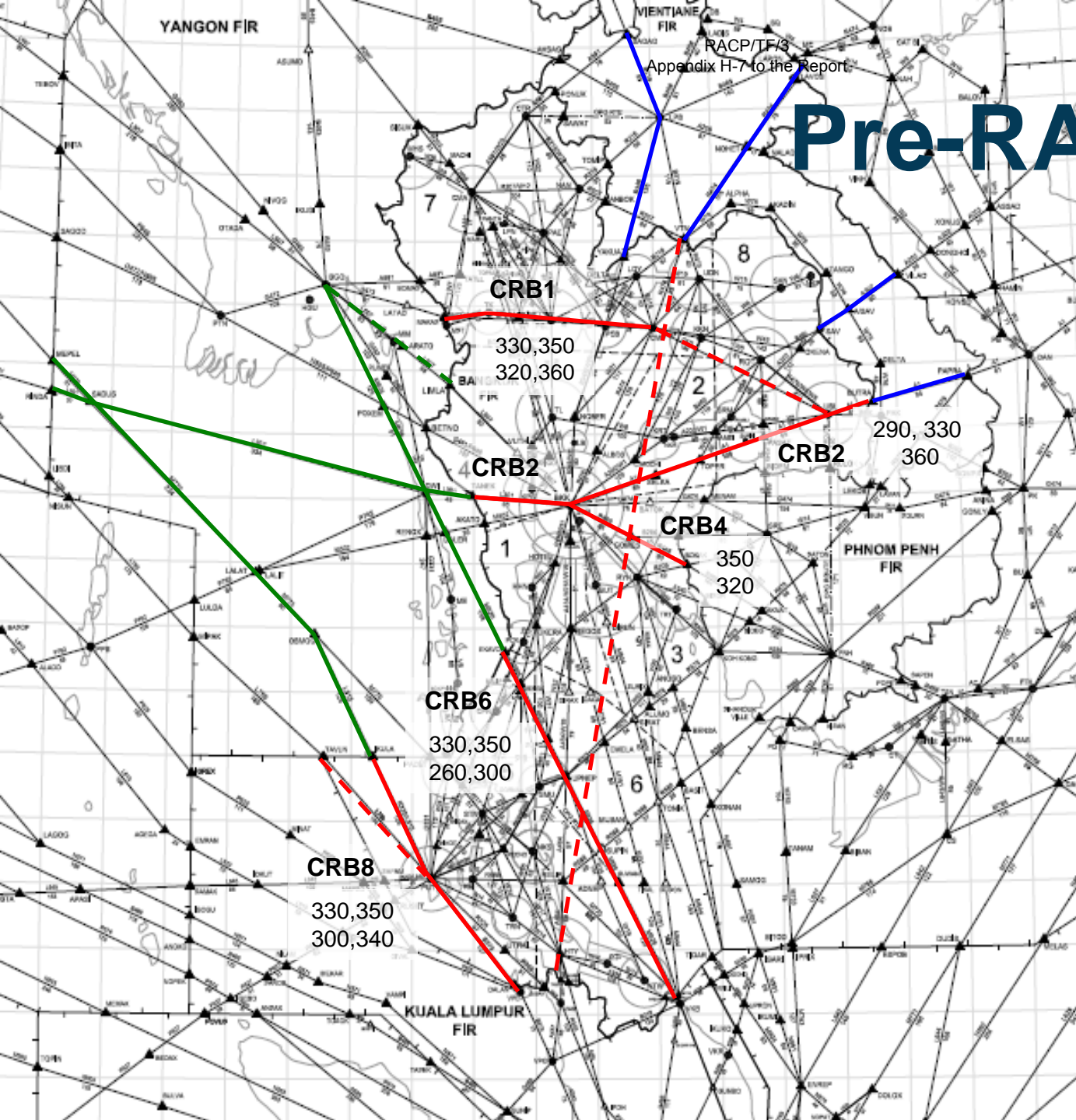
**Cambodia, Lao PDR,  
Myanmar, Thailand**

