



*International Civil Aviation Organization*

**The 10<sup>th</sup> Meeting of the FANS Implementation Team for South-East Asia (FIT-SEA/10) and the 17<sup>th</sup> Meeting of the South-East Asia ATS Coordination Group (SEACG/17)**

Singapore, 24 – 27 May 2010

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**Agenda Item 3: Review Outcomes of Related Meetings**

**OUTCOMES OF APANPIRG/20**

(Presented by the Secretariat)

**SUMMARY**

The 20<sup>th</sup> Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/20, September 2009) raised a total of 76 Conclusions and Decisions for regional actions. This paper presents the APANPIRG/20 Conclusions and Decisions and relevant material from the APANPIRG/20 report for review by the meeting.

**1. INTRODUCTION**

1.1 The 20<sup>th</sup> meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/20) was held in Bangkok, Thailand from 7-11 September 2009.

**2. DISCUSSION**

2.1 APANPIRG/20 discussed a number of matters that may be of interest to SEACG. Relevant extracts from the APANPIRG/20 report have been included in **Attachment A** to this paper.

2.2 As well as reviewing progress on Conclusions and Decisions raised by previous APANPIRG meetings, APANPIRG/20 raised a total of 76 new Conclusions and Decisions for regional actions, as shown in **Attachment B** to this paper. A brief summary of key technical, economical and operational outputs of APANPIRG/20 is presented below:

- States, organizations and stakeholders collect and process data to support the regional metrics adopted by APANPIRG, leveraging to the extent possible all existing data and ongoing efforts, and provide a progress report to APANPIRG/21.
- The 'Interim Strategy for the Implementation of New ICAO Flight Plan Format and Supporting ATS Messages' should be adopted and published as the interim edition, and States and users should be urged to commence implementation planning based on the interim strategy.
- In order to align regional implementation planning, States inform the Regional Office by 1 July 2010 of their scheduled date and implementation methodology for transition to the new Flight Plan and ATS Message formats.

- A survey of Asia/Pacific States should be conducted with the objective of benchmarking the current status of Air Traffic Flow Management (ATFM) activities in the Asia/Pacific Region.
- The RVSM Minimum Monitoring Requirements (MMRs) should be adopted as the MMRs applicable for the Asia/Pacific Region.
- In addition to the continuous update of RVSM Approvals data called for by Conclusion 19/15 and APANPIRG RMA requirements, States provide an update of RVSM Approvals data in conjunction with the annual December traffic sample data submission required by Conclusion 16/4.
- The *Asia/Pacific Regional Impact Statement – RVSM Global Long Term Height Monitoring Requirements effective from November 2010* should be adopted and circulated as Asia/Pacific regional guidance material.
- The term En-route Monitoring Agency (EMA) should be used to describe an organization providing airspace safety assessment, monitoring and implementation services for international airspace in the Asia/Pacific Region to support implementation and operation of reduced horizontal (lateral and longitudinal) separation.
- a) States should be urged to provide Region & State Information for inclusion in the GOLD Appendix E, by sending the completed forms(s) provided in Annex 1 to the Report on agenda item 3.4 for their flight information regions (FIRs) or control areas (CTAs) by 30 October 2009; and  
b) IATA should be urged to coordinate with member airlines for providing operator & aircraft information for the GOLD Appendix F by sending completed form(s) as provided in Annex 2 to the Report on agenda item 3.4 for each variance, clarification, or addition to applicable aircraft type by 30 October 2009.
- Recognizing the technical limitations in satellite data link communications capability for the provision of ADS-C and CPDLC, States intending to implement reduced horizontal separations based on RNAV 10 or RNP 4 PBN specifications in oceanic and remote areas commence early coordination with Communication Service Providers (CSPs) in order to ascertain adequate data link communication/surveillance capability to support the proposed implementation. Outcomes should be recorded in a formal Service Level Agreement (SLA) between implementing States and CSPs, jointly or severally, to ensure that capabilities are available to properly support RCP 240/D specifications contained in Appendices B and C to the GOLD on an ongoing basis.
- States should be urged to use the PBN Implementation Progress Report Template provided in Appendix K to the Report on Agenda Item 3.4 for all future reporting of their status of PBN implementation. The Report should be submitted at each of the future PBN Task Force Meeting.
- The Asia/Pacific Regional PBN Implementation Plan provided in Appendix L to the Report on Agenda Item 3.4 should be adopted as Version 1.0.

- States should be urged to give detailed considerations to the operational need, safety and cost benefits prior to deciding on RNP AR Approach implementation.
- States should be
  - a) reminded of the contents of State Letter AN 7/5-01/52 dated 11 May 2001 on ILS maintenance procedures;
  - b) reminded to provide updates to information as contained in the eighth edition of the flight inspection catalogue; and
  - c) urged to consider upgrading their FIS to include the flight inspection requirements of GNSS, Interference, ADS-B, Multi-lateration etc. as necessary.
- a) The ICAO Regional Office, in coordination with the ISCS Provider State, should prepare a survey to be circulated to the ISCS user States and focal points on their intentions as to the future reception of OPMET data and WAFS forecasts, i.e. ISCS-G3 vs. WIFS;
- b) After completion of action under a) above by 1 December 2009, the ISCS Provider State should inform the ISCS user States concerning their plans for the replacement of the ISCS-G2; and
- c) The WAFSOPSG should be invited to consider preparing an amendment to all ICAO regional procedures in the ANP/FASID to render WIFS and SADIS FTP Service as an alternative to the respective satellite broadcasts as the primary means of obtaining WAFS forecasts and OPMET data for flight planning purposes.
- Upon release of the Global Operational Data Link Document (GOLD) by the Ad-Hoc GOLD Working Group in first quarter 2010, the FANS-1/A Operations Manual (FOM) should be withdrawn and replaced by the GOLD as Asia/Pacific regional guidance material for use by States and airspace users as the basis for operating Automatic Dependent Surveillance – Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC), in conjunction with Annex 10 – Aeronautical Telecommunications Volume II – Communications Procedures including those with PANS status and the Procedures for Air Navigation Services – Air Traffic Management (PANS–ATM Doc 4444).

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) review related discussions from APANPIRG/20 and the Conclusions and Decisions, and
- b) identify any actions arising for SEACG/17.

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**Agenda Item 3: Regional Air Navigation Planning and Implementation Issues**

**3.2 ATM/AIS/SAR**

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3.2.2 The meeting reviewed the outcomes of the 19<sup>th</sup> meeting of the Air Traffic Management/Aeronautical Information Services/Search and Rescue Sub-Group (ATM/AIS/SAR/SG/19, June 2009) held at the ICAO regional office in Bangkok, Thailand. ...

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**Air Traffic Management**

**Western Pacific/South China RVSM Scrutiny Group**

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3.2.8 Acknowledging the excellent outcomes that had been achieved by the WPAC/SCS RSG, the meeting agreed to Decision 20/6 – Dissolution of Western Pacific/South China Sea RVSM Scrutiny Working Group.

**First Meeting of ICAO Flight Plan and ATS Messages Task Force**

3.2.9 The First meeting of the Asia/Pacific Flight Plan & ATS Messages Implementation Task Force (FPL&AM TF/1) was held at the Regional Office during March 2009. The FPL&AM TF/1 meeting had prepared a suitable PFF, as adopted by APANPIRG/20 (Agenda Item 3.0 refers) which would be periodically reviewed by the Task Force to ensure that it continues to accurately reflect the work programme of the FPL&AM/TF.

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3.2.12 However, the Interim Strategy provided valuable information to States and users about the way that the Asia/Pacific region intended to proceed with implementation. The Strategy would be updated by future meetings of the Task Force to incorporate the latest information available. In the meantime, there was a pressing need to increase awareness amongst States about the complexities involved and encourage them to commence work on implementation.

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**ATFM Seminar/Workshop (October 2008, Fukuoka, Japan)**

3.2.27 Recognizing that the ATFM Seminar (October 2008, Fukuoka) called for by APANPIRG/18 provided a good opportunity to influence regional ATFM planning, the Regional Office elected to include a ‘Workshop’ component to allow for opportunity for recommendations to come forward. The outputs of the ATFM Seminar/Workshop were presented as a series of six outcomes and five recommendations and, based on these, the meeting adopted the following Conclusions 20/11 – ATFM Steering Group and Concept of Operations, and 20/12 – Adopt ATFM Communications Manual.

