



*International Civil Aviation Organization*

**The Third Meeting of the APANPIRG ATM Sub-Group  
(ATM /SG/3)**

Bangkok, Thailand, 3-7 August 2015

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**Agenda Item 5: ATM Coordination (Meetings, Route Development, Contingency Planning)**

**FOURTH MEETING OF THE MEKONG ATM COORDINATION GROUP OUTCOMES**

(Presented by Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam and IATA)

**SUMMARY**

This paper presents outcomes of the Fourth Meeting of the Mekong ATM Coordination Group (MK-ATM/CG/4) held in Siem Reap, Cambodia on 2-4 June 2015.

**1. INTRODUCTION**

1.1 The Mekong ATM Coordination Group was established to discuss and collaborate on ATM coordination issues focusing on the region surrounding the Mekong River with agreed annual meetings. The first three meetings of the group under its current name were held in Bangsaen, Chonburi, Thailand in April 2011, in Bangkok, Thailand in May 201 and in Da Nang, Viet Nam in October 2014. The latest meeting of the group was held in Siem Reap, Cambodia on 2-4 June 2015.

1.2 Delegates from Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam and IATA participated in the meeting. While invitations were also extended to China; Hong Kong, China; ICAO RSO and EU-ASEAN Air Transport Integration Project (EU-AATIP), they were regrettably unable to participate in the meeting plenary.

**2. DISCUSSION**

2.1 The MK-ATM/CG/4 meeting reviewed outcomes of related meetings while each Member State updated the group on traffic growth managed and their on-going projects as reflected in the meeting report in **Attachment 1**. Documents related to the meeting can be downloaded from Cambodia Air Traffic Services Co., Ltd. (CATS) website at <<http://www.cats.com.kh/others.php>>.

2.2 During the meeting, delegates worked together to further develop ATS route network across the Mekong sub-region as well as reduction of spacing parameter under surveillance environment to collaboratively support ATM harmonization with the goal of achieving Seamless ATM Operations across the Mekong sub-region.

*Reduction of Spacing Parameter Among Mekong Member States*

2.3 Following agreement in previous meetings in respect to En-Route PBN Harmonization, the meeting agreed to reduction of aircraft spacing parameters on route segments supporting traffic among cities in Mekong Member States airspace under surveillance environment. Current spacing parameter between 30-80 NM would be reduced to 20 NM by end of 2015. A side meeting is being organized to finalize revision of Operational Letter of Agreement (LOA) among Mekong Member States with signing ceremony planned on the sideline of ICAO APANPIRG/26 meeting in September 2015.

*Route Structure Review Process*

2.4 The meeting agreed to several route structure changes that would convert conventional bidirectional routes among Mekong Member States into parallel unidirectional RNAV5 route structure for main city pairs, supported by RNAV5 routes to smaller cities, under joint coordination of Cambodia and Lao PDR.

*ATS Operational Difficulties*

2.5 The meeting discussed various ATS operational difficulties among Member States as well as operational difficulties with a neighboring State. While Member States agreed to work together to resolve these operational difficulties, those raised concerning other neighboring State would need further coordination and potential side discussion at ICAO ATM/SG/3 meeting.

*AIDC Implementation*

2.6 The meeting shared experience in AIDC implementation while considering convening of the ICAO AIDC Implementation Task Force (APA TF/1). The meeting requested Mekong Member States to prepare report on AIDC implementation plan status and update the ICAO APA TF/1 meeting accordingly. Further, Member States are requested to further develop AIDC implementation plan in accordance to ICAO APA TF guidance (**Attachment 2**).

*Surveillance Data Sharing*

2.7 The meeting discussed radar data sharing proposed during the meeting, with conclusion that further study on Surveillance Data Sharing would be needed. Matters related to Surveillance Data Sharing would be further studied prior to further discussion in the next meeting.

*ICAO/IATA Cross-Border ATFM Workshops*

2.8 The meeting was briefed on progress of Distributed Multi-Nodal ATFM Operational Trial, which Thailand and Viet Nam continued to participate. Preparation for the Distributed Multi-Nodal ATFM Operational Trial scheduled to commence on 29 June 2015 continued as planned. Moreover, IATA briefed the meeting on the ICAO/IATA Cross-Border ATFM Workshops organized in support of ICAO ATFM Steering Group Decision 5/3. Taking the view that Cross-Border ATFM needs to be implemented to support growing traffic demand while capacity upgrades are being put in place, the meeting encourages Member States to send appropriate individuals to the ICAO/IATA Cross-Border ATFM Workshops, especially the workshop planned in ICAO Asia/Pacific Regional Office, Bangkok.