**Contingency Routes and  
FLAS**

YANGON FIR

MENTIANE FIR  
RACP/TF/3  
Appendix H-7 to the Report

# Pre-RACP/TF/2



**CRB1**

330,350  
320,360

**CRB2**

**CRB2**

290, 330  
360

**CRB4**

350  
320

**CRB6**

330,350  
260,300

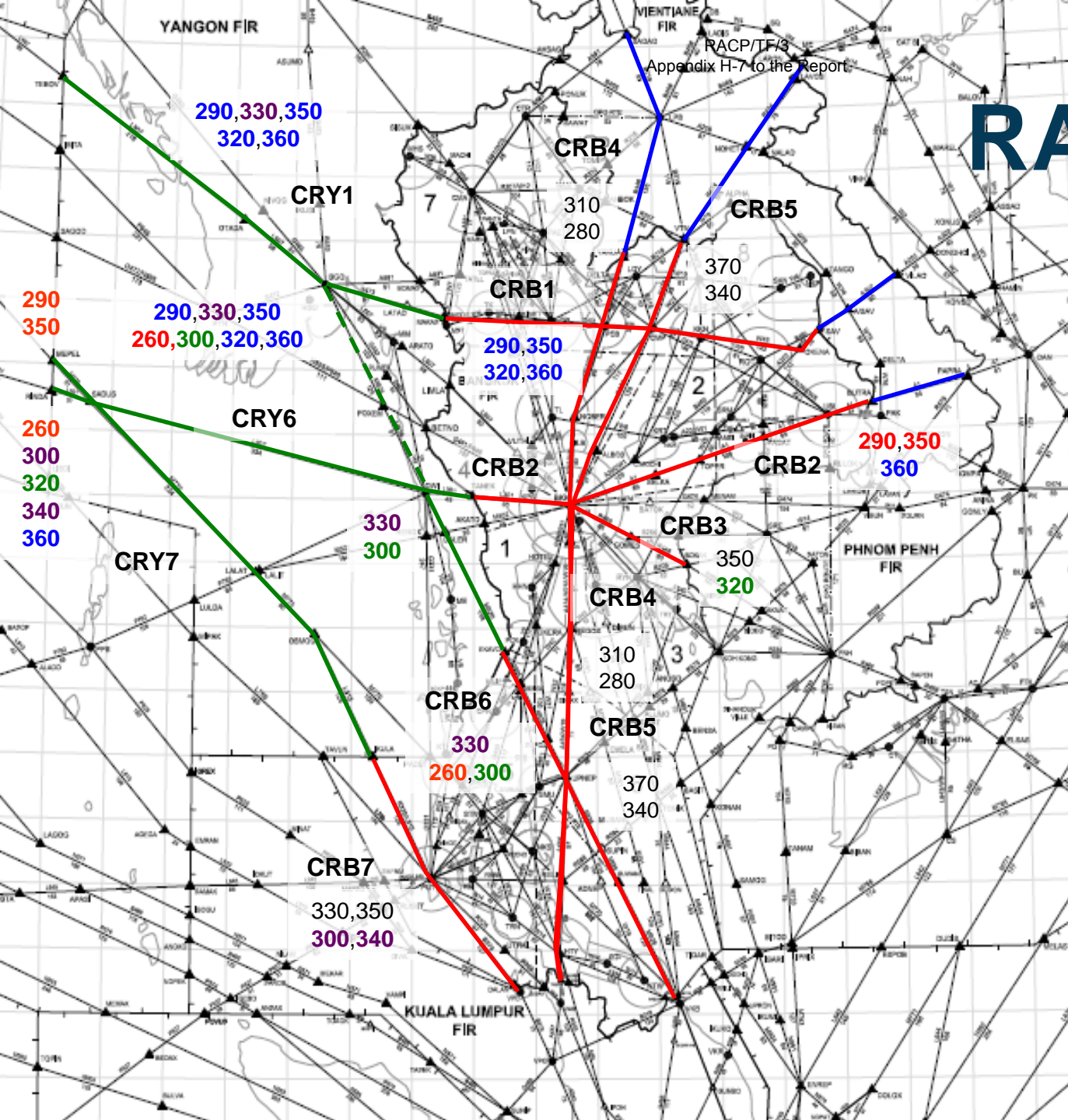
**CRB8**

330,350  
300,340

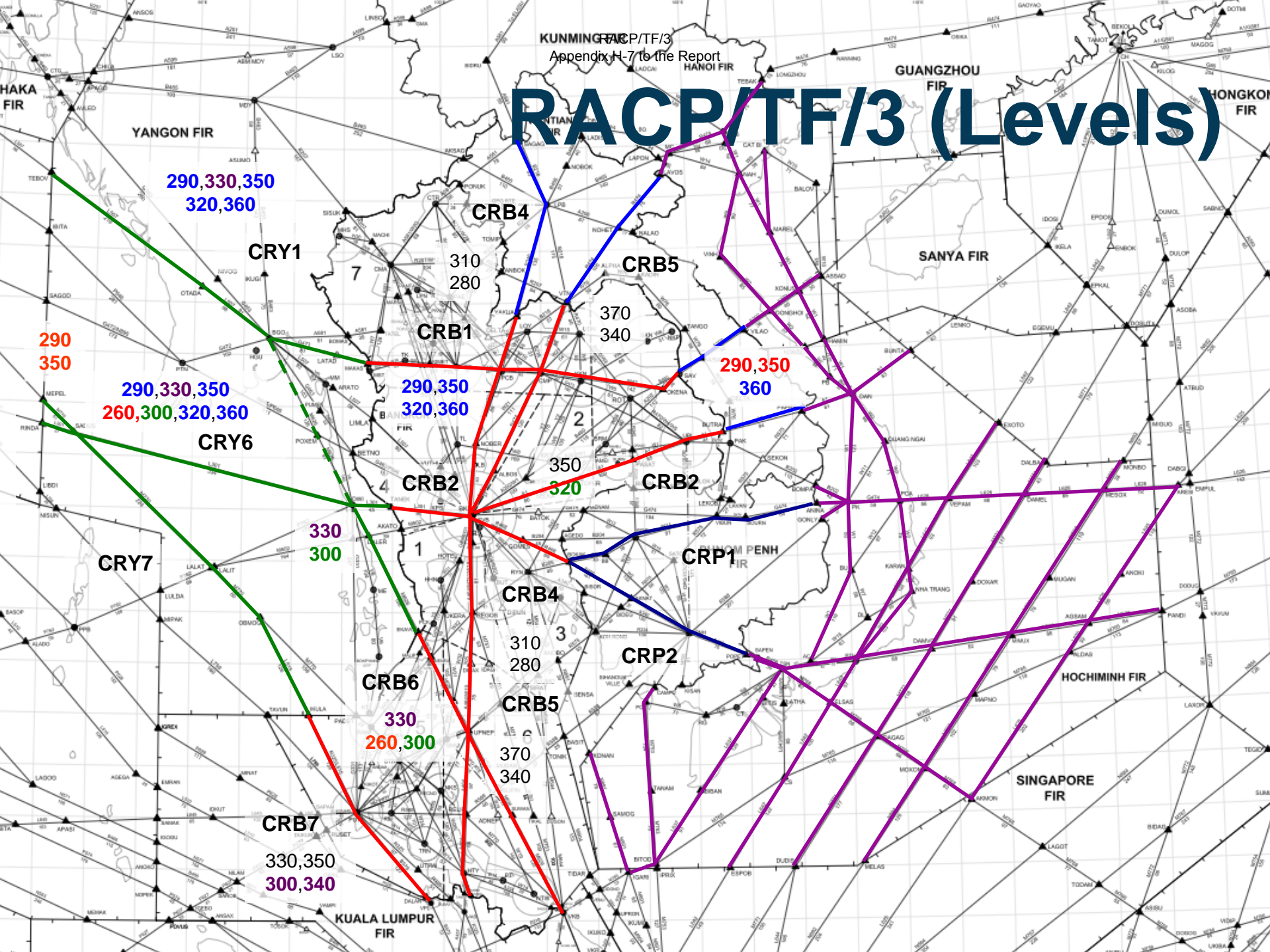
KUALA LUMPUR  
FIR

PHNOM PENH  
FIR

# RACP/TF/2



# RACP/TF/3 (Levels)



290,330,350  
320,360

CRY1

CRB4

CRB5

CRB1

290,350  
320,360

290,350  
360

290  
350

290,330,350  
260,300,320,360

CRY6

CRB2

350  
320

CRB2

330  
300

CRY7

CRB4

CRP1

CRB5

CRP2

CRB6

330  
260,300

310  
280

370  
340

CRB7

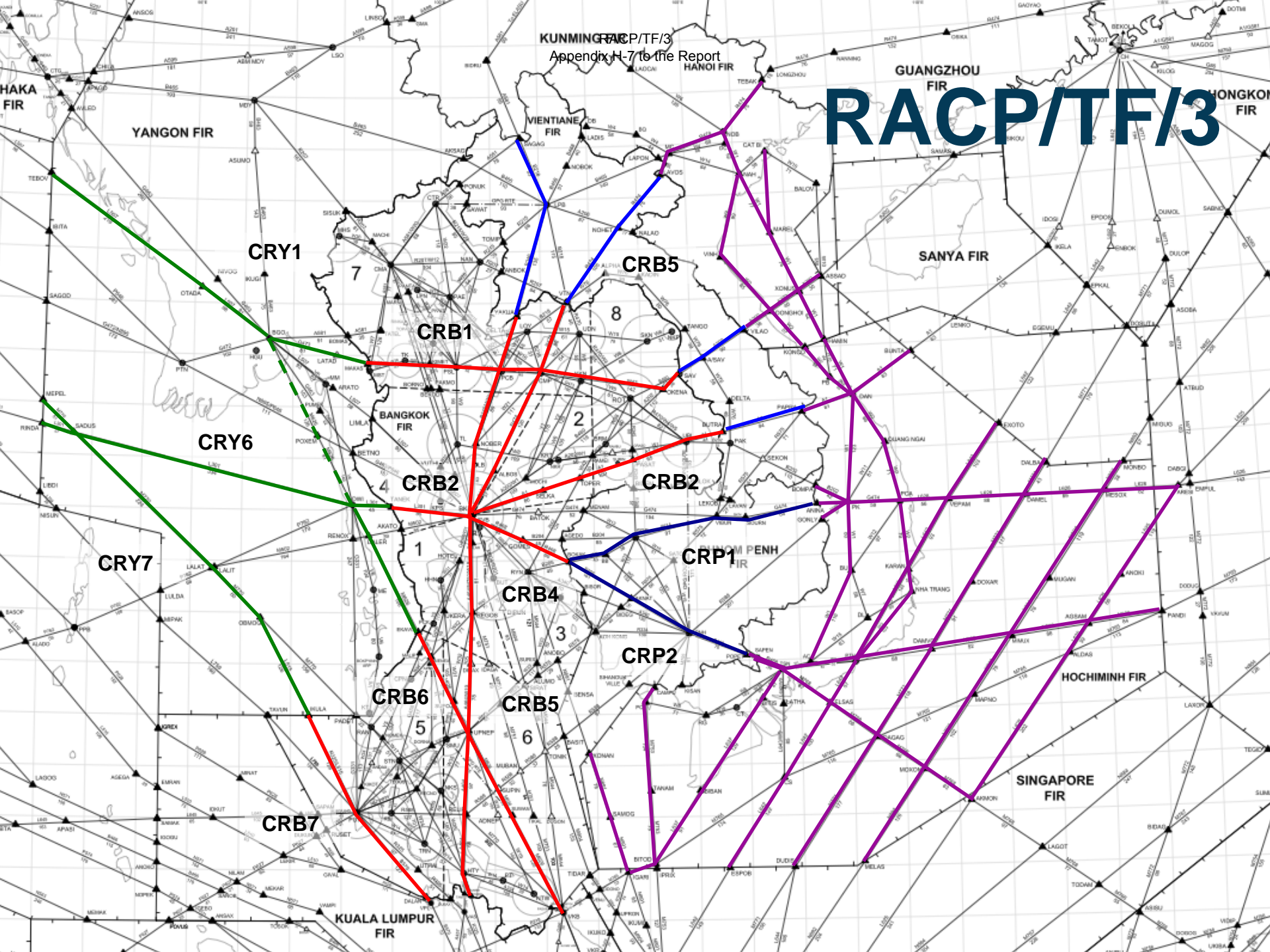