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Establishment of Southeast Asia Route Review Task Force (SEA-RR/TF)

3.2.29 The Review Task Force would analyze and implement appropriate measures, where environmental and efficiency benefits could be positively enhanced using the ICAO Regional and State Performance Framework methodology....

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Indonesia - Establishment of Radar Service in Upper Sectors Ujung Pandang

3.2.31 The meeting noted that Indonesia had taken some actions to prepare the implementation of radar services in the upper airspace of the Ujung Pandang FIR.

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USA - Operational Trial of ADS-B In-Trail Procedures

3.2.33 The United States provided an in-depth update on planning by the FAA to conduct an operational trial of ADS-B In-Trail Procedures (ITP) in the South Pacific. For ADS-B ITP, the maneuvering aircraft obtains the flight identification on proximate ADS-B equipped non-maneuvering aircraft using ADS-B 'IN' technologies. Based on the ADS-B data from the non-maneuvering or reference aircraft, a pilot can make an ITP altitude change request to ATC. The controller, who maintains separation responsibility at all times can then approve the manoeuvre. The planned trial will be undertaken with United Airlines B747 aircraft, and will be closely monitored and supervised by the FAA. ...

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Japan – Continuous Descent Arrivals (CDA)

3.2.36 Japan provided updated information on their Continuous Descent Arrivals programme which was initially implemented as an operational trial at Kansai International Airport (RJBB) during specified periods from 7<sup>th</sup> May until 11 August, 2009. The CDA operational trial used the services of Japanese air carriers only. The timing of the trial was limited between 23:00 JST (04:00 UTC) and 07:00 JST (22:00 UTC) when there is very little airport demand.

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Japan - Data Link Operations and Numbers of RNP 4 Aircraft in the Fukuoka FIR

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3.2.41 All ANSPs and operators recognized that this separation reduction to 30 NM would provide aircraft with more opportunity to fly at or closer to an optimum altitude than before as well as increase airspace capacity and ATC flexibility. Also this reduction contributes to reduce fuel burn and emissions. JCAB conducted a study of environmental benefits of the RNP 4-based separation reduction, and the study indicated significant improvement.

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3.2.43 The meeting recalled APANPIRG Conclusion 19/7 that Pacific operators be urged to equip with RNP 4 avionics as early as possible, but not later than 2012, and agreed that a survey of aircraft RNP 4 equipage and certification would be useful in establishing the current situation. Conclusion 19/7 had set the timeline of 2012 and therefore the survey should establish the intentions of operators in terms of equipage and certification.

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ATM Regional Guidance Materials

*Asia/Pacific ATS Route Catalogue*

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3.2.50 ... Version 6 is now available from the ICAO Asia/Pacific web site (<http://www.bangkok.icao.int/>) under the menu “APAC eDocuments”.

*ICAO Five-Letter Name-Codes and Route Designator Database (ICARD)*

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3.2.52 APANPIRG/18 adopted *Conclusion 18/11- Endorsement of the Use of ICARD System* to facilitate and enhance the management of 5LNC in the Asia/Pacific Region by using the ICARD system. Asia and Pacific States now using the system include Australia, China, Japan, Malaysia and New Zealand Pakistan, Republic of Korea, Singapore and Thailand. Other States are invited to join and should contact the Regional Office for joining information.

*Guidance Material for the End-to-End Monitoring of Data Link Systems*

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3.2.54 Version 3.0 of the *Guidance Material for End-to-End Safety and Performance Monitoring of Air Traffic Service (ATS) Data Link Systems in the Asia/Pacific Region* is now available from the ICAO Asia/Pacific web site (<http://www.bangkok.icao.int/>) under the menu “APAC e-Documents”.

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*Guidance Material for Aeronautical Information Services (AIS) in the Asia/Pacific Region*

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3.2.61 APANPIRG/18 agreed to adopt the Chapter 3 amendment of the Guidance Material. The First Edition with the Second Amendment is now available from the ICAO Asia/Pacific web site (<http://www.bangkok.icao.int/>) under the menu “APAC e-Documents”.

### **Aeronautical Information Services**

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#### AIS Automation/Electronic Terrain and Obstacle Data Seminar/Workshop

3.2.64 The ICAO AIS Automation/eTOD Seminar/Workshop (February 2009), graciously hosted by JCAB of the Ministry of Land, Infrastructure, Transport and Tourism was held in Narita, Japan in conjunction with AAITF/4....

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#### USA - ICAO SARPS Amendment for Additional NOTAM Field for Cross-Reference of Digital Aeronautical Information and Legacy Text NOTAM

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3.2.68 Acknowledging that there was insufficient technical representation at the meeting to be able to make an informed decision on the United States proposal and that it was intended that the “Y field” proposal would be reviewed at the Global AIM Conference in South Africa and the AIS-AIMSG in Montreal, updated information would be available in due course. The meeting requested the United States to continue the coordination efforts on this matter with a focus on any potential impacts in operational areas and provide updated information to appropriate forums including the Asia/Pacific AAITF as it became available.

#### India – Update on AIS/AIM Implementation

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3.2.70 The new Integrated AIS/AIM Automation System will be an integrated computer network, based on AICM/AIXM concepts, to assist and support the workflow of AIS office using a common database of aeronautical information, from which the data can be exploited, to produce automated document outputs such as AIP and its amendments, aeronautical charts, Instrument flight procedure Design etc....

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### **Search and Rescue**

#### SAR Agreements and SAR Matrix

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3.2.76 The meeting also noted the successful outcomes of the Hong Kong Civil Aviation Department (HK CAD) 2008 international SAREX during October 2008 and the supporting ICAO SAR Seminar.

#### Lessons Learned Regarding Termination of Satellite Detection of 121.5 Hz Signals from Distress Beacons

3.2.79 ... In re-training and educating people in the United States in relation to the termination, many facts and lessons learned had to be brought to their attention.

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**Agenda Item 3: Regional Air Navigation Planning and Implementation Issues**

**3.3 Regional Airspace Safety Monitoring Advisory Group (RASMAG)**

3.3.1 The meeting reviewed a consolidated report of the Tenth and Eleventh Meetings of the Regional Airspace Safety Monitoring Advisory Group of APANPIRG (RASMAG/10 and 11), held in December 2008 and June 2009, respectively. Full copies of the meeting reports are available on the web site of the ICAO Asia and Pacific Office at <http://www.bangkok.icao.int/> under the 'Meetings' menu. The meeting expressed its appreciation for the many tasks that had been addressed by RASMAG since reporting to APANPIRG/19 last year.

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Asia/Pacific RVSM Safety Assessments

3.3.3 Assessment of the safety performance of RVSM airspace is undertaken by specialist assessment bodies known as Regional Monitoring Agencies (RMAs), which are specifically established to undertake the on-going monitoring of RVSM operations in order to meet ICAO Standards.

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3.3.5 The meeting reviewed a consolidated report of the RVSM safety performance across the Asia/Pacific Region. The meeting recognized that this summary of RVSM safety performance comprised the reporting called for by the Asia/Pacific Safety Metric "*Percentage of RMA sub-regions achieving the regional Target Level of Safety (TLS) for RVSM operations, as of April each year*" that had been adopted by the meeting (refer paragraphs 3.0.12 to 3.0.13 above). ...

South China Sea Horizontal Safety Assessments

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3.3.8 ... The safety assessment also concludes that applying the existing reduced lateral and longitudinal minima used on L642 and M771 (RNP 10 based 50 NM/50 NM) to the other four South China Sea routes would also meet established TLS values.

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Expand December TSD for Airspace Planning

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3.3.12 After considering this proposal of expanding the use, RASMAG gave in-principle agreement to the concept. However, beyond agreeing to the expansion of the standardized template for the annual December TSD gathering to include the registration/tail number (if available) and en-route PBN approval (if available), regional RMAs were not able to accommodate extra workload or responsibilities in gathering and managing data. RASMAG recommended that release of data should be authorized by an appropriate oversight body, such as the Regional Office. Additionally, RMAs also clearly preferred that wherever possible implementing agencies obtained data directly from the States or parties involved in each implementation. The meeting agreed to Decision 20/21 – Expand use of safety monitoring data the following Decision in this respect:

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Difficulties in RMA coordination with States

3.3.13 The meeting recalled that in relation to RVSM monitoring, APANPIRG/19 agreed that implementing effective coordination arrangements between States and RMAs was a critical first step and adopted Conclusion 19/5 encouraging States to immediately strengthen relationships with their respective RMAs to ensure that information in relation to RVSM approval status is continuously available to RMAs.