ASEAN Strategic Planning Group

2.9 The meeting should note that the previous meeting of the group (MK-ATM/CG/3) in 2014 already agreed to support establishment of the ASEAN Strategic Planning Group, which would serve as mechanism for collaborative planning of capacity enhancements and ATM implementation among members of the Association of Southeast Asia Nations (ASEAN). However, the Mekong ATM Coordination Group composes of five of the ten ASEAN Member States.

2.10 Fortunately, the Group of Five ANSP Informal ATM Coordination (G5) composes five ASEAN Member States, while not including Brunei. The latest meeting of G5 was in February 2014. The next meeting of G5 is planned in July 2015. Therefore, matters related to ASEAN Strategic Planning Group are expected to be discussed after the next meeting of G5.

**3. ACTION BY THE MEETING**

- 3.1 The meeting is invited to;
- a) note the information contained in this paper; and
  - b) discuss any relevant matters as appropriate.

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**REPORT  
OF  
THE FOURTH  
MEKONG AIR TRAFFIC MANAGEMENT  
COORDINATION GROUP MEETING  
(MK-ATM/CG/4)**

Siem Reap, Cambodia, 2-4 June 2015

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

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## **History of the Meeting**

### **1.1 Introduction**

1.1.1 The First Mekong ATM Coordination Meeting (MK-ATM/CG/1) was held at The Tide Resort, Bang Saen, Chonburi, Thailand from 24th to 26th April 2011. The Second Mekong ATM Coordination Meeting (MK-ATM/CG/2) was held at The AETAS Lumpini Hotel, Bangkok, Thailand from 29th to 30th May 2013. The Third Mekong ATM Coordination Meeting (MK-ATM/CG/3) was held at The HAGL Plaza Hotel, Da Nang, Viet Nam from 13<sup>th</sup> to 15<sup>th</sup>, October 2014.

1.1.2 The Fourth Mekong ATM Coordination Meeting (MK-ATM/CG/4) was held at The Pacific Hotel, Siem Reap, Cambodia from 2<sup>nd</sup> to 4<sup>th</sup>, June 2015.

1.1.3 The MK-ATMCG meeting was originally held as “ATS Coordination Meeting” among Cambodia, Lao PDR, Thailand and Viet Nam with previous meetings held in Cambodia (2006), Thailand (2008) and Lao PDR (2009) respectively. The previous meetings discussed ATM coordination issues focusing the region surrounding the Mekong River.

### **1.2 Officers, Secretariat and Participants**

1.2.1 The meeting was facilitated by Mr. CHHUN Sivorn, Director, Air Navigation Standards and Safety Department, State Secretariat of Civil Aviation (SSCA) and Mr. Bountaeng SYMOON, Director, Air Navigation Division, Lao DCA. The Secretariat team of the meeting consists of Mr. LORN Thyrieth, Deputy Director, Air Navigation Standards and Safety Department, SSCA, supported by Mr. Piyawut TANTIMEKABUT, ATM Network Manager, Network Operations ATM Centre, Aeronautical Radio of Thailand Ltd (AEROTHAI), Mr. TAN Sophondarith, Deputy Director, Air Navigation Standards and Safety Department, SSCA, Mr. NOV Bunkong, Supervisor, ATC Instructor, Cambodia Air Traffic Services (CATS), Mr. SOY Aron, Safety Officer, CATS, and Mr. CHEA Veasna, Supervisor, Document Control, CATS.

1.2.2 Totally six five (56) participants, from Cambodia (State Secretariat of Civil Aviation, Cambodia Air Traffic Services Co., Ltd.: CATS, Airlines), Lao PDR (Department of Civil Aviation of Lao PDR: DCAL and Lao Air Traffic Management: LATM), Myanmar (Department of Civil Aviation Myanmar: DCA Myanmar), Thailand (Aeronautical Radio of Thailand: AEROTHAI), Viet Nam (Civil Aviation Authority of Viet Nam: CAAV, Viet Nam Air Traffic Management Corporation: VATM, Viet Nam Airlines), and the International Air Transport Association (IATA), were attended the meeting. A list of participants can be found in **Appendix A**.

### **1.3 Opening of the Meeting**

1.3.1 H. E. Lieutenant-General MAO Havannall, Secretary of State, SSCA, welcomed all participants to the Fourth Mekong ATM Coordination Group Meeting stressing need for cooperation among Mekong ANSPs as all members of the Association of South East Asia Nations (ASEAN). His Excellency also highlighted the history of previous ATS Coordination Meetings and ATM Coordination Group Meeting and suggested that each country should appoint and update Focal Point for Mekong and G5 to support ASEAN Economic Community establishment through Air Transport Working Group. His Excellency expressed sincere thank to delegation from the five countries and Mr. David Rollo, IATA representative, for supporting the MK-ATMCG, wished the meeting all the success.

