



*International Civil Aviation Organization*

**The Fifth Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/5)**

Bangkok, Thailand, 30 March – 3 April 2015

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**Agenda Item 4: Review of Current ATFM/CDM Operations and Problem Areas**

**BOBCAT OPERATIONAL UPDATES**

(Presented by Thailand)

**SUMMARY**

The purpose of this paper is to present an analysis and overview of operational Westbound flights through the Kabul FIR associated with the ATFM BOBCAT system from the commencement of its ATFM operation in July 2007 to December 2014 as well as Action Items assigned by previous BBACG and SAIOACG meetings.

**1. INTRODUCTION**

1.1 The meeting would recall that on AIRAC 5 July 2007, international long range ATFM procedure using the BOBCAT system became fully operational.

1.2 It was agreed at the ATFM/TF/13 meeting held in September 2009 that sample monthly traffic data would be collected by all States in the third week of each month, sent to the ATFMU and analyzed by the BOBCAT Development Team for presentation to the periodic meetings of the ATFM/TF, which was later dissolved by APANPIRG/20 decision. Therefore, BOBCAT matters should be followed up at SAIOACG meetings.

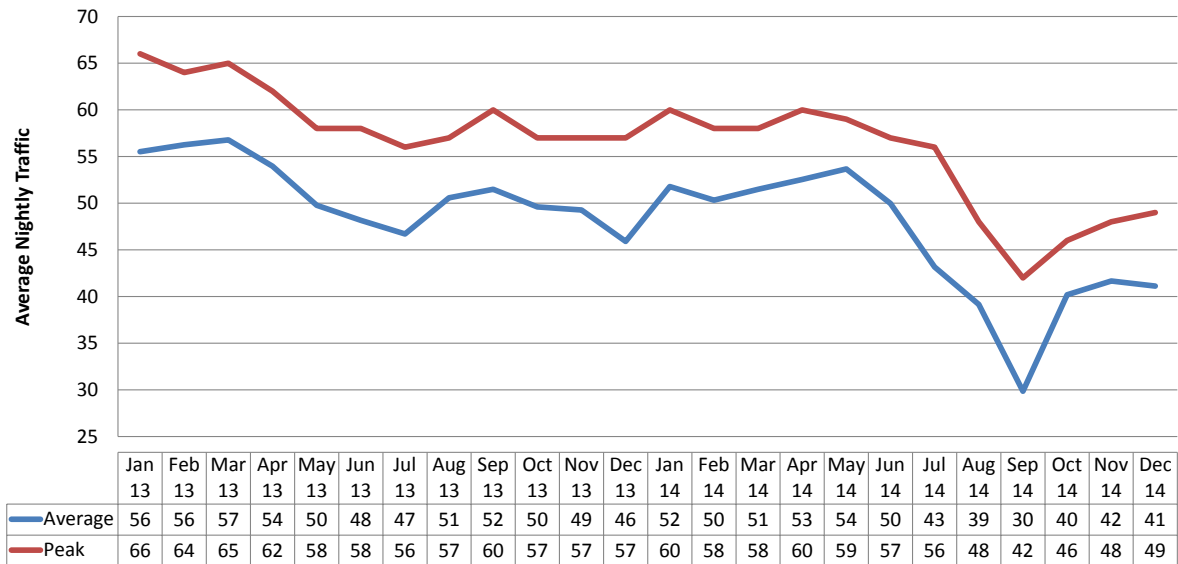
1.3 It was discussed in the SAIOACG/5 that Action Items related to ATFM Operations for Afghanistan airspace should be reported to the ATFM/SG meeting.

**2. DISCUSSIONS**

2.1 Over seven (7) years from the start of operational implementation of BOBCAT in July 2007 to December 2014, based on IATA estimate, BOBCAT procedure has contributed in saving over 100 million kilograms of fuel, which is equivalent to approximately 405 million kilograms of carbon dioxide emissions.

2.2 The meeting is invited to note summary of Slot Request received between January 2013 and December 2014 in **Figure 1**.