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3.3.15 The meeting urged States to take necessary actions to swiftly improve this situation and agreed that, in addition to Conclusion 19/5, States would be asked for their current RVSM approvals data as an additional item for transmission to the RMAs with the annual December TSD required under Conclusion 16/4, and that a standard letter template would also be drafted by RASMAG for RMAs to use when required in support of specific enquiries to States. ...

*(Conclusion 20/22 – Provide Annual Update of RVSM Approvals to RMAs was adopted in this respect.*

RVSM Non - Approved Operators Using RVSM Airspace

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3.3.18 ... The meeting recognised that the shortcomings in data provision by States to RMAs (discussed in paragraphs 3.3.13 to 3.3.15 above) were contributing to the difficulties being experienced by RASMAG in investigating the size and complexity of this problem. For example, as States were not providing up-to-date information on RVSM approvals, RMAs were unable to reliably check whether an aircraft that had filed a plan indicating RVSM approval (i.e. 'W') was actually approved or not. Until the availability of data was enhanced, this problem would persist and RASMAG would continue to have difficulty progressing the investigations.

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RASMAG review of WPAC/SCS RSG/6

3.3.22 RASMAG noted the proposed dissolution of the Western Pacific/South China Sea RVSM Scrutiny Group (WPAC/SCS RSG) and commended the excellent outcomes that had been achieved by the participants of the WPAC/SCS RSG. In respect to the major concerns that had originally led APANPIRG to establish the WPAC/SCS RSG, the implementation of the revised flight level arrangements in July 2008 had resulted in greater harmonisation with the flight level arrangements in airspaces surrounding the WPAC/SCS area. ...

DPRK RVSM implementation

3.3.23 The meeting recalled the intention of the Democratic People's Republic of Korea (DPRK) to implement RVSM in the Pyongyang FIR during 2009 and learned that, in coordination with the Regional Office, DPRK had adopted the October 2009 AIRAC date for implementation.

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3.3.25 The safety assessment also demonstrates that based on the collected TSD and LHD reports, the technical risk estimate is  $5.62 \times 10^{-10}$  fatal accidents per flight hour and the overall risk is  $1.66 \times 10^{-9}$ . Both estimates satisfy the regionally agreed TLS value of no more than  $2.5 \times 10^{-9}$  and  $5.0 \times 10^{-9}$  fatal accidents per flight hour due to the loss of a correctly established vertical separation

standard of 300m (1,000ft) and to all causes, respectively. In addition, the safety assessment report also defines the risk estimate for ATS route B467, which is the busiest route in the Pyongyang FIR. It is found that technical risk is  $7.40 \times 10^{-10}$  and the overall risk is  $2.29 \times 10^{-9}$  fatal accidents per flight hour, which also satisfy the regional TLS.

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3.3.27 A Regional Office mission to DPRK during late July 2009 had recommended that the RVSM implementation proceed as scheduled, noting that in addition to the satisfactory risk estimates described above:

- a) ... All matters raised by the Regional Office had either already been addressed or work programmes were in place to ensure that matters would be addressed before implementation;
- b) The flight level arrangements to be implemented were in compliance with the metric RVSM flight levels promulgated in Annex 2;
- c) ATS Operational Letters of Agreement (LOAs) had been coordinated with neighbouring ACCs and updated to include appropriate provisions, including flight level transition arrangements as necessary, and the amended LOAs had already been signed; and
- d) No impediment to the implementation of RVSM during October 2009 as scheduled was identified.

Regional Impact Statement on Long Term RVSM Monitoring

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3.3.30 The Impact Statement highlights that three primary objectives need to be achieved in terms of RVSM height monitoring:

- a) Compliance with a basic Minimum Monitoring Requirement (MMR - e.g. two aircraft per type, per operator, per two years),
- b) Conduct of analyses of aircraft group performance, and
- c) Evaluation of the stability of altimetry system error.

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3.3.32 Additional monitoring infrastructure will need to be deployed in the Asia/Pacific Region. .... At present, there are no HMU installations operating in the Asia/Pacific region and only limited portable GMU monitoring capability is available via Asia/Pacific RMAs.

3.3.33 The impact statement reports that a review of the region's major international traffic flows suggests that appropriate locations for installation of ground-based monitoring systems could include Australia/New Zealand, Southeast Asia, Northeast Asia, China and India/Pakistan. The availability of ground-based monitoring capabilities in these five areas would adequately serve the majority of international traffic flows, whilst also catering for the disposition and monitoring of the larger domestic fleet operations in Australia, China and India. Adoption of such a ground-based infrastructure could mean that existing regional portable GMU capability is adequate. However, the

absence of suitable ground-based infrastructure means that investment in GMU capabilities will be necessary.

3.3.34 Japan has already indicated its intention to deploy three HMUs situated within the airspace of Japan, with the first HMU targeted to become operational in 2011.

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3.3.37 The meeting noted that as the Annex 6 provisions become applicable in November 2010, urgent action was necessary to ensure compliance with the SARPS. The meeting recognised that HMU siting requirements needed significant study, and anecdotally understood that the HMU equipment itself used multilateration concepts comprising at least 3 sensors in a triangular pattern with 8 – 10 NM legs.

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3.3.39 The Regional Office would attempt to ascertain the interest of States in response to the areas described in the impact statement and assess their potential position in regard to hosting a HMU. The Regional Office would also gather relevant information by correspondence and provide any useful material to the RASMAG for consideration. The meeting thanked RASMAG for the excellent work in preparing the impact statement and raised Conclusion 20/23 – Adopt RVSM Monitoring Impact Statement.

#### Horizontal safety assessment and monitoring

3.3.40 APANPIRG had long recognized that although arrangements for monitoring in the vertical plane (RVSM) using RMAs were comparatively advanced, there was a need to further develop regional safety assessment and monitoring capability in the horizontal plane (i.e. lateral and longitudinal). In this context, Decision 16/1 – Safety Monitoring Agency (SMA) had been taken by APANPIRG during August 2005.

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3.3.43 ... RASMAG would take responsibility for ensuring that horizontal assessment and monitoring matters proceed appropriately in the region, based on the collaborative activities and working methods already established and followed so successfully by regional RMAs. Appropriate horizontal monitoring agencies would be included on the RASMAG *List of Competent Airspace Safety Monitoring Organizations* once RASMAG was satisfied that their capabilities were adequate.

3.3.44 The meeting learned that the term Safety Monitoring Agency, which had been adopted by Decision 16/1, also had a meaning in common English language which applied equally to all safety monitoring agencies, be they for vertical, horizontal, data link or other safety monitoring. This had caused confusion in a number of forums and required regular explanation. The meeting agreed that a more suitable name would be appropriate for horizontal monitoring agencies and, in order to clarify that the function presently intended and supported by RASMAG was confined to horizontal aspects of en-route operations, adopted Decision 20/24 – En-route Monitoring Agency (EMA) to supersede Decision 16/1.

En-Route Monitoring Agency (EMA) Handbook

3.3.45 ... However, there was no monitoring guidance document under development by ICAO for the safe use of a horizontal-plane separation minimum where PBN is applied and no suitable regional equivalent was available.

3.3.46 RASMAG noted that the recent inclusion of the previously independent RNP and RNAV concepts under ICAO's global PBN concept has led to some uncertainty amongst States regarding the monitoring requirements for new horizontal separation minima implementations where these minima are based on PBN approvals. In anticipation of more widespread use of the PBN RNAV 10 and RNP 4 navigation specifications within the international airspace of the Asia/Pacific Region, the RASMAG agreed that there was a need to develop a handbook aimed at standardizing the principles and practices of the work of the En-route Monitoring Agencies (EMAs) established to assess the safety performance of implementations utilizing reduced horizontal plane separations.

3.3.47 Accordingly, RASMAG prepared a regional En-Route Monitoring Agency Handbook in order to assist adoption of a common set of principles and practices for safety assessment and ongoing safety monitoring in connection with operational usage of reduced horizontal-plane separation minima based on the application of PBN. The handbook is expected to also help to promote an interchange of information among Asia/Pacific States in support of achieving common operational horizontal monitoring procedures, as well as supporting the acquisition and sharing of data resulting from the application of those procedures. The meeting agreed to Conclusion 20/25 – Adopt En-route Monitoring Agency (EMA) Handbook.