1.3.2 H.E. Mr. Keo Sivorn, Director General for Technical, SSCA, was elected as the meeting’s Chairperson, welcomed all participants to the Fourth Mekong ATM Coordination Group Meeting, invited the head of delegation of the other four countries and IATA to express expressed sincere thank and appreciation for full and active participation in this regional event. For ease facilitating the discussion His Excellency delegated the chairmanship to Mr. Chhun Sivorn, Director, Air Navigation Standards and Safety Department, SSCA, as moderator. Mr. Inthanousorn SISANONH was elected to be a co-chairman and he also delegated the co-chairmanship to Mr. Bountaeng SYMOON, Director, Air Navigation Division, Lao DCA as a co-moderator of the meeting as well.

**1.4 Documentation and Working Language**

1.4.1 The meeting was conducted in English. All meeting documentation was in English.

1.4.2 A set of presentation slides was prepared as to support deliberation of the meeting.

## **Meeting Report**

### **Summary of Conclusions:**

#### ***Conclusion 4/1 – ICAO/IATA Cross-Border ATFM Workshops***

The MK-ATM/CG/4 meeting encourages Mekong Member States to send appropriate individuals to the ICAO/IATA Cross-Border ATFM Workshops to be organized in support to ICAO ATFM Steering Group Decision 5/3, especially the workshops planned in ICAO Regional Office Bangkok in November – December 2015.

#### ***Conclusion 4/2 – Reduction of Spacing Parameter Among Mekong Member States***

The MK-ATM/CG/4 meeting agreed to reduction of aircraft spacing parameter on route segments supporting traffic among cities in Mekong Member States airspace under surveillance environment to 20NM, with implementation by end of 2015.



## **Summary of Action Items:**

### ***Action Item 4/1: Traffic growth updates***

The MK-ATM/CG/4 meeting agrees that Member States provide traffic growth updates at Mekong ATM Coordination Group Meetings.

### ***Action Item 4/2 – Follow-Up of Mekong Route Structure Review Process***

The MK-ATM/CG/4 requests Cambodia to follow up on agreed route structure review:

- (1) Parallel RNAV5 routes replacing G474
- (2) Parallel RNAV5 routes replacing R468
- (3) RNAV5 route overlaying B329
- (4) RNAV5 route between Sihanouk (VDSV) and Samui (VTSM)

In addition, the meeting requests Lao PDR to follow up on agreed route structure review:

- (1) Realignment of R575 from Koh Kong (KK) through Attapeu direct to Da Nang

### ***Action Item 4/3: Phnom Penh ACC – Vientiane ACC Communications Upgrade***

The MK-ATM/CG/4 meeting supports CATS and LATM discussion to finalize VOIP communication equipment installation. Following installation of the VOIP equipment, the Phnom Penh ACC and Vientiane ACC would conduct operational trial using VOIP as supplementary communications.

### ***Action Item 4/4 – Prepare Coordination of ATS Operational Difficulties***

The MK-ATM/CG/4 meeting tasks Mekong Secretariat Team to prepare Working Paper to the ICAO ATM/SG/3 meeting outlining MK-ATM/CG/4 meeting report and operational difficulties.

The Mekong Secretariat Team is tasked to coordinate operational difficulties with ICAO Asia/Pacific Regional Office and Asia/Pacific Regional Sub-Office.

In addition, the Mekong Secretariat Team is tasked to coordinate side discussion with relevant parties in the sideline of ICAO ATM/SG/3.

### ***Action Item 4/5 – Reduction of Spacing Parameter Among Mekong Member States***

The MK-ATM/CG/4 meeting tasks Mekong Member States to revise Letters of Agreement (LOA) in support of reduction of aircraft spacing parameter on route segments supporting traffic among cities in Mekong Member States airspace under surveillance environment to 20NM.

In addition, the meeting requests AEROTHAI to organize Letter of Agreement Signing Ceremony, preferably in Bangkok on the sideline of ICAO ATM/SG/3 in August 2015.

### ***Action Item 4/6: Report on State's AIDC Implementation Plan Status***

The MK-ATM/CG/4 meeting requests Mekong Member States to prepare report on AIDC implementation plan status and update the ICAO AIDC Implementation Task Force (APA TF/1) in Bangkok on 16 – 18 June 2015. Member States are requested to further develop AIDC implementation plan in accordance to ICAO APA TF advice.

### ***Action Item 4/7: Technical Aspect of Surveillance Data Sharing***

The MK-ATM/CG/4 meeting requests Mekong Member States to prepare papers to the next MK-ATM/CG meeting to outline technical aspect of surveillance data sharing.