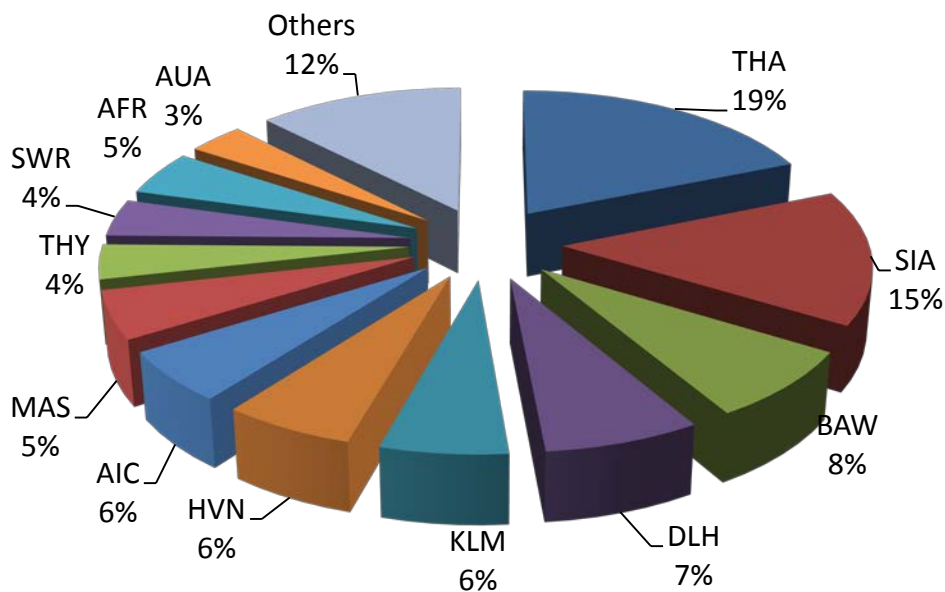
**BOBCAT Traffic Demand from Slot Request  
1 Jan 2013 - 31 Dec 2014**



*Figure 1: BOBCAT Traffic Demand from Slot Request*

2.3 The meeting is also invited to note that the number of airlines involved has remained at 58 airlines. Top 12 airlines involved are illustrated in **Figure 2**.

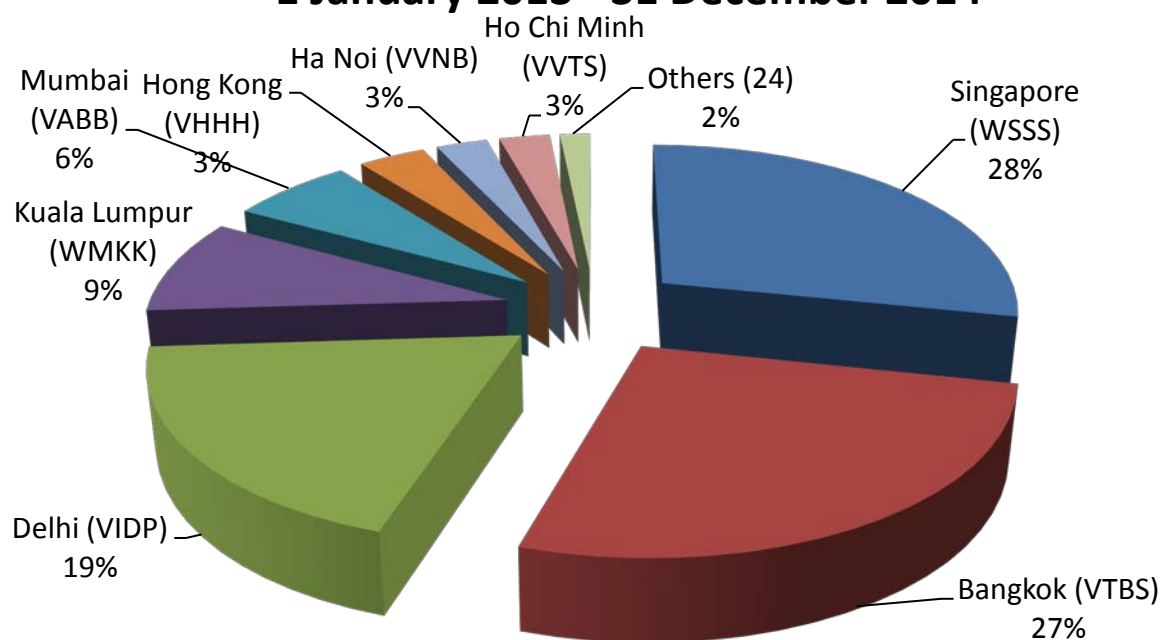
**BOBCAT Airline Participation  
1 January 2013 - 31 December 2014**



*Figure 2: BOBCAT Airline Participation*

2.4 The meeting is also invited to note that 8 major airports continue to contribute 98 percent of total BOBCAT traffic based on January 2013- December 2014 data as illustrated in **Figure 3**.