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Lack of State capabilities to conduct PBN safety assessments

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3.3.52 The meeting was informed that, in the opinion of RASMAG, this was an important matter to be addressed in order to ensure adequate safety monitoring could urgently be made available to assist PBN implementation in both the en-route and terminal environments. ... Noting that the Terms of Reference (TORs) of the PBN/TF already included responsibilities in this respect, notably at items 2), 3), 6) & 7) of the TORs, the meeting recognized that the PBN/TF was already pursuing a work programme in this respect.

**APANPIRG/20 Conclusions/Decisions – Action Plan**

<b>Conclusion/ Decision No --- Strategic Objective*</b>	<b>Title of Conclusion/Decision</b>	<b>Text of Conclusion/Decision</b>	<b>Follow-up Action</b>	<b>To be initiated by</b>	<b>Deliverable</b>	<b>Target date</b>
<b>C 20/1</b>	<b>Performance Framework Workshop/Seminar</b>	That, ICAO be invited to conduct additional Workshop(s)/Seminar(s) on performance frameworks to provide guidance to the States in developing their national performance frameworks.	<b>Prepare Issue Form</b>	<b>ICAO APAC Office</b>	<b>Issue Form transmitted to HQ</b>	<b>December 2009</b>
<b>C 20/2</b>	<b>Asia Pacific Regional Performance Objectives</b>	That, the Asia Pacific Regional Performance Objectives and associated Performance Framework Forms (PFFs) as contained in <b>Appendix A</b> to the APANPIRG/20 Report on Agenda Item 3.0 be adopted.	<b>a) Notify States</b>  <b>b) Include on Regional Office website under APANPIRG</b>	<b>ICAO APAC Office</b>  <b>ICAO APAC Office</b>	<b>State Letter</b>  <b>Available on website</b>	<b>December 2009</b>  <b>December 2009</b>
<b>C 20/3</b>	<b>Align Regional &amp; National Performance Objectives</b>	That, the Regional Office encourages use by States of the PFF template adopted for the regional PFFs and circulate MS Word soft copy versions of the regional PFFs adopted by APANPIRG to enable States to derive national performance objectives based on the regional objectives.	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>December 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/4	<b>Asia/Pacific Performance Metrics</b>	<p>That the following metrics be adopted as a part of Asia/Pacific regional performance monitoring and measurement:</p> <p><b>APAC Metric 1</b> Percentage of RMA sub-regions achieving the regional Target Level of Safety (TLS) for RVSM operations, referenced as of April each year.</p> <p><b>APAC Metric 2</b> Percentage of instrument runway ends with an approach procedure with vertical guidance.</p> <p><b>APAC Metric 3</b> Percentage of en-route and terminal PBN routes implemented on a sub-regional basis in accordance with the regional PBN plan.</p> <p><b>APAC Metric 4</b> Average delays for departures at State's primary international airports for the busiest hour on a weekly basis</p>	<p>a) Notify States</p> <p>b) Include on Regional Office website under APANPIRG</p>	<p>ICAO APAC Office</p> <p>ICAO APAC Office</p>	<p>State Letter</p> <p>Available on website</p>	<p>December 2009</p> <p>December 2009</p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/5	<b>Data Collection for Regional Metrics</b>	That States, organizations and stakeholders collect and process data to support the regional metrics adopted by APANPIRG, leveraging to the extent possible all existing data and ongoing efforts, and provide a progress report to APANPIRG/21.	<p>a) Notify States</p> <p>b) Provide data to regional meetings</p>	<p>ICAO APAC Office</p> <p>APAC States</p>	<p>State Letter</p> <p>Data available to regional meetings and APANPIRG to support metrics</p>	<p>December 2009</p> <p>Continuous</p>
D 20/6	<b>Dissolution of Western Pacific/South China Sea RVSM Scrutiny Working Group</b>	<p>That, having completed the Terms of Reference established by APANPIRG,</p> <p>a) the Western Pacific/South China Sea RVSM Scrutiny Working Group (WPAC/SCS RSG) be commended for the swift and effective outcomes in satisfactorily addressing RVSM safety performance in the WPAC/SCS area, and</p> <p>b) the WPAC/SCS RSG be dissolved and any residual work items be allocated to Southeast Asia ATS Coordination Group (SEACG) and/or the Regional Airspace Safety Monitoring Advisory Group (RASMAG) and ATM/AIS/SAR Sub-Group as necessary.</p>	<p>a) Notify States</p> <p>b) Transition any remaining items to South East Asia ATS Coordination Group (SEACG)</p>	<p>ICAO APAC Office</p> <p>ICAO APAC Office, SEACG</p>	<p>State Letter</p> <p>Remaining items covered by SEACG</p>	<p>May 2010</p> <p>May 2010</p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/7	<b>Adopt Interim Strategy for Implementation of New Flight Plan Format</b>	That the <i>Interim Strategy for the Implementation of new ICAO Flight Plan Format and Supporting ATS Messages</i> provided in <b>Appendix A</b> to the APANPIRG/20 Report on Agenda Item 3.2 be adopted and published as the interim edition, and States and users be urged to commence implementation planning based on the interim strategy.	Notify States	ICAO APAC Office	State Letter	December 2009
C 20/8	<b>Notification of State Transition Date to New Flight Plan Format</b>	That, in order to align regional implementation planning, States inform the Regional Office by 1 July 2010 of their scheduled date and implementation methodology for transition to the new Flight Plan and ATS Message formats.	States formulate implementation strategies	APAC States	Notify Regional Office of methodology and target implementation date	Not later than 1 July 2010
C 20/9	<b>SSR Code Coordination with ORCAM Secretariat</b>	That, recognizing that four of the ten European (EUR) region SSR code Participating Areas (PAs) border Asian States, the Regional Office facilitate coordination with the European Originating Region Code Assignment Method (ORCAM) Secretariat to implement code management arrangements that avoid SSR code conflicts at the EUR/ASIA interface.	Invite ORCAM Secretariat to join coordination	ICAO APAC Office	Letter to ORCAM Secretariat via EUR/NAT Office to invite coordination	February 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/10	<b>ATFM Compliance- Advice to Airlines and Airports</b>	That, on behalf of the ATFM/TF, the Regional Office seeks assistance in properly complying with ATFM procedures from the specific airlines and airports identified by the ATFM/TF as contributing to poor ATFM performance because of early or late departures.	<b>Advise affected States and Airlines</b>	<b>ATFM/TF, ICAO APAC Office</b>	<b>Data provided to ICAO APAC Office</b>  <b>Letters containing data transmitted to affected States and Airlines</b>	<b>December 2009</b>  <b>December 2009</b>
C 20/11	<b>ATFM Steering Group and Concept of Operations</b>	That a regional ATFM Steering Group be constituted and tasked with preparing an Asia/Pacific Regional ATFM Concept of Operations based on analysis of regional data and traffic flows. The ATFM Steering Group should consider the outcomes and recommendations from the October 2008 ATFM Seminar/Workshop (Fukuoka, Japan) and information about the CAR/SAM ATFM Project contained in IP/3 to APANPIRG/20 as guidance in deriving its Objectives and Terms of Reference.	<b>Conduct first meeting of Steering Group</b>	<b>ICAO APAC Office</b>	<b>First meeting of Steering group conducted</b>	<b>Second half 2010</b>
C 20/12	<b>Adopt ATFM Communications Manual</b>	That the <i>Air Traffic Flow Management (ATFM) Communications Handbook for the Asia/Pacific Region</i> , as shown in <b>Appendix B</b> to the APANPIRG/20 Report on Agenda Item 3.2, be adopted and circulated as regional guidance material.	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>December 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/13	<b>Conduct Regional ATFM Survey</b>	That a survey of Asia/Pacific States be conducted based on the questionnaire at <b>Appendix C</b> to the APANPIRG/20 Report on Agenda Item 3.2, with the objective of benchmarking the current status of Air Traffic Flow Management (ATFM) activities in the Asia/Pacific Region.	<b>Conduct survey</b>	<b>ICAO APAC Office</b>	<b>Survey conducted and outputs compiled</b>	<b>March 2010</b>
D 20/14	<b>Support for Global ICD for AFTN AIDC</b>	That recognizing the benefits to be gained from globally harmonized interface arrangements for AIDC, APANPIRG supports the work being undertaken by the United States to coordinate a global Interface Control Document for AFTN AIDC and invites the Asia/Pacific Regional Office to act as the regional point of contact for this work.	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>February 2010</b>
C 20/15	<b>Survey of RNP 4 Equipage and Approvals</b>	That during 2010 the Regional Office conducts a regional survey to establish the current and near term equipage and approvals status for RNP 4 operations.	<b>Conduct survey</b>	<b>ICAO APAC Office</b>	<b>Survey conducted and outputs compiled</b>	<b>March 2010</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/16	<b>Assistance to States to Implement Electronic Terrain and Obstacle Data (eTOD)</b>	<p>That, in light of the fact that:</p> <p>a) within the Asia and Pacific region, there is a varying degree of implementation status and readiness for the existing Annex 15, Chapter 10 eTOD Standards and Recommended Practices (SARPs);</p> <p>b) significant cost and institutional issues prevail as impediments to global eTOD implementation; and</p> <p>ICAO consider providing short- and long-term assistance to States in order to build their capacity to provide eTOD in a sustainable and cost efficient manner.</p> <p><i>Note: An appropriate form of providing assistance could include establishment of an ICAO Technical Cooperation Project with funding sought from donor agencies.</i></p>	<b>Prepare Issue Form</b>	<b>ICAO APAC Office</b>	<b>Issue Form transmitted to HQ</b>	<b>December 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/17	<b>SAR Guidance on 121.5 MHz Search Planning</b>	Recognizing that large populations of aircraft would continue to use 121.5MHz distress beacons after the February 2009 cessation of COSPAS SARSAT Satellite tracking capability, States consider the guidance material “ <i>Search Planning for Audible 121.5 Distress Beacon Alerts</i> ” contained in <b>Appendix G</b> to the APANPIRG/20 Report on Agenda Item 3.2 when developing SAR procedures and training documentation.	Notify States	ICAO APAC Office	State Letter	February 2010
C 20/18	<b>Provide SAR 121.5 MHz Guidance to ICAO/IMO JWG</b>	That the Regional Office seek the assistance of the United States in providing a copy of the guidance material “ <i>Search Planning for Audible 121.5 Distress Beacon Alerts</i> ” contained in Appendix G to the APANPIRG/20 Report on Agenda Item 3.2 to the ICAO/IMO Joint Working group on SAR for consideration as an amendment to the <i>International Aeronautical and Maritime SAR (IAMSAR) Manual</i> .	Coordinate with USA	ICAO APAC Office	Regional Office Letter	February 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
D 20/19	ATM/AIS/SAR Task List	That the ATM/AIS/SAR Sub-Group Task List and attachments contained in Appendix A to the ATM/AIS/SAR/SG/19 Report on Agenda Item 10 be adopted as the current work programme for the ATM/AIS/SAR Sub-Group of APANPIRG.	Notify ATM/AIS/SAR Sub Group	ICAO APAC Office	Working Paper to next ATM/AIS/SAR Sub Group meeting	June 2010
C 20/20	Adopt RVSM Minimum Monitoring Requirements	That the RVSM Minimum Monitoring Requirements (MMRs) shown in Appendix B to the APANPIRG/20 Report on Agenda Item 3.3 be adopted as the MMRs applicable for the Asia/Pacific Region.	a) Notify States  b) Include on Regional Office website under “APAC eDocuments”	ICAO APAC Office  ICAO APAC Office	State Letter  Available on website	December 2009  December 2009