330,350  
300,340

KUALA LUMPUR FIR

SINGAPORE FIR



# RACP/TF/3



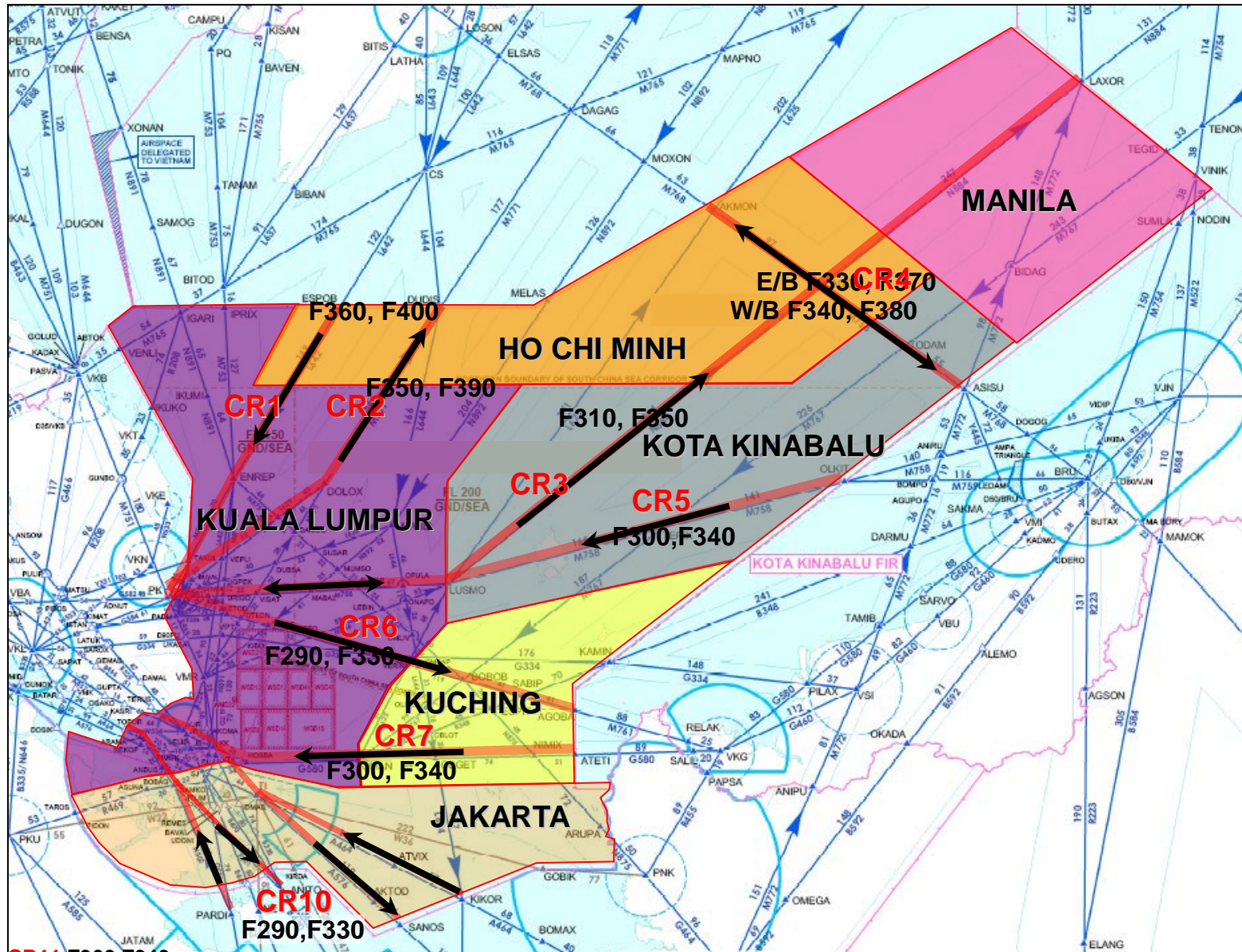
**Cambodia ATS Routes/FLAS**

CR	ATS Route	Direction	FL	ATC Unit	Comm
CRC1	BOKAK W3 SRE			VTBB/VVT	135.5
	W14 VIBUN G474			S	123.3
	ANINA				
CRC2	BOKAK R468			VTBB/VVT	135.5
	SAPEN			S	120.1/120.9

Singapore Contingency Routes and Flight Level Allocation Scheme **MARCH 2013**

Contingency Route	ATS Route	Direction	Flight Level Assignment	ATC Unit	Communications
CR1	L642	W/B	F400/F360	WMKK/VVTS	123.7 , 5655
CR2	M771	E/B	F350/F390	WMKK/VVTS	123.7 , 5655
CR3	M758/N884	E/B	F310/F350		133.8 , 5655
CR4	M768	E/B , W/B	F330/F410 F300/F380		8942
CR5	M758	W/B	F300/F340		133.8 , 5655