## BOBCAT Slot Request by Departure Airport 1 January 2013 - 31 December 2014



*Figure 3: BOBCAT Slot Request by Departure Airports*

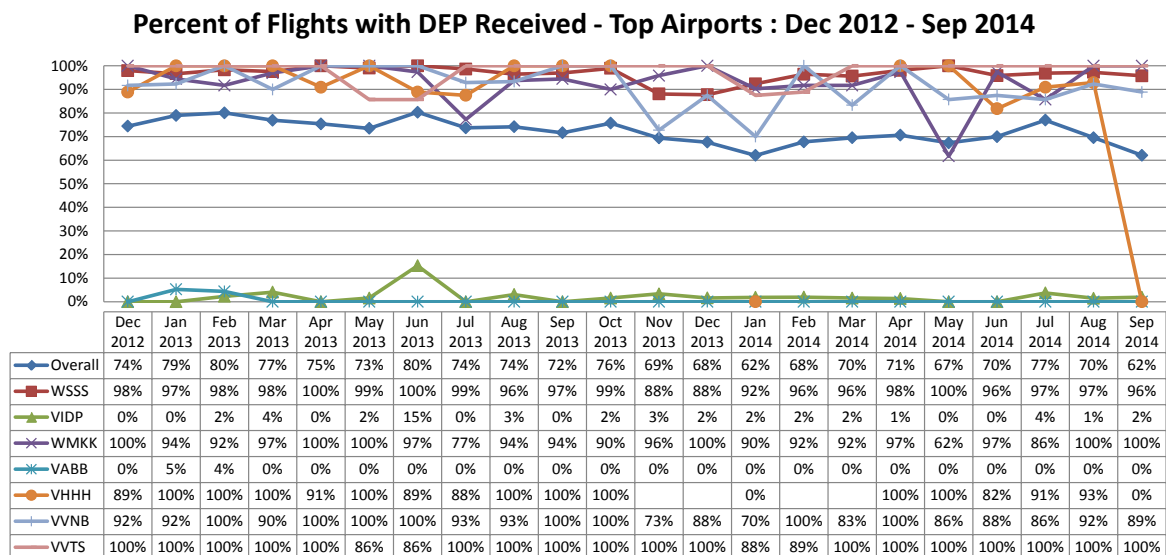
### Traffic Sample Data and Post-Operational Analysis

2.5 The meeting is advised that Traffic Sample Data is collected from member ANSPs on weeks starting on the third Sunday of each month to perform post-operational analysis. Unfortunately, due to resource constraint, Post-Operational analysis was completed only up to September 2014 Traffic Sample Data.