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
D 20/21	<b>Expand use of safety monitoring data</b>	That the arrangements for annual month of December traffic sample data by all States to satisfy airspace safety monitoring analysis called for by APANPIRG Conclusion 16/4 be expanded to enable this data to also be available for airspace planning and implementation purposes. This will apply only where such data is not otherwise available to regional or State implementing bodies and only with specific written authority of the ICAO Asia/Pacific Regional Office on each occasion.	<b>Notify States prior to annual December traffic sample data collection</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>November 2009</b>
C 20/22	<b>Provide Annual Update of RVSM Approvals to RMAs</b>	That, in addition to the continuous update of RVSM Approvals data called for by Conclusion 19/15 and APANPIRG RMA requirements, States provide an update of RVSM Approvals data in conjunction with the annual December traffic sample data submission required by Conclusion 16/4.	<p>a) <b>Notify States prior to annual December traffic sample data collection</b></p> <p>b) <b>States provide RVSM Approvals data</b></p>	<p><b>ICAO APAC Office</b></p> <p><b>APAC States</b></p>	<p><b>State Letter</b></p> <p><b>States provide update of RVSM Approvals status to APANPIRG RMAs as part of December traffic sample data submission</b></p>	<p><b>November 2009</b></p> <p><b>January 2010</b></p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/23	<b>Adopt RVSM Monitoring Impact Statement</b>	That the <i>Asia/Pacific Regional Impact Statement – RVSM Global Long Term Height Monitoring Requirements effective from November 2010</i> , as shown in <b>Appendix C</b> to the APANPIRG/20 report on Agenda Item 3.3, be adopted and circulated as Asia/Pacific regional guidance material.	c) Notify States  d) Include on Regional Office website under “APAC eDocuments”	ICAO APAC Office  ICAO APAC Office	State Letter  Available on website	December 2009  December 2009
D 20/24	<b>En-route Monitoring Agency (EMA)</b>	That the term En-route Monitoring Agency (EMA) be used to describe an organization providing airspace safety assessment, monitoring and implementation services for international airspace in the Asia/Pacific Region to support implementation and operation of reduced horizontal (lateral and longitudinal) separation.	Notify States	ICAO APAC Office	State Letter	December 2009
C 20/25	<b>Adopt En-route Monitoring Agency (EMA) Handbook</b>	That the <i>Asia/Pacific En-route Monitoring Agency (EMA) Handbook</i> , as shown in <b>Appendix D</b> to the APANPIRG/20 report on Agenda Item 3.3, be adopted and circulated as Asia/Pacific regional guidance material.	e) Notify States  f) Include on Regional Office website under “APAC eDocuments”	ICAO APAC Office  ICAO APAC Office	State Letter  Available on website	December 2009  December 2009

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
D 20/26	<b>Revision of Subject/Tasks List of ATNICG</b>	That, the revised Subject/Tasks List of ATNICG provided in <b>Appendix A</b> to the Report on Agenda Item 3.4 be adopted.	<b>Notify ATNICG WG/6 and ATNICG</b>	<b>ICAO APAC Office</b>	<b>ATNICG informed and paper prepared</b>	<b>September 2009 May 2010</b>
C 20/27	<b>ATN/AMHS Guidance Material</b>	<p>That, the following guidance materials for ATN/AMHS Implementation be adopted and published.</p> <ul style="list-style-type: none"> <li>- Version 3.1 of the Asia/Pacific IDRP Routing Policy provided in <b>Appendix B</b> to the Report on Agenda Item 3.4;</li> <li>- AMHS/ATN Network Management Operational Procedure Guidelines provided in <b>Appendix C</b>;</li> <li>- Amended AMHS Conformance Testing (AMHS Manual provided in <b>Appendix D</b>; and</li> <li>- Aeronautical Telecommunication Network Security Checklist provided in <b>Appendix E</b>.</li> </ul>	<b>Publish on website</b>	<b>ICAO APAC Office</b>	<b>Published on website. States notified</b>	<b>October 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/28	<b>Short-term procedure for Global AMHS address Coordination</b>	That, ICAO request States to register their AMHS addresses with EUROCONTROL AMC through Aeronautical Radio of Thailand (Aerothai) and provide a copy of this information to ICAO Asia/Pacific Office.	Notify States	ICAO APAC Office	State Letter	November 2009
C 20/29	<b>AMHS Addressing Scheme</b>	That,  a) States be urged to update information in respect of their administrations in the regional AMHS Naming Register; and  b) States hosting BBIS hubs be requested to process both the XF and CAAS addressing schemes.	Notify States	ICAO APAC Office	State Letter	November 2009
C 20/30	<b>Revision of FASID Tables CNS-1B, CNS-1C and CNS-1E</b>	That, FASID Tables CNS-1B, 1C and 1E for ATN Router Plan, AMHS Routing Plan and AIDC Routing Plan be replaced with the revised CNS Tables provided in <b>Appendices F, G and H</b> respectively to the Report on Agenda Item 3.4.	Prepare amendment proposal	ICAO APAC Office	Amendment proposal to HQ	March 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/31	<b>State and Operator aircraft information for GOLD</b>	<p>That,</p> <p>a) States be urged to provide Region &amp; State Information for inclusion in the GOLD Appendix E, by sending the completed forms(s) provided in <b>Annex 1</b> to the Report on agenda item 3.4 for their flight information regions (FIRs) or control areas (CTAs) by 30 October 2009; and</p> <p>a) IATA be urged to coordinate with member airlines for providing operator &amp; aircraft information for the GOLD Appendix F by sending completed form(s) as provided in <b>Annex 2</b> to the Report on agenda item 3.4 for each variance, clarification, or addition to applicable aircraft type by 30 October 2009.</p>	Notify States	ICAO APAC Office	State Letter	September 2009
C 20/32	<b>Second Satellite Data-link Operational Continuity Meeting</b>	That, ICAO be invited to organize 2 <sup>nd</sup> Satellite Data-link Operational Continuity Meeting in 2010 for stakeholders to review the developments on the performance and provision of satellite data link communication in the Asia/Pacific Region and develop a solution.	Coordination and organize SOCM/2 Meeting	ICAO APAC Office	Meeting conducted	October 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/33	<b>Coordinate Implementation of Reduced Horizontal Separations with CSPs</b>	That, recognizing the technical limitations in satellite data link communications capability for the provision of ADS-C and CPDLC, States intending to implement reduced horizontal separations based on RNAV 10 and RNP 4 PBN specifications in oceanic and remote area commence early coordination with Communication Service Providers (CSPs) in order to ascertain adequate data link communication/surveillance capability to support the proposed implementation. Outcomes should be recorded in a formal Service Level Agreement (SLA) between implementing States and CSPs, jointly or severally, to ensure that capabilities are available to properly support RCP 240/D specifications contained in Appendices B and C to the GOLD on an ongoing basis.	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>January 2010</b>
C 20/34	<b>Technical Limitations in Satellite Data Link Communications Capability</b>	That, recognizing current technical limitations in satellite data communications capability that impacts PBN based separation applications particularly for RNAV10 and RNP 4 in the remote and oceanic areas, ICAO be invited to address this issue at global level.	<b>Prepare Issue Form</b>	<b>ICAO APAC Office</b>  <b>ICAO HQ</b>	<b>Issue Form sent HQ</b>	<b>December 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/35	<b>Asia-Pacific Flight Procedure Programme</b>	That, States be encouraged to participate in the Asia-Pacific Flight Procedure Programme in order to build or improve their instrument flight procedure capabilities, meet the PBN implementation goals of Assembly Resolution A36-23 and enhance flight safety, efficiency and environmental protection.	Notify States	ICAO APAC Office	State Letter	SL T6/13.11.2-AP089/09 & follow-up letter had been issued on 29July09.
C 20/36	<b>Preparation for PBN Implementation</b>	That, States that have not done so, are urged to develop their State PBN Implementation Plans, and take action in accordance with those plans to implement WGS-84 and Electronic Terrain and Obstacle Data in their States.	Notify States	ICAO APAC Office	State Letter	November 2009