## Agenda Item 1: Adoption of Agenda

1.1 The meeting adopted the following agenda:

- Agenda Item 1:** Adoption of Agenda
- Agenda Item 2:** Review of Related Meetings
  - 2.1. MK-ATM/CG/3
  - 2.2. ICAO APANPIRG/26
  - 2.3. ICAO Forums
    - 2.3.1. ICAO SEACG/22
    - 2.3.2. ICAO RACP/TF/4
    - 2.3.3. ICAO ATFM/SG/5
  - 2.4. ASEAN ATWG/31 ATTC/10
- Agenda Item 3:** Information Sharing
  - 3.1. Traffic Growth
- Agenda Item 4:** Air Traffic Management (ATM) Matters
  - 4.1. Airspace Management (ASM)
    - 4.1.1. Route Structure Review
    - 4.1.2. PBN Harmonization (En-Route)
  - 4.2. Air Traffic Flow Management (ATFM)
    - 4.2.1. Experiences of Capacity Assessment of ATM airspace
    - 4.2.2. Distributed Multi-Nodal CDM/ATFM Network
    - 4.2.3. APAC Regional Framework on Collaborative ATFM
  - 4.3. ATS Coordination
    - 4.3.1. Operational Difficulties
  - 4.4. Aircraft Spacing Parameter at Mekong MS FIR Boundaries
- Agenda Item 5:** CNS Matters
  - 5.1. ATS Inter-facility Data Communication (AIDC)
  - 5.2. Surveillance Data Sharing
  - 5.3. ATS and AIS Automation
- Agenda Item 6:** Operational Contingency Plan
  - 6.1. ATM Contingency Plan
- Agenda Item 7:** Future Direction
- Agenda Item 8:** Any Other Businesses
- Agenda Item 9:** Date and Venue of the next meeting

## Agenda Item 2: Review of Related Meetings

Secretariat team reviewed related meetings including previous Mekong ATM Coordination Group meeting (MK-ATM/CG/3), Special Coordination Meeting held in Cambodia to follow up MK-ATM/CG/3 Action Items on 8 April 2015, ICAO forums including SEACG/22, RACP/TF/4 and ATFM/SG/5 as well as ASEAN Air Transport Working Group (ATWG/31) meeting and Air Transport Technical Cooperation (ATTC/10) meeting.

The final report of MK-ATM/CG/3 is attached in **Appendix B** for reference. ATM Point of Contact and AIDC Point of Contact were updated in **Appendix C** and **Appendix D**.

### **Agenda Item 3: Information Sharing**

#### **Agenda Item 3.1: Traffic Growth**

Cambodia updated the meeting with traffic growth since 2006 up to December 2014, featuring annual average growth of 8 percent, in which the domestic and overflight traffic annual average growth was 9 percent, while international flight by 6 percent. Traffic growth information is attached in **IP/01**.

Cambodia observed significant reduction in traffic on R575 and queried the meeting on possible causes of such event. IATA suggested that airline decision to flight plan on various routes depend on multiple factors including horizontal distance, vertical profile (ability to reach optimum flight level) and associated air navigation charges as well as other factors. IATA is willing to assist Cambodia in investigating cause of reduction of traffic on R575.

Lao PDR updated the meeting that Vientiane FIR has been experiencing 10 to 13 percent per annum growth in air traffic movement between 2010-2014, with average over flight movement growing from 300 flights/day in 2010 to 500 flights/day in 2014. Particularly, the annual average growth of overflight was 13.8 percent. Traffic growth information is attached in **IP/02**.

Myanmar updated the meeting that Yangon FIR has been experiencing 7 to 8 percent per annum growth in air traffic movement from 2010 to 2014 with average Overflight movement 600 flights/day in 2014. Traffic growth information is attached in **IP/03**.

Thailand updated the meeting with traffic growth up to March 2015, featuring overall growth rate of 7 percent. In general, domestic traffic grew at approximately 13 percent, overflight traffic 7 percent, and international flight grew at approximately 2 percent. Traffic growth information is attached in **PR/02**.

The meeting agreed to standing Action Item 4/1:

#### ***Action Item 4/1: Traffic growth updates***

The MK-ATM/CG/4 meeting agrees that Member States provide traffic growth updates at Mekong ATM Coordination Group Meetings.

### **Agenda Item 4: Air Traffic Management (ATM) Matters**

#### **Agenda Item 4.1: Airspace Management (ASM)**

The meeting discussed the airspace management related matters as follows:

##### **4.1.1 Progress of PBN Implementation in Cambodia (IP/04)**

Cambodia presented progress of PBN implementation in Cambodia including PBN progress in terminal airspace and en route airspace.

The meeting discussed the need for RAIM Prediction Service for implementation of RNP Approach and use of ADS-B to provide aircraft separation. AEROTHAI mentioned that their RAIM Prediction Service is operational for the Thai airspace (Bangkok FIR) supporting RAIM prediction for terminal airspace and en route airspace. Cambodia and Viet Nam informed the meeting that they are in discussion with AEROTHAI on provision of RAIM Prediction Service.