### Addressing of Flight Movement Message

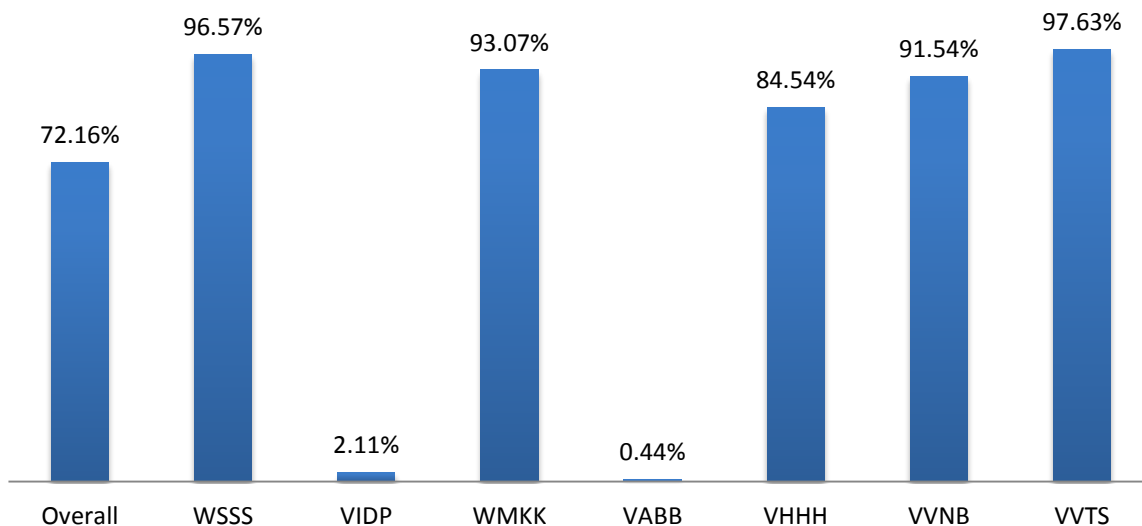
2.6 The meeting is reminded that, in accordance to BBACG-20/1 Action Item (updated in SAIOACG/3), States were invited to ensure that BOBCAT flight plans and movement messages (DEP, CHG, CNL, etc) of flights subject to ATFM procedures (BOBCAT) are addressed by AFTN to Bangkok ATFMU.

2.7 Accordingly, the Bangkok ATFMU continued to monitor percentage of flights with DEP message received as part of Post-Operational Analysis. Percentage of flights with DEP messages received is summarized in **Figure 4** and **Figure 5**.