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/37	<b>Guidance material for PBN Implementation</b>	<p>That, ICAO be invited to develop guidance materials on:</p> <ul style="list-style-type: none"> <li>a) establishing common implementation rules and technical standards for GNSS reporting and prediction requirements;</li> <li>b) assigning PBN capability to GPS IFR aircraft in the first instance without the need for recertification; and</li> <li>c) PBN-specific aspects of en-route safety assessment.</li> </ul>	<b>Prepare Issue Form</b>	<p>ICAO APAC Office</p> <p>ICAO HQ</p>	<b>Issue Form sent HQ</b>	<b>December 2009</b>
D 20/38	<b>Regional RAIM prediction System</b>	That, PBNTF be tasked to examine the feasibility of establishing a regional RAIM prediction system.	<b>Notify PBNTF</b>	<b>ICAO APAC Office</b>	<b>PBNTF informed and paper prepared</b>	<b>February 2010</b>
C 20/39	<b>RNAV Human Factors</b>	That, RNAV safety message provided in <b>Appendix J</b> to the Report on Agenda Item 3.4 be distributed to the States for further distribution to all operators involved in RNAV operations in order to apply the lessons learnt.	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>November 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/40	<b>PBN Implementation Progress Report Template</b>	That, States be urged to use the PBN Implementation Progress Report Template provided in <b>Appendix K</b> to the Report on Agenda Item 3.4 for all future reporting of their status of PBN implementation. The Report should be submitted at each of the future PBN Task Force Meeting.	Notify States	ICAO APAC Office	State Letter	A SL had been sent to States on 4 Aug09) urging States to provide progress report using the template.
C 20/41	<b>Asia/Pacific Regional PBN Implementation Plan</b>	That, the Asia/Pacific Regional PBN Implementation Plan provided in <b>Appendix L</b> to the Report on Agenda Item 3.4 be adopted as Version 1.0.	Notify States	ICAO APAC Office	State Letter	November 2009
C 20/42	<b>PBN Safety Assessment Training</b>	That, ICAO be requested to assist in addressing the PBN safety assessment training needs in the region.	Prepare Issue Form	ICAO APAC Office  ICAO HQ	Issue Form sent HQ	December 2009
C 20/43	<b>RNP AR Approach Implementation</b>	That, States be urged to give detailed considerations to the operational need, safety and cost benefits prior to deciding on RNP AR Approach implementation.	Notify States	ICAO APAC Office	State Letter	November 2009
D 20/44	<b>PBN Task Force Activities</b>	That, the PBN Task Force continues with the current TORs for two additional meetings in 2010.	Notify PBNTF	ICAO APAC Office	PBNTF informed and paper prepared	February 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/45	<b>Sharing Information on ICAO Panels/SGs</b>	That, ICAO be requested to consider sharing information on ICAO Panels and Study Groups activities/outcome regularly with regional planning/implementation groups.	<b>Prepare Issue Form</b>	ICAO APAC Office  ICAO HQ	Issue Form sent HQ	December 2009
C 20/46	<b>Revision of the Strategy for the Provision of Navigation Services in the Asia/Pacific Region</b>	That, the updated Strategy for the provision of navigation services provided in <b>Appendix M</b> to the Report on Agenda Item 3.4 be adopted and published.	<b>Notify States</b>	ICAO APAC Office	<b>State Letter Updated Strategy posted on website</b>	November 2009
D 20/47	<b>Guidance material for flight inspection/validation of ADS-B ground stations</b>	That, ADS-B SITF be tasked to study the need for developing guidance material for flight inspection/validation of ADS-B ground stations.	<b>Notify ADS-B SITF</b>	ICAO APAC Office	<b>ADS-B SITF informed and paper prepared</b>	April 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/48	<b>Flight Inspections and Validation of Flight Procedures</b>	<p>That, ICAO be invited to:</p> <p>a) carry out a study for use of DGPS as a positioning reference system for flight inspection;</p> <p>b) provide guidelines for selecting GP reference point for flight inspection;</p> <p>c) review areas of possible misinterpretations in ICAO Doc 8071 such as the ones shown in <b>Appendix N</b> to the Report on Agenda Item 3.4 and provide necessary guidance on the interpretation of the ICAO requirements in order to avoid inconsistency of interpretations and to harmonize application of ICAO Standards and Recommended Practices;</p> <p>d) review information on flight validation as contained in ICAO Doc 8071 Volume II consequent to new Doc 9906 Volume V becoming applicable; and</p> <p>e) develop templates for flight validation reports for PBN IFPs including RNP APCH procedure. A sample template developed by Aerothai for RNP APCH is provided in <b>Appendix O</b> to the Report on agenda item 3.4.</p>	<b>Prepare Issue Form</b>	<p>ICAO APAC Office</p> <p>ICAO HQ</p>	Issue Form sent HQ	December 2009