##### **4.1.2 Progress of PBN Implementation in Myanmar (IP/05)**

Myanmar updated the meeting on the progress of PBN implementation in terminal airspace and en route airspace in Yangon FIR.

The meeting discussed process of implementing routes based on PBN RNP4 specification. Myanmar further clarified that the implementation was agreed to by relevant States including India. Further PBN route structure updates will be discussed in the Bangladesh – India – Myanmar – Thailand (BIMT) ATM Coordination Group Meeting in Yangon, Myanmar on 21 – 24 June 2015 with route structure changes targeted for implementation by the end of 2015.

#### 4.1.3 Proposed PBN RNAV5 Routes in Cambodia, Lao PDR, Thailand and Viet Nam (WP/02)

Cambodia presented proposed PBN RNAV5 Routes on behalf of Cambodia, Lao PDR, Thailand and Viet Nam, namely:

- (1) Parallel RNAV5 routes replacing G474
- (2) Parallel RNAV5 routes replacing R468
- (3) RNAV5 route overlaying B329
- (4) RNAV5 route between Sihanouk (VDSV) and Samui (VTSM)
- (5) Parallel RNAV5 routes linking Vientiane (VLVT) and Ha Noi (VVNB)
- (6) Parallel RNAV5 routes between Ha Noi (VVNB) and Ho Chi Minh (VVTs) through Phnom Penh and Vientiane FIRs.

Cambodia, Thailand and Viet Nam agreed to parallel RNAV5 routes replacing G474 (1). Viet Nam intended to implement G474 parallel route structure in a phased approach with Phase 1 G474 Parallel Route implemented between GOMES-GONLY. In Phase 2, following Traffic Sample Data study, Viet Nam will coordinate with the Philippines to extend the route in parallel with L628.

Cambodia, Thailand and Viet Nam agreed to parallel RNAV5 routes replacing R468 (2). Viet Nam also agreed to extension of R468 parallel routes to DAGAG.

RNAV5 route overlaying B329 (3) would be discussed in 4.1.4.

Cambodia and Thailand agreed in principle on RNAV5 route between Sihanouk (VDSV) and Samui (VTSM), pending flight validation and further approval process.

Lao PDR and Viet Nam agreed to establish parallel route between Vientiane (VLVT) and Ha Noi (VVNB) as mentioned in (5).

#### 4.1.4 Preparation of Viet Nam in Implementing RNAV5 B329 (PR/03)

Viet Nam briefed the meeting on progress of implementing RNAV5 route overlaying B329.

Following agreement among Cambodia, Lao PDR and Viet Nam to re-designate the route, it was agreed that Cambodia would take the lead to coordinate route designator for the RNAV5 route overlaying B329.

#### 4.1.5 ATS Route Development within the Vientiane FIR (IP/09 and WP/06)

Lao PDR briefed the meeting on ATS Route Development in the Vientiane FIR mainly pertaining to route structure linking to the new Attapeu Airport. It was also mentioned that parallel RNAV5 route structure between Vientiane (VLVT) and Luang Prabang (VLLB) as well as Vientiane (VLVT) and Ha Noi (VVNB) are being planned.

Lao PDR further proposed establishment of routes connecting Attapeu Airport to Pleiku, Da Nang and Phnom Penh.

It was further clarified that the Attapeu Airport will support Category A, B, and C aircraft, which would limit size and flight levels required.

After deliberation, the meeting agreed to the following route structure changes:

- (1) Attapeu – Pleiku Connecting Route: use existing B202
- (2) Realign R575 from Koh Kong (KK) through Attapeu direct to Da Nang

The meeting agreed that Cambodia would take leadership in following up on route structure review initiatives agreed to in 4.1.3 and 4.1.4 and Lao PDR would take leadership in following up on route structure review agreed to in 4.1.5 as reflected in **Action Item 4/2**.

***Action Item 4/2 – Follow-Up of Mekong Route Structure Review Process***

The MK-ATM/CG/4 requests Cambodia to follow up on agreed route structure review:

- (1) Parallel RNAV5 routes replacing G474
- (2) Parallel RNAV5 routes replacing R468
- (3) RNAV5 route overlaying B329
- (4) RNAV5 route between Sihanouk (VDSV) and Samui (VTSM)

In addition, the meeting requests Lao PDR to follow up on agreed route structure review:

- (1) Realignment of R575 from Koh Kong (KK) through Attapeu direct to Da Nang

**4.1.6 Establishment of Two New Parallel Routes in Viet Nam (PR/08)**

Viet Nam briefed the meeting on progress of implementing parallel route structure linking Ha Noi (VVNB) and Ho Chi Minh (VVTG) within Ha Noi FIR and Ho Chi Minh FIR airspace with expected publication date in Q4 2015.