**Figure 4:** Percent of Flights with DEP Message Received - Top Airports : Dec 2012 - Sep 2014

### Average Percent of Flights with DEP Received Top Airports : Dec 2012 - Sep 2014

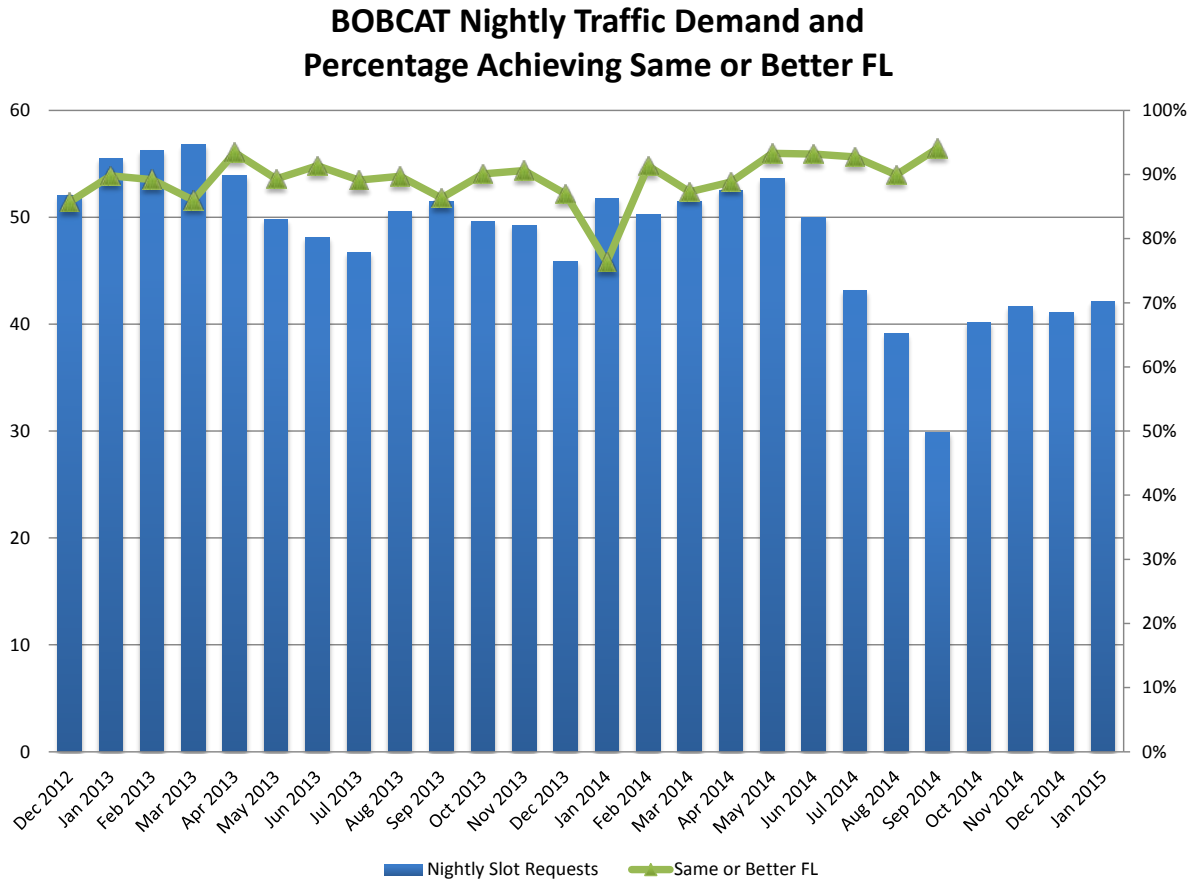


**Figure 5:** Average Percent of Flights with DEP Message Received - Top Airports : Dec 2012 - Sep 2014

2.8 The meeting is reminded that flight movement messages should continue to be forwarded to the Bangkok ATFMU via AFTN at VTBBZDZX.

Preferred Flight Levels

2.9 Post-Operational Analysis continued to indicate high percentage of flights operating through the Kabul FIR with the same or better flight level. Summary of nightly traffic demand from Slot Request and Percentage of Flights Achieving Same or Better Flight Level is illustrated in **Figure 6**.



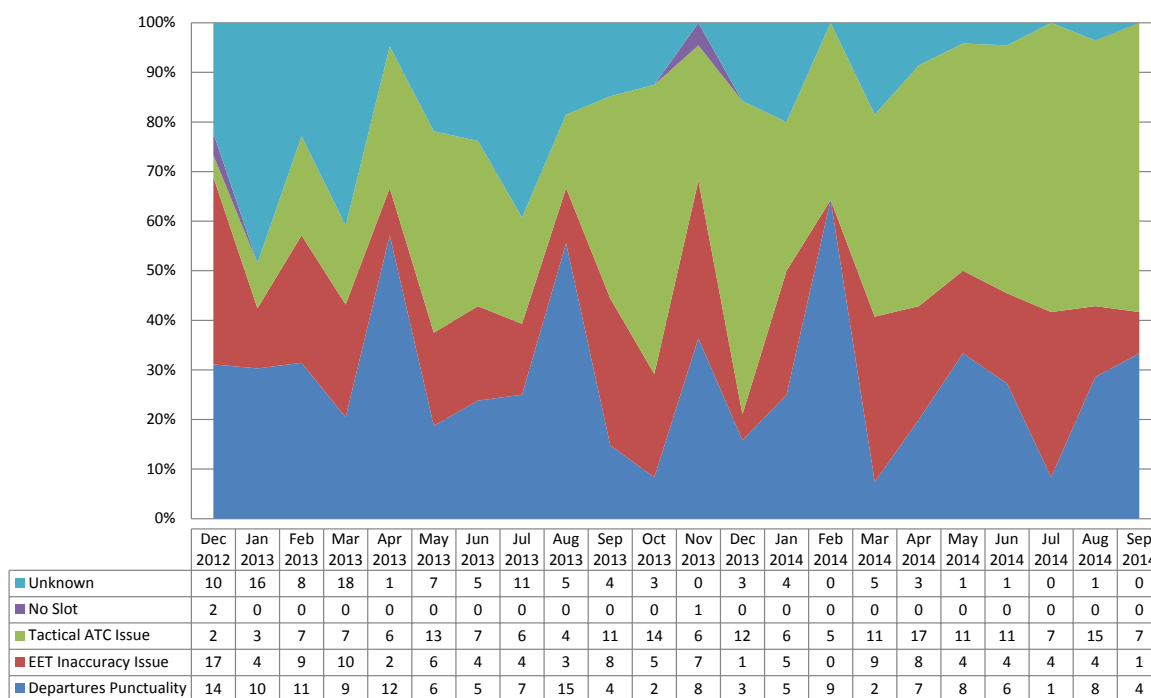
**Figure 6:** Nightly Traffic Demand from Slot Request vs Percentage Achieving Same or Better FL

