



SAM/IG/3
WP/06
04/06/09

**International Civil Aviation Organization
South American Regional Office**

**THIRD WORKSHOP/MEETING OF THE SAM IMPLEMENTATION GROUP (SAM IG/3)
REGIONAL PROJECT RLA/06/901**

Lima, Peru, 20-24 April 2009

**Agenda Item 5: Implementation of Air Traffic Flow Management (ATFM) in the
SAM Region**

ATFM QUESTIONNAIRE ON TASK 1.2.1

(Presented by the Secretariat)

SUMMARY

This working paper proposes the Meeting to make a revision of the information resulting from the questionnaire related to Task 1.2.1 described in Appendix A to Item 2 of the SAM/IG/1 meeting report.

References:

- SAM/IG/1 meeting report, Lima, Peru, April 2008; and
- SAM/IG/2 meeting report, Lima, Peru, November 2008

ICAO Strategic Objectives:

- C: *Environmental Protection*
D: *Efficiency*

1. Background

1.1 The SAM/IG/1 meeting, among other matters, analysed issues related with ATFM implementation in the South American Region, and agreed to develop a survey in order to obtain and supplement the information aimed at