**Agenda Item 4.2: Air Traffic Flow Management (ATFM)**

**4.2.1 Distributed Multi-Nodal ATFM Network (PR/04)**

Thailand briefed the meeting on progress of Distributed Multi-Nodal ATFM Operational Trial based on Distributed Multi-Nodal ATFM Concept planned to start in June 2015. The Distributed ATFM Operational Trial would involve participation of aviation stakeholders from China, Hong Kong China, Singapore Thailand, Indonesia, Malaysia, Cambodia, Viet Nam and Australia.

Recognizing varying level of sophistication of ATFM Nodes (consisting of ANSPs, Airport Operators and Aircraft Operators), the ATFM Operational Trial would be conducted with tiered level of participation as follows:

**Level 3: Full Demand – Capacity Balancing:** capability to recognize demand-capacity imbalance; capability to generate and distribute Calculated Take-Off Time (CTOT); capability to receive CTOT from another ATFM Node and manage flight operations in accordance to CTOT.

**Level 2: CTOT Compliance Support:** capability to receive CTOT from another ATFM Node and manage flight operations in accordance to CTOT.

**Level 1: Observer**

It was mentioned that ATFM Operational Trial would commence in June 2015 with phased approach as follows:

<b>Phase 1: Distributed ATFM for Airport Arrival Constraints (Jun 2015 – Jun 2016)</b>		
<b>Stage 1: CTOT Communications</b> (Jun – Sep 2015) Ensure proper CTOT communication flow among ATFM Nodes and stakeholders	<b>Stage 2: CTOT Adherence</b> (Oct 2015 – Jan 2016) Initial ATFM operations under scripted scenarios with provisions of addressing ad-hoc demand-capacity imbalance	<b>Stage 3: Advanced CTOT Management</b> (Feb – Jun 2016) More complex ATFM operations including CTOT revisions, cancellation and improvements
<b>Phase 2: More Advanced Distributed ATFM</b> - Consider airspace constraints		

#### 4.2.2 Cross-Border ATFM Workshop Schedule (WP/06)

IATA presented schedule of Cross-Border ATFM Workshops planned as part of IATA ATFM Project in support to ICAO ATFM Steering Group Decision 5/3, in cooperation with ICAO Regional Sub-Office. IATA outlined the schedule of workshops in promotion of Cross-Border ATFM as follows:

- (1) 3 – 4 September 2015 : India (location TBC)
- (2) October 2015 : Indonesia (location and dates TBC)
- (3) 19 – 20 November 2015 : ICAO Regional Office Bangkok
- (4) 30 November – 1 December 2015 : ICAO Regional Office Bangkok

IATA stressed importance of States sending appropriate individuals to the workshops, especially workshops in ICAO Regional Office Bangkok to promote understanding of Cross-Border ATFM initiatives. It was mentioned that ICAO Regional Office would be sending invitation to all workshops to member States.

The meeting agreed to **Conclusion 4/1** encouraging Member States to send appropriate individuals to the Cross-Border ATFM Workshops.

#### ***Conclusion 4/1 – ICAO/IATA Cross-Border ATFM Workshops***

The MK-ATM/CG/4 meeting encourages Mekong Member States to send appropriate individuals to the ICAO/IATA Cross-Border ATFM Workshops to be organized in support to ICAO ATFM Steering Group Decision 5/3, especially the workshops planned in ICAO Regional Office Bangkok in November – December 2015.

#### 4.2.3 Regional Framework for Collaborative ATFM (PR/04A)

Secretariat prepared summary of ICAO Regional Framework for Collaborative ATFM developed by the ICAO ATFM Steering Group. The framework document will be submitted to ICAO ATM/SG/3 meeting in August for further endorsement process.

#### **Agenda Item 4.3: ATS Coordination**

##### 4.3.1 Cambodia Operational Difficulties in ATS Coordination (WP/03)

Cambodia presented operational difficulties to the meeting, namely:

- (1) Need for direct voice communications with Vientiane ACC
- (2) Limitation of ATC Clearance Flight Level on R588

Following discussions, CATS (Cambodia) and LATM (Lao PDR) agreed to finalize VOIP equipment for installation. After installation, Phnom Penh ACC and Vientiane ACC would conduct operational trial using VOIP as supplementary communication as soon as possible.

#### ***Action Item 4/3: Phnom Penh ACC – Vientiane ACC Communications Upgrade***

The MK-ATM/CG/4 meeting supports CATS and LATM discussion to finalize VOIP communication equipment installation. Following installation of the VOIP equipment, the Phnom Penh ACC and Vientiane ACC would conduct operational trial using VOIP as supplementary communications.

Viet Nam agreed that Ho Chi Minh ACC will inform Phnom Penh ACC as soon as possible when higher flight level than LOA becomes available on R588.