2.10 Accordingly to Post-Operational Analysis between December 2012 and September 2014, major causes of aircraft unable to achieve preferred flight level are:

- a) Tactical ATC issues: 36 percent
- b) Departures punctuality: 28 percent
- c) EET inaccuracy: 19 percent
- d) Unknown (more data required): 15 percent
- e) Departure without Slot Allocation: 1 percent

2.11 Summary of major causes of aircraft unable to achieve preferred flight level is illustrated in **Figure 7**.

**Causes of Flights Not Entering Kabul FIR at Slot Allocation FL**



**Figure 7: Causes of Flight Not Entering Kabul FIR at Slot Allocation FL**

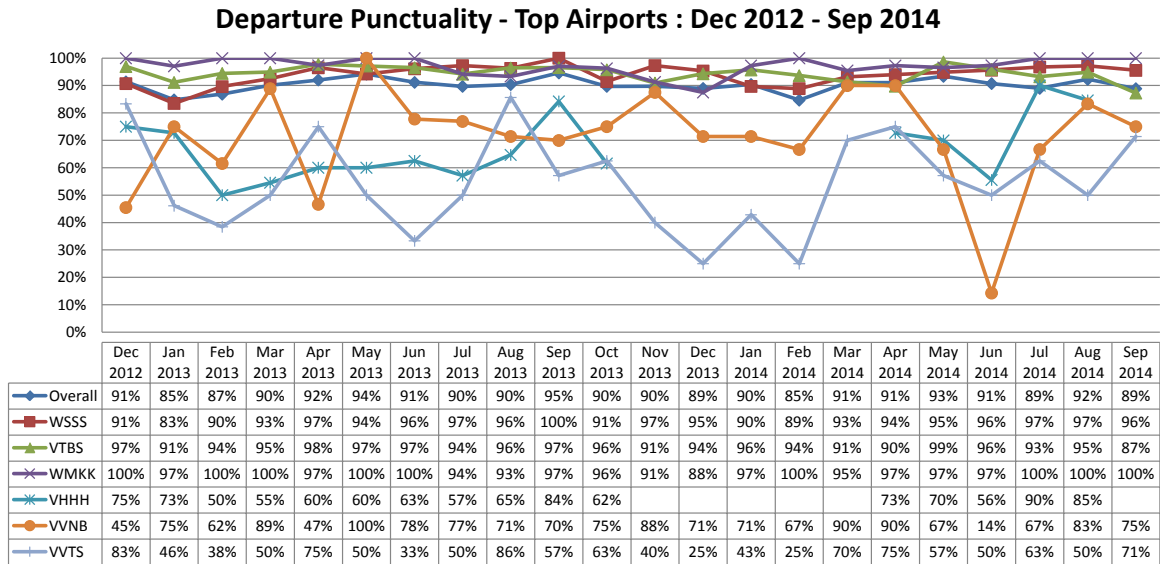
Departures Punctuality

2.12 According to previous Post-Operational Analysis, it was recognized that a major cause of flights not transiting the Kabul FIR at Slot Allocation flight level relate to departure punctuality with respect to AWUT.

2.13 Summary of Departure Punctuality for Top Airports between December 2012 and September 2014 is shown in **Figure 8** and **Figure 9**.