CR6	M761	E/B	F290/F330		134.2
CR7	G580	W/B	F300/F340		134.2
CR8	M774	W/B	F320/F360*		134.4
CR9	M635	E/B	F310/F350*		134.4
CR10	B470	E/B	F290/F330*		134.4
CR11	G579	W/B	F300/F340*		134.4

### CONTINGENCY ROUTES STRUCTURE IN SINGAPORE FIR



**CR11** F300,F340  
**CRJ5** F280, F320,F380

**CR9** F310,F350  
**CRJ2** F290,F350, F410

**CR8** F320, F360  
**CRJ1** F320, F380

### Viet Nam ATM Contingency Routes

Affected States and FIRs:

No.	States	FIR	ATS units
1	Cambodia	Phnom Penh	Phnom Penh ACC
2	China	Kunming Guangzhou Sanya	Kunming ACC ACC Nanning ACC Sanya
3	Laos	Vientiane	Vientiane ACC
4	Malaysia	Kuala Lumpur	Kuala Lumpur ACC
5	Philippines	Manila	Manila ACC
6	Singapore	Singapore	Singapore ACC

Contingency route structure:

a) Ha Noi FIR:

ATS routes	Orientation	Flight levels
R474	Eastbound	270, 290, 330, 370
	Westbound	260, 300, 340, 380
A202	Eastbound	290, 330
	Westbound	300, 340
W1, W20	Southbound	320, 360
	Northbound	310, 350
W2	Southbound	140, 240
	Northbound	150, 250

b) Ho Chi Minh FIR:

ATS routes	Orientation	Flight levels
L642, N892, M771, L625		310, 320 390, 400
A1	Eastbound	290, 330
	Westbound	300, 340
B202, G474, R588, L628	Eastbound	290
	Westbound	280
M753	Northbound	270
	Southbound	260
N891	Northbound	300
	Southbound	330
M765	Eastbound	390
	Westbound	280
N500	Eastbound	330
	Westbound	300
L637	Northeast bound	250
	Southwest bound	240