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/49	<b>Update of procedures and infrastructure</b>	<p>That, the States be</p> <p>a) reminded of the contents of State Letter AN 7/5-01/52 dated 11 May 2001 on ILS maintenance procedures;</p> <p>b) reminded to provide updates to information as contained in the eighth edition of the flight inspection catalogue; and</p> <p>c) urged to consider upgrading their FIS to include the flight inspection requirements of GNSS, Interference, ADS-B, Multi-lateralisation etc. as necessary.</p>	Notify States	ICAO APAC Office	State Letter	November 2009
D 20/50	<b>Subject/Tasks List of ADS-B Study and Implementation Task Force</b>	That, the Subject/Tasks List for ADS-B Study and Implementation Task Force provided in <b>Appendix P</b> to the Report on Agenda Item 3.4 be adopted.	Notify ADS-B SITF	ICAO APAC Office	ADS-B SITF informed and paper prepared	April 2010
C 20/51	<b>Workshop on ADS-B OUT equipage requirement</b>	That, ICAO be invited to organize a workshop on ADS-B OUT equipage requirement before May 2010 with the assistance from Australia and USA.	Organise the workshop	ICAO APAC Office, Australia and USA	The workshop conducted	April 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/52	<b>Table CNS 4A and Table CNS 4B</b>	That, the FASID Table CNS 4A and Table CNS 4B be replaced with updated Tables provided in <b>Appendix Q</b> and <b>Appendix R</b> to the Report on Agenda Item 3.4 in accordance with the established procedure.	<b>Prepare amendment proposal</b>	<b>ICAO APAC Office</b>	<b>Amendment proposal to HQ</b>	<b>March 2010</b>
C 20/53	<b>Revised Guidelines for Development of ADS-B Implementation Plan by States</b>	That, the revised guidelines for Development of ADS-B Implementation Plan by States provided in <b>Appendix S</b> to the Report on Agenda Item 3.4 be adopted.	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter Updated Strategy posted on website</b>	<b>November 2009</b>
C 20/54	<b>Regional ADS-B Equipage Requirement</b>	<p>That, States be urged to issue ADS-B authorizations for the interim period 2010-2020 (or until requirements can be harmonized globally) in Non-Radar Areas (NRA) airspace based on:</p> <ul style="list-style-type: none"> <li>- AMC20-24 certification or</li> <li>- Approval by CASA Australia or</li> <li>- The requirements of the CASA Civil Aviation Order 20.18 Amendment (No. 1) 2009 and Advisory Circular AC21-45</li> </ul> <p><i>Note: States that have not yet published regulations should implement necessary regulations that recognize that any one of the above requirements is acceptable and not specify an individual requirement.</i></p>	<b>Notify States</b>	<b>ICAO APAC Office</b>	<b>State Letter</b>	<b>December 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/55	<b>Forward Fitment Requirements for SA Aware and FDE functionality</b>	That, ICAO recommends States concerned to adopt forward fitment requirements which include SA aware and FDE functionality as soon as reasonable.	Notify States	ICAO APAC Office	State Letter	December 2009
C 20/56	<b>Coordination for SSR MODE S II Codes</b>	That,  a) the Table on SSR Mode S Interrogator Identifier Codes as provided in <b>Appendix T</b> on Agenda Item 3.4 to the Report be adopted; and  b) States be advised to provide the required information as specified in the Table on SSR Mode S Interrogator Identifier Codes to the ICAO Asia/Pacific Office for coordination and registration.	Notify States	ICAO APAC Office	State Letter	January 2010
C 20/57	<b>Planning Criteria for SSR Mode S II Code Assignment</b>	That, the Planning criteria for SSR Mode S II code coordination and assignment as provided in <b>Appendix U</b> to the Report on Agenda Item 3.4 be adopted as a provisional guidance material for use in the Asia/Pacific Region.	Notify States	ICAO APAC Office	State Letter	January 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/58	<b>ICAO Position for the World Radio Communication Conference – 2011 (WRC-11) Agenda Items</b>	<p>That, States be urged to:</p> <ul style="list-style-type: none"> <li>a) integrate ICAO Position on WRC-11 Agenda Items into their State Position presented to the regional telecommunication forum (APG) involved in the preparation of joint regional position on the Agenda Items;</li> <li>b) include ICAO Position on WRC-11 Agenda Items into the State Position to the extent possible;</li> <li>c) undertake to provide experts from their civil aviation authorities to participate in the development of State and regional positions; and</li> <li>d) ensure to the extent possible, State delegation to regional conferences, ITU Study Groups and WRC should include experts from Civil Aviation authorities.</li> </ul>	Notify States	ICAO APAC Office	State Letter	October 2009

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
D 20/59	<b>Use of the public Internet to access OPMET data and WAFS forecasts</b>	<p>That, OPMET data and WAFS forecasts currently distributed through the ISCS, if only used for flight planning, can be considered non-time critical and therefore, can be accessed through the public Internet.</p> <p><i>Note: Relevant ICAO guidance will be updated accordingly, subject to consideration of a similar decision by the WAFSOPSG/5 Meeting and subsequent endorsement by ANC.</i></p>	<b>(with regards to the note) – ANC consideration</b>	<b>ICAO HQ</b>	<b>Updated guidance material if clarity is needed</b>	<b>Nov 2010</b>
C 20/60	<b>Extension of the ISCS-G2 and the implementation of the WAFS Internet file server (WIFS)</b>	<p>That, WAFS Washington Provider State advise the ISCS user States about its intentions to:</p> <p>a) continue to work on extending the current ISCS-G2 service through 30 June 2012 to allow users sufficient time for transition to replacement services; and</p> <p>b) provide an operational WAFS Internet File Server (WIFS) by March 2010.</p>	<p><b>Inform States of ISCS-G2 cessation date</b></p> <p><b>Develop WAFS Internet File Server (WIFS)</b></p>	<p><b>WAFS Washington Provider State/ APAC Office</b></p> <p><b>WAFS Washington Provider State</b></p>	<p><b>ISCS website update/ State Letter</b></p> <p><b>WAFS products available by Internet</b></p>	<p><b>Dec 2009</b></p> <p><b>Mar 2010</b></p>



Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
		<p><i>Note 3: the ISCS Provider State is expected to indicate its future plans concerning ISCS-G3 and the WIFS</i></p> <p>c) the WAFSOPSG be invited to consider preparing an amendment to all ICAO regional procedures in the ANP/FASID to render WIFS and SADIS FTP Service as an alternative to the respective satellite broadcasts as the primary means of obtaining WAFS forecasts and OPMET data for flight planning purposes.</p> <p><i>Note 4: WAFS user States are responsible for the procurement of the necessary tools to access WAFS forecasts and OPMET data provided by the WAFCS.</i></p> <p><i>Note 5: The adoption of this Conclusion reinstates the APANPIRG Conclusion 19/45, Transition to ISCS 3<sup>rd</sup> Generation.</i></p>	<p><b>Update ANP/FASID</b></p>	<p><b>ICAO HQ (through WAFSOPSG)</b></p>	<p><b>Amendment Proposal to ANP/FASID (if deemed necessary by WAFSOPSG/5)</b></p>	<p><b>Jan 2010</b></p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/62	<b>Harmonization of procedures for OPMET data issuance</b>	<p>That, ICAO Regional Office be invited to</p> <p>a) Include examples of correct methods of issuing OPMET data for inclusion in the ROBEX Handbook;</p> <p>b) After completion of a) above request States in the Asia/Pacific Region to implement these methods as a matter of priority; and</p> <p>c) Consult the RODBs to monitor the progress of OPMET data issuance in compliance with the Regional Air Navigation Plan for reporting at the OPMET/M TF/8 Meeting.</p>	<p><b>Update ROBEX Handbook</b></p> <p><b>Inform States</b></p> <p><b>RODB monitoring of OPMET compiling/filing times</b></p>	<p><b>ICAO APAC Office</b></p> <p><b>ICAO APAC Office</b></p> <p><b>RODBs / ICAO APAC Office</b></p>	<p><b>Updated ROBEX Handbook</b></p> <p><b>State Letter</b></p> <p><b>Inclusion of monitoring results in OPMET/M TF/8 Report</b></p>	<p><b>Oct 2009</b></p> <p><b>Oct 2009</b></p> <p><b>Apr 2010</b></p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/63	<b>Improvement of OPMET data availability for AOP aerodromes</b>	<p>That, after the next round of harmonization of OPMET data between SADIS and ISCS Provider States,</p> <p>a) IATA be invited to monitor the availability of OPMET data for AOP aerodromes; and</p> <p>b) ICAO Regional Office, based on the results of the monitoring in a) above, remind States concerned of unavailability of OPMET data.</p> <p><i>Note: the aim will be an availability of 95% of all OPMET data (METAR and TAF) from AOP aerodromes on SADIS and ISCS.</i></p>	<p><b>SADIS/ISCS harmonization</b></p> <p><b>IATA OPMET monitoring</b></p> <p><b>Inform States</b></p>	<p><b>ISCS and SADIS Provider States/ ICAO APAC Office</b></p> <p><b>IATA</b></p> <p><b>ICAO APAC Office</b></p>	<p><b>ISCS/SADIS OPMET harmonization</b></p> <p><b>Table of AOP aerodromes not available on SADIS</b></p> <p><b>State Letter</b></p>	<p><b>Oct 2009</b></p> <p><b>Dec 2009</b></p> <p><b>Jan 2010</b></p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/64	<b>Improvement of OPMET data availability for non-AOP aerodromes</b>	<p>That, after the next round of harmonization of OPMET data between SADIS and ISCS Provider States,</p> <p>a) IATA be invited to monitor the availability of OPMET data for non-AOP aerodromes; and</p> <p>b) ICAO Regional Office, based on the results of the monitoring in a) above, approach States concerned to confirm their agreement to continue providing OPMET data</p> <p><i>Note: the aim will be an availability of 90% of all OPMET data (METAR and TAF) from non-AOP aerodromes on SADIS and ISCS.</i></p>	<p><b>SADIS/ISCS harmonization</b></p> <p><b>IATA OPMET monitoring</b></p> <p><b>Inform States</b></p>	<p><b>ISCS and SADIS Provider States/ ICAO APAC Office</b></p> <p><b>IATA</b></p> <p><b>ICAO APAC office</b></p>	<p><b>ISCS/SADIS OPMET harmonization</b></p> <p><b>Table of AOP aerodromes not available on SADIS</b></p> <p><b>State Letter</b></p>	<p><b>Oct 2009</b></p> <p><b>Dec 2009</b></p> <p><b>Jan 2010</b></p>
C 20/65	<b>Replace FASID Tables MET 4A and 4B by the ROBEX Handbook</b>	<p>That, the FASID Tables MET 4A and 4B be replaced with the ROBEX Handbook when referencing the ROBEX Scheme in the Basic ANP and FASID in accordance to <b>Appendices V and W</b> to the APANPIRG/20 Report on Agenda Item 3.4. Subsequently, FASID Tables MET 4A and 4B will be removed from the FASID.</p>	<b>Update ANP/FASID</b>	<b>ICAO APAC Office</b>	<b>Amendment Proposal to ANP/FASID</b>	<b>Dec 2009</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/66	<b>Replace FASID Table MET 4C by the Asia/Pacific regional OPMET data banks interface control document</b>	That, the FASID Tables MET 4C be replaced with the Asia/Pacific regional OPMET data banks interface control document when referencing the responsibilities of the ASIA/PAC OPMET data banks for collection and dissemination of OPMET bulletins to support the ROBEX Scheme in the Basic ANP and FASID in accordance to <b>Appendices V and W</b> to the APANPIRG/20 Report on Agenda Item 3.4. Subsequently, FASID Table MET 4C will be removed from the FASID.	<b>Update ANP/FASID</b>	<b>ICAO APAC Office</b>	<b>Amendment Proposal to ANP/FASID</b>	<b>Dec 2009</b>
C 20/67	<b>Cost Recovery by Volcano Observatories</b>	That, the ICAO CNS/MET Sub-group VA/TC Implementation Task Force, in coordination with the VAAC Provider States and the ICAO Secretariat, be invited to investigate examples of agreements between State volcanic observatories and the civil aviation authorities that may be used by other States in considering the recovery of the cost in accordance with ICAO provisions.	<b>Investigate cost recovery examples by volcanic observatories</b>	<b>VA/TC I TF/ VAACs/ ICAO HQ (IAVWOPSG)/ ICAO APAC Office</b>	<b>State Letter</b>	<b>June 2010</b>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/68	<b>Expanded WV SIGMET Test Development</b>	<p>That,</p> <p>a) Japan be invited to further develop an expanded WV SIGMET Test utilizing automated templates in consultation with the Darwin VAAC; and</p> <p>b) upon completion of a) above, Japan conducts the expanded WV SIGMET Test and produce an analysis to the OPMET/M TF/8 meeting for further review and subsequent reporting to the CNS/MET SG/14 meeting to determine the next phase of the test.</p>	<p><b>Develop WV expansion SIGMET test</b></p> <p><b>Conduct and report on trial test</b></p>	<p><b>Japan/ VAAC Darwin</b></p> <p><b>Japan</b></p>	<p><b>Updated WV expansion SIGMET Test</b></p> <p><b>Test results included in OPMET/M TF/8 and CNS/MET SG/14 reports</b></p>	<p><b>Apr 2010</b></p> <p><b>Apr 2010 / Jul 2010</b></p>
C 20/69	<b>Implementation of SIGMET on Radioactive Clouds and Aerodrome Warnings on Tsunami</b>	<p>That, in view of clarifying existing Annex 3 provisions,</p> <p>a) the IAVWOPSG consider developing Annex 3 provisions and guidance material, as necessary, related to the issuance of SIGMET on radioactive clouds; and</p> <p>b) ICAO consider developing Annex 3 provisions and guidance material as necessary related to the issuance of aerodrome warnings on Tsunami.</p>	<p><b>Proposals to develop provisions and guidance material on radioactive cloud SIGMET and Tsunami aerodrome warnings</b></p>	<p><b>ICAO HQ</b></p>	<p><b>Amendment criteria to be included in Am. 76 or 77 to Annex 3, as necessary; guidance</b></p>	<p><b>2013 or 2016</b></p>

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/70	Training on QMS	That, WMO, in coordination with ICAO, be invited to organize a seminar/workshop on QMS related to aeronautical meteorological services during the first half of 2010.	Conduct QMS Seminar/ Workshop	WMO/ICAO HQ/APAC Office	Seminar/Workshop	June 2010
D 20/71	Updated Terms of Reference and Subject/Tasks List of the CNS/MET Sub-group	That, the revised Terms of Reference and Subject/Tasks List of the CNS/MET Sub-group provided in <b>Appendices Y and Z</b> to the Report be adopted.	Notify CNS/MET SG	ICAO APAC Office	CNS/MET SG informed and paper prepared	July 2010
C 20/72	Ionospheric Data Collection – Focal Point of Contact	That, the States be urged to:  a) cooperate with each other to collect data and characterize ionosphere model in the APAC region that will lead to smooth introduction of GNSS in ASIA/PAC Region; and  b) provide the name and contact details of the Focal Point of Contact to ICAO Regional Office for coordinating collection and exchange of ionospheric data with the ultimate objective of establishing a standard ionospheric model for the region.	Notify States	ICAO APAC Office	State Letter	January 2010

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/73	<b>Adopt GOLD to replace FOM</b>	That, upon release of the Global Operational Data Link Document (GOLD) by the Ad-Hoc GOLD Working Group in first quarter 2010, the FANS-1/A Operations Manual (FOM) be withdrawn and replaced by the GOLD as Asia/Pacific regional guidance material for use by States and airspace users as the basis for operating Automatic Dependent Surveillance – Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC), in conjunction with <i>Annex 10 – Aeronautical Telecommunications Volume II – Communications Procedures including those with PANS status</i> and the <i>Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM Doc 4444)</i> .	Notify States	ICAO APAC Office	Upon release of the GOLD by the AD-Hoc GOLD Working Group, transmit State Letter	First quarter 2010
C 20/74	<b>Removal of the APANPIRG Air Navigation Deficiency AP-MET-15</b>	That, the air navigation deficiency AP-MET-15 be removed from the APANPIRG air navigation deficiencies list.	Update list of APANPIRG air navigation deficiencies	ICAO APAC Office	Updated list of APANPIRG air navigation deficiencies	Dec 2009

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date
C 20/75	<b>MET deficiencies to be added to the APANPIRG list of Air Navigation Deficiencies</b>	That, the list of proposed air navigation deficiencies in <b>Appendix F</b> to the APANPIRG/20 Report on Agenda item 4, obtained by the ICAO TCB CAEMSA-SP reports be added to the list of APANPIRG air navigation deficiencies list tagged with the U status.	<b>Update list of APANPIRG air navigation deficiencies</b>	APAC Office	<b>Updated list of APANPIRG air navigation deficiencies</b>	<b>Dec 2009</b>
C 20/76	<b>Continuation of CAEMSA-SP</b>	That, the DGCA/46 conference considers funding and resources be allotted by donor States, WMO, and ICAO for the continuation of the CAEMSA-SP in order to meet international requirements in the provision of meteorological services which would achieve the necessary safety and efficiency levels for airlines operating in the South Pacific.	<b>Provide necessary means for the continuation of CAEMSA-SP</b>	DGCA Conference	<b>Continuation of CAEMSA-SP</b>	<b>Oct 2009</b>

\* **Note:** ICAO has established the following Strategic Objectives for the period 2005-2010:

**A: Safety** - Enhance global civil aviation safety; **B: Security** - Enhance global civil aviation security; **C: Environmental Protection** - Minimize the adverse effect of global civil aviation on the environment; **D: Efficiency** - Enhance the efficiency of aviation operations; **E: Continuity** - Maintain the continuity of aviation operations; **F: Rule of Law** - Strengthen law governing international civil aviation.