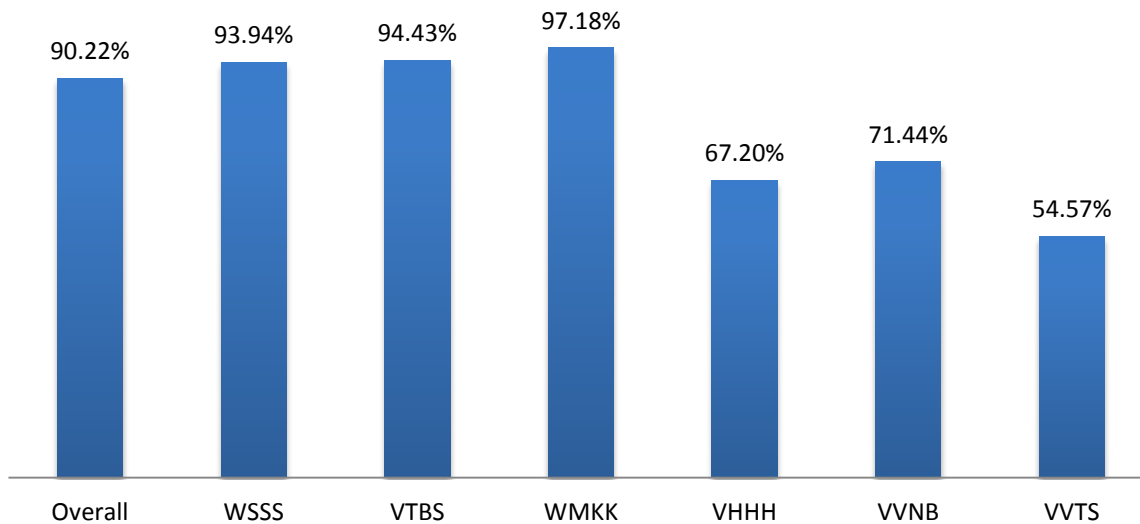
2.14 It should be noted that while the overall system compliance is around 90 percent, there remains room for improvement on departure compliance for various airports. However, for airports with lesser traffic, responsibility to adhere to AWUT may have been entirely shifted to aircraft operators.

2.15 The meeting is advised that reporting of Departure Punctuality is in accordance to Action Item BBACG-20/3 (updated in SAIOACG/5), which was transferred to ATFM/SG by SAIOACG/5.



*Figure 8: Departure Punctuality - Top Airports: Dec 2012 - Sep 2014*

### Average Departure Punctuality - Top Airports Dec 2012 - Sep 2014



*Figure 9: Average Departure Punctuality - Top Airports: Dec 2012 - Sep 2014*

#### ANSP Feedback

2.16 Prior to ATFM/SG/5, India kindly provided feedback on BOBCAT operations to the Bangkok ATFMU. It was noted by the Kolkata FIR that some flights were operating without BOBCAT slot allocation. Upon further investigation of the data, it was recognized that some of the flights received were operating to the Middle East, thus potentially planning different routing probably not through Afghanistan airspace. Nevertheless, data provided will be further examined when full Post-Operational Analysis is conducted on Traffic Sample Data of the time period collected.

2.17 Moreover, Post-Operational Analysis in **Figure 7** indicated that since November 2013, ANSPs have collaboratively managed to ensure that flights operating without BOBCAT slot can be accommodated after those with BOBCAT slot allocation are accommodated.

2.18 Other feedback received from India in respect to BOBCAT operations were related to issues on implementation of 50NM longitudinal separation based on RNAV10/RNP10.

#### *BOBCAT Software Updates*

2.19 The meeting is reminded of Action Item SAIOACG-2/13, which suggested that Thailand communicate with stakeholders about an upgrade in terms of sharing information more like a CDM system. Nevertheless, it was suggested that the extra information should not be used as “controlling” tool. The Action Item has subsequently been transferred to ATFM/SG.

2.20 Accordingly, Thailand will communicate with stakeholders on the software upgrade in due course.

#### *BOBCAT Slot Allocation Beyond 2000 – 2359UTC*

2.21 The meeting is reminded of Action Item SAIOACG-2/16 requesting all involved to consider operational impact of BOBCAT slot allocation beyond current 2000 – 2359UTC time period with timeframe of 2013.

2.22 The meeting is also advised of recent concerns on continuity of Air Navigation Service Provision in Afghanistan, which prompted ICAO to setup cross-regional Ad-Hoc Afghanistan Contingency Group (AHACG). The latest meeting of AHACG (AHACG/2 – Istanbul, Turkey – November 2014) requested AEROTHAI to support H24 slot allocation for flights operating through Afghanistan in case of contingency using the BOBCAT system.

2.23 Accordingly, the possibility of BOBCAT slot allocation beyond 2000 – 2359UTC should be considered within the context of current Afghanistan air navigation service provision. Analysis provided to the AHACG/2 meeting based on December 2013 Traffic Sample Data could be further examined for operational impact to determine whether BOBCAT Slot Allocation beyond 2000 – 2359UTC is required.

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

3.1 The meeting is invited to:

- a) Note the data collated by the Bangkok ATFMU;
- b) Discuss data collection results; and,
- c) Discuss relevant matters as appropriate.

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