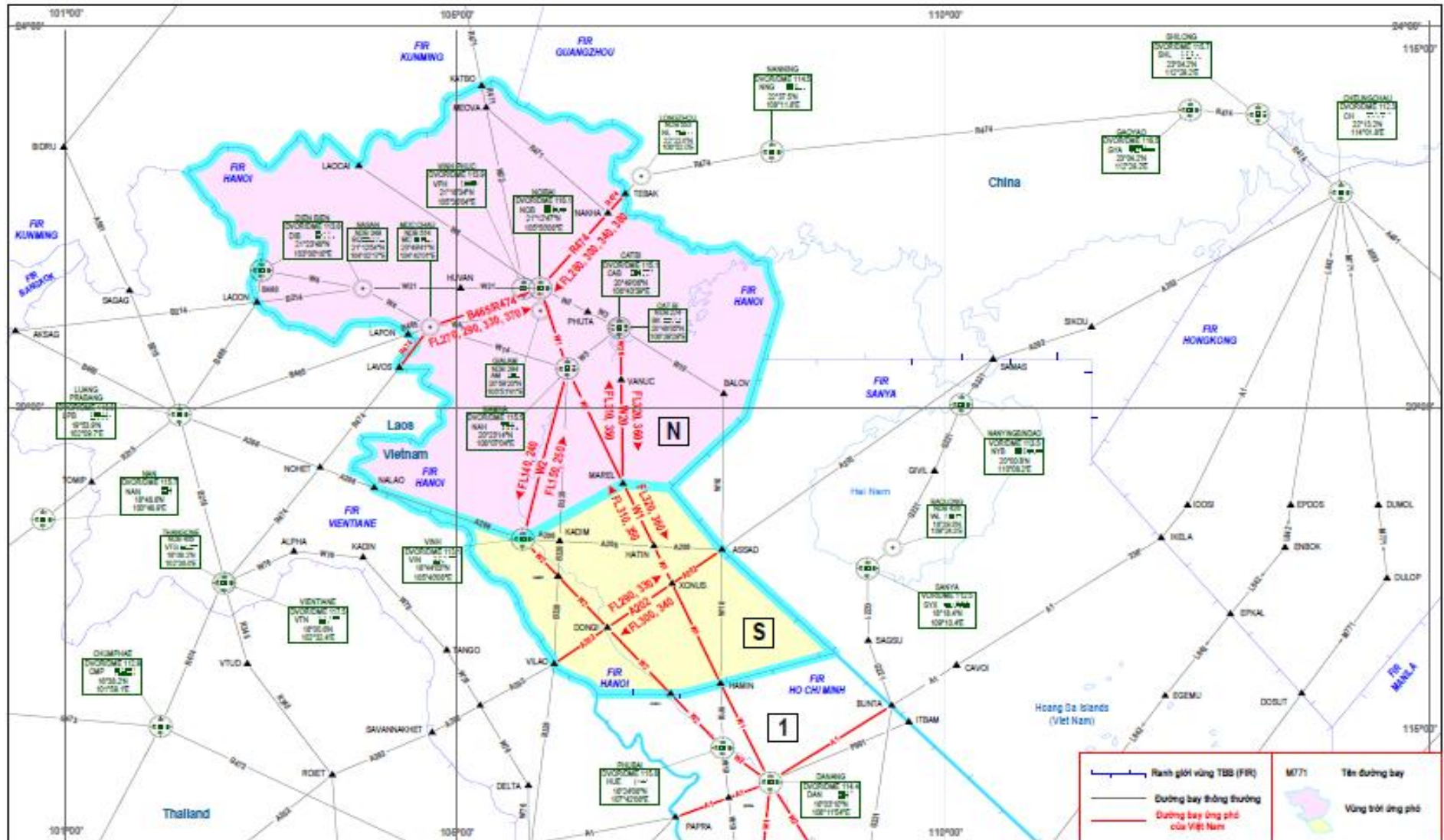
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R468, M768	Southeast bound	270
	Northwest bound	380
W1	Northbound	310, 350
	Southbound	320, 360
W2	Southbound	140, 240
	Northbound	150, 250