##### 4.3.2 Viet Nam Operational Difficulties in ATS Coordination (WP/03)

Viet Nam presented operational difficulties to the meeting, namely:

- (1) Flight operations without flight permission from CAAC into the Chinese Airspace
- (2) Chinese traffic near Sanya FIR – Ha Noi FIR Boundary and Sanya FIR – Ho Chi Minh FIR Boundary without appropriate notification
- (3) Excessive uncoordinated flow restrictions

Secretariat suggested the meeting that operational difficulties be outlined in the report and further explained in Working Paper to relevant ICAO meeting, in this case, ICAO ATM/SG/3 on 3 – 7 August 2015. In addition, the meeting agreed that the secretariat coordinate with ICAO APAC

Regional Office and ICAO APAC Regional Sub-Office (RSO) to coordinate side discussion among related parties on the sideline of ICAO ATM/SG/3.

***Action Item 4/4 – Prepare Coordination of ATS Operational Difficulties***

The MK-ATM/CG/4 meeting tasks Mekong Secretariat Team to prepare Working Paper to the ICAO ATM/SG/3 meeting outlining MK-ATM/CG/4 meeting report and operational difficulties.

The Mekong Secretariat Team is tasked to coordinate operational difficulties with ICAO Asia/Pacific Regional Office and Asia/Pacific Regional Sub-Office.

In addition, the Mekong Secretariat Team is tasked to coordinate side discussion with relevant parties in the sideline of ICAO ATM/SG/3.

**Agenda Item 4.4: Aircraft Spacing Parameter at Mekong Member States FIR Boundaries**

Secretariat reminded the meeting of MK-ATM/CG/3 Conclusion 3/1 on En Route PBN Harmonization, reminding the meeting of agreement to reduce spacing parameter on international routes connecting cities within Mekong Member State airspace under surveillance environment. The presentation (**PR/10**) highlights current spacing parameter between 30 NM and 80 NM (10 minutes).

Following extensive discussion, the meeting agreed to reduce aircraft spacing parameter for routes supporting traffic between cities in Mekong Member State Airspace by end of 2015 as referred to in **Conclusion 4/2**.

The meeting requests AEROTHAI to organize Letter of Agreement Signing Ceremony, preferably in Bangkok, on the sideline of ICAO ATM/SG/3 in August 2015, as referred to in **Action Item 4/5**.

***Conclusion 4/2 – Reduction of Spacing Parameter Among Mekong Member States***

The MK-ATM/CG/4 meeting agreed to reduction of aircraft spacing parameter on route segments supporting traffic among cities in Mekong Member States airspace under surveillance environment to 20NM, with implementation by end of 2015.

***Action Item 4/5 – Reduction of Spacing Parameter Among Mekong Member States***

The MK-ATM/CG/4 meeting tasks Mekong Member States to revise Letters of Agreement (LOA) in support of reduction of aircraft spacing parameter on route segments supporting traffic among cities in Mekong Member States airspace under surveillance environment to 20NM.

In addition, the meeting requests AEROTHAI to organize Letter of Agreement Signing Ceremony, preferably in Bangkok on the sideline of ICAO ATM/SG/3 in August 2015.

**Agenda Item 5: CNS Matters**

**Agenda Item 5.1: ATS Inter-facility Data Communication (AIDC)**

**5.1.1 Progress on ADS-B and AIDC Implementation Plan (IP/06)**

Myanmar presented on the current Communication and Surveillance capabilities in Yangon FIR such as the progress on ADS-B and Data link AIDC implementation plans to enhance safety and collaboration in air traffic management.

IATA congratulated Myanmar on the effort made and noted that AIDC would help to reduce ATC workload and enhance safety through reduction of Large Height Deviation (LHD); ADS-B / VHF data sharing between Myanmar - India also helps to fill surveillance gap similar to Viet Nam collaboration with Singapore; and Mekong sub-region action in data sharing provides example for the region.

### 5.1.2 AIDC Implementation Plan (IP/07)

Viet Nam presented on information of AIDC implementation plan in Viet Nam.

Viet Nam suggested Technical Test with Cambodia should be in July 2015.

Thailand suggested the Test should be in accordance with the ICAO AIDC Survey and requested State to report AIDC System readiness status in the next meeting of the ICAO AIDC Implementation Task Force.

Thailand suggested step-wise Implementation plan similar to AMHS implementation:

- (1) Bilateral Kick-Off Meeting
- (2) Technical establishment and technical interoperability test
- (3) Pre-Operational Trial - use AIDC in parallel
- (4) Commissioning

Chairman of Mekong ATM meeting encourages Mekong Member States to participate in ICAO AIDC Task Force (APA TF/1) in Bangkok on 16-18 June 2015. States are encouraged to update APA TF/1 with AIDC implementation plan and develop implementation plan in accordance to ICAO APA TF advice.

In preparation of the ICAO APA TF/1 meeting, Thailand prepared an AIDC Planner based on AMHS Planner for the Mekong ATM Coordination Group as in Appendix E.