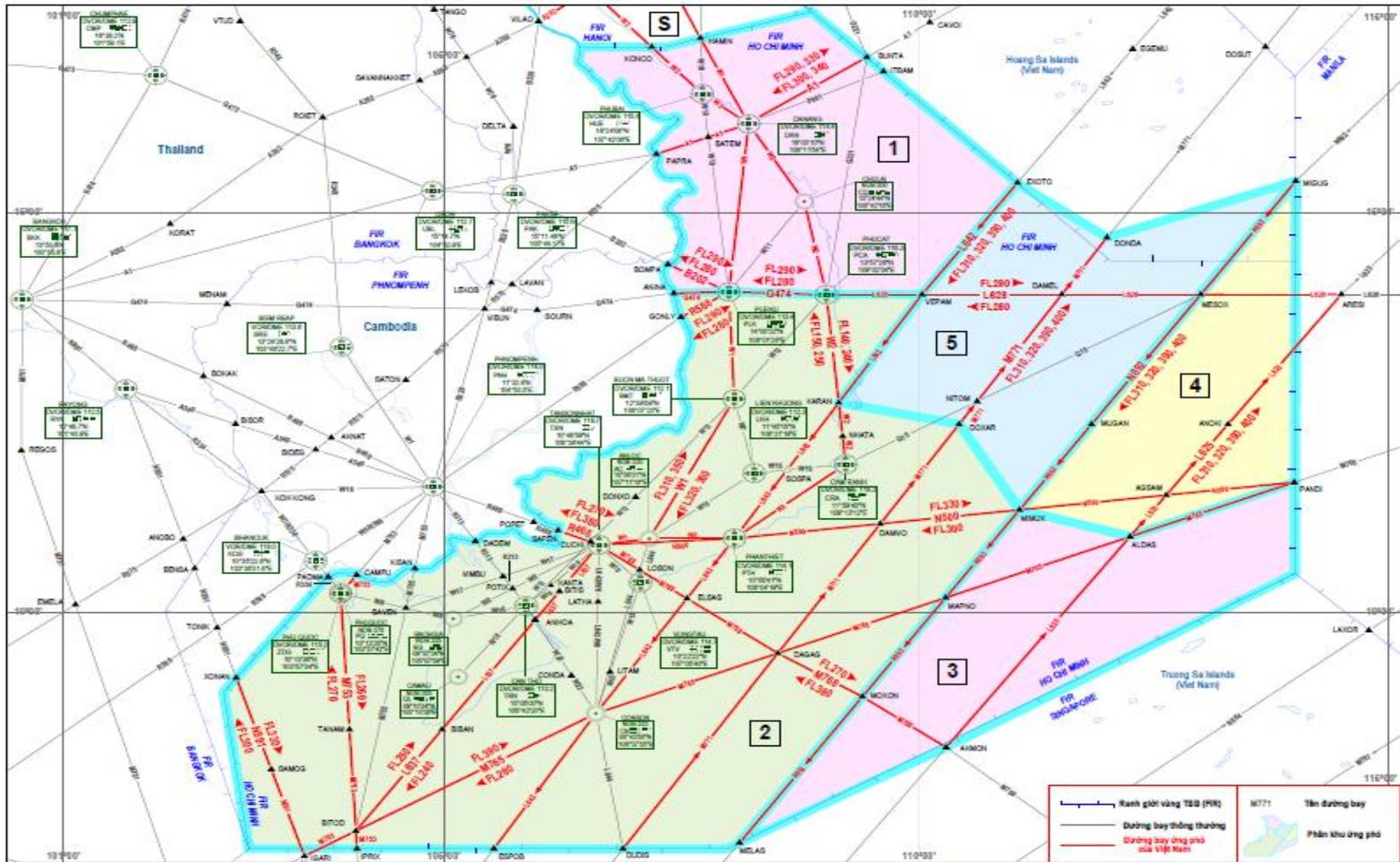
*Note: Other ATS routes, FLs will be added subject to contingency process.*

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Appendix 1: ATM CONTINGENCY ROUTES AND SECTORS WITHIN HA NOI FIR



**Appendix 2: ATM CONTINGENCY ROUTES AND SECTORS WITHIN HO CHI MINH FIR**





## Terms of Reference

### Regional ATM Contingency Plan Task Force (RACP/TF)

1) The objective of the Regional ATM Contingency Plan Task Force is:

In collaboration with affected stakeholders and ensuring inter-regional harmonization, develop and implement a Regional ATM Contingency Plan that:

- i) provides a contingency response framework for States;
- ii) ensures a timely, harmonised and appropriate response to events that affect the provision of Air Traffic Services (ATS), or which ATS is involved in; and
- iii) provides a greater degree of certainty for airspace and aerodrome users during contingency operations.