#### ***Action Item 4/6: Report on State's AIDC Implementation Plan Status***

The MK-ATM/CG/4 meeting requests Mekong Member States to prepare report on AIDC implementation plan status and update the ICAO AIDC Implementation Task Force (APA TF/1) in Bangkok on 16 – 18 June 2015. Member States are requested to further develop AIDC implementation plan in accordance to ICAO APA TF advice.

### 5.1.3 AIDC Test Scenario (PR/10)

Thailand presented the AIDC Test Scenario in the context of the new ATC system supported.

#### **Agenda Item 5.2: Surveillance Data Sharing**

##### 5.2.1 Proposal on SSR Surveillance Data Sharing (WP/05)

Viet Nam presented the proposal on SSR Surveillance Data Sharing between Viet Nam and Lao PDR.

Further, Viet Nam invites Lao PDR to Ha Noi for technical discussion at the appropriate time.

IATA congratulated Viet Nam and Lao PDR on the initiative to share radar data. This would enable radar handoffs reducing coordination and controller workload as providing contingency backup.

Moderator of Mekong ATM Coordination Group Meeting suggested Mekong States to prepare paper on technical aspect of surveillance data sharing for next meeting.

#### ***Action Item 4/7: Technical Aspect of Surveillance Data Sharing***

The MK-ATM/CG/4 meeting requests Mekong Member States to prepare papers to the next MK-ATM/CG meeting to outline technical aspect of surveillance data sharing.

#### **Agenda Item 5.3: ATS and AIS Automation**

##### 5.3.1 Improvement of ATM in Viet Nam (PR/05)

Viet Nam presented information on Improvement of Air Traffic Services in Viet Nam.

##### 5.3.2 AIS-AIM Transition Plan (IP/08)

Cambodia presented an overview of implementation progress of Aeronautical Information Service (AIS) to Aeronautical Information Management (AIM) in Cambodia.

##### 5.3.3 Transition from AIS to AIM in Viet Nam (PR/06)

Viet Nam presented information on the progress of AIM implementation.



### **Agenda Item 6: Operational Contingency Plan**

#### 6.1 Draft Regional ATM Contingency Plan (PR/07)

Secretariat prepared summary of draft ICAO Regional ATM Contingency Plan developed by the ICAO Regional ATM Contingency Plan Task Force.

### **Agenda Item 7: Future Direction**

#### 7.1. ASEAN Strategic Planning Group

The Mekong Secretariat Team briefed the meeting that the Group of 5 ANSP Informal ATM Coordination Group meeting would be held in Singapore in July 2015. Afterwards, the ASEAN Strategic Planning Group can be convened.

### **Agenda Item 8: Any Other Business**

There was no discussion on this Agenda Item.

### **Agenda Item 9: Date and Venue of the Next Meeting**

Following agreement from MK-ATM/CG/3 meeting that the hosted countries for Mekong ATM Coordination Group Meeting shall be rotated among the members in alphabetical order, Lao PDR (DCA Lao and LATM) agreed proceed with domestic process to host the meeting such as location and timing of the next meeting and inform Mekong Member States and concerned organization through Mekong Secretariat Team in due course.

### **Closing of the Meeting**

10.1 H.E. Mr. Keo Sivorn, Director General for Technical, SSCA closed the meeting, thanking all for active participation during the meeting proceeding and thanking secretariat team for preparation of relevant documents.

	Stage	Cambodia	Myanmar	Lao PDR	Thailand	Vietnam
Cambodia	A. Procedure Agreement					
	B. Connection + Technical Testing					
	C. Pre-Operational Trial					
	D. LoA signing + Commissioning					
Myanmar	A. Procedure Agreement					
	B. Connection + Technical Testing					
	C. Pre-Operational Trial					
	D. LoA signing + Commissioning					
Lao PDR	A. Procedure Agreement					
	B. Connection + Technical Testing					
	C. Pre-Operational Trial					
	D. LoA signing + Commissioning					
Thailand	A. Procedure Agreement					
	B. Connection + Technical Testing					
	C. Pre-Operational Trial					
	D. LoA signing + Commissioning					
Vietnam	A. Procedure Agreement					
	B. Connection + Technical Testing					
	C. Pre-Operational Trial					
	D. LoA signing + Commissioning					

Stage Description	Description
A. Procedure Agreement	The related states agree on the procedures to be used for AIDC using template available in AFTN AIDC ICD. Draft LoA using procedure.
B. Connection + Technical Testing	Both states prepare their respective technical arrangement and test with each other.
C. Pre-Operational Trial	Both states perform pre-operation trial such as running both conventional procedure and AIDC procedure in parallel. Adjust the LoA if required and prepare for operation.
D. LoA signing + Commissioning	Both states sign the LoA and commissioning the use of AIDC.