2) To meet this objective the Task Force shall:

- a) Review the current status of ATM Contingency Plans and the contingency preparedness of Asia and Pacific Region States;
- b) Identify areas where ATM contingency planning requires improvement in terms of compliance with Annex 11 and accepted best practice, and to make recommendations on those areas of improvement;
- c) Analyse contingency procedures in use in other ICAO Regions, and cooperate with other groups which are involved with similar work in adjacent airspaces, in order to achieve harmonized inter-regional solutions;
- e) Develop a Regional ATM Contingency Plan that:
  - i) takes into account the varying levels of contingency response necessary, commensurate with precipitating events;
  - ii) takes into account the varying levels of State contingency capability;
  - iii) provides principles for Regional ATM Contingency planning;
  - iv) details recommended Regional contingency practices to events such as severe meteorological and geological phenomena, health emergencies (pandemics, etc), military conflicts and industrial relations issues; and
  - v) where practical, provides contingency planning templates for States.

The Task Force reports to APANPIRG through the ~~ATM/AIS/SAR~~ **ATM** Sub-Group for planning, coordination and implementation of a regional ATM contingency plan, with a link to the ~~METWARN/~~ **MET/H** Task Force.

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**RACPTF - TASK LIST**

<b>ID</b>	<b>Activity</b>	<b>Start Date</b>	<b>Complete Date</b>	<b>Status</b>	<b>Group Responsible</b>
1/1	Develop Basic Plan Elements	19 Apr 2012	RACP/TF/3 RACP/TF/4		Secretariat (RACP/TF/1 WP05)/Regional ATM Contingency Plan Review Team
1/2	Develop key principles and practices	19 Apr 2012	RACP/TF/3 RACP/TF/4		Secretariat/Regional ATM Contingency Plan Review Team
1/3	Draft Regional ATM Contingency Plan	19 Apr 2012	RACP/TF/3 Ongoing		Secretariat/Regional ATM Contingency Plan Review Team
1/4	Form Regional ATM Contingency Plan Review Team	17 Apr 2012	19 Apr 2013	Completed	RACP/TF
1/5	Develop Contingency Plan Review Questionnaire	19 Apr 2012	30 Jun 2012	Completed	Secretariat
1/6	Update Regional Office Contingency Plan Status Record	17 Apr 2012	19 Apr 2012	Completed	Secretariat
1/7	All States to develop Contingency Plan	19 Apr 2012	Ongoing		States
1/8	Update Level 1/Level 2 Contingency Plan template based on Indonesian model	19 Apr 2012	RACP/TF/3 RACP/TF/4		Secretariat/Regional ATM Contingency Plan Review Team
1/9	Review State ATM Contingency Plans and identify areas for improvement	19 Apr 2012	Ongoing		Secretariat/Regional ATM Contingency Plan Review Team
1/10	Review Terms of Reference for meeting timeline and suitability	RACP/TF/1	RACP/TF/2	Completed	RACP/TF
1/11	Development of a Level 2 Contingency Arrangement Template	19 Apr 2012	<del>30 Jun 2012</del> RACP/TF/5		Indonesia/Secretariat/Regional ATM Contingency Plan Review Team
1/12	RACP/TF/1 17 – 19 April 2012	17 Apr 2012	19 Apr 2012	Completed	Secretariat
1/13	RACP/TF/2 25 - 29 March 2013	25 Mar 2013	29 Mar 2013	Completed	Secretariat
1/14	RACP/TF/3 2013	12 Nov 2013	15 Nov 2013	Completed	Secretariat

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ID	Activity	Start Date	Complete Date	Status	Group Responsible
2/1	Forward preliminary Contingency Route and FLAS structures as agreed by SWG to the Secretariat for collation.	14 Mar 2013	<del>12 Apr 2013</del> RACP/TF/5		RACP/TF SWG States
2/2	Circulate relevant finalized/agreed Contingency Route and FLAS structures to neighbouring non-RACP/TF/2-attending States	15 Apr 2013	RACP/TF/3 15 Jan 2014		Secretariat
3/1	Explore the establishment of a linkage between the Regional ATM Contingency Plan and the Regional Framework for Collaborative ATFM	15 November 2013	RACP/TF/4		Secretariat
3/2	Re-circulate contingency questionnaire to non-respondent States	15 November 2013	15 Jan 2014		Secretariat
3/2	RACP/TF/4	29 Apr 2014	2 May 2014		Secretariat
3/3	Standardize contingency route table	15 Nov 2013	15 Dec 2013		Contingency Plan Review Team/Secretariat
3/3	Contact non-SWG States with request to forward contingency route and FLAS to Regional Office by RACP/TF/5	15 Nov 2013	15 Jan 2014		Secretariat
3/4	Consolidated contingency route/FLAS map	15 Nov 2013	31 May 2014		Singapore/Secretariat
3/5	Confirmation of Contingency Plan Review Team replacements	15 Nov 2013	22 Nov 2013		India/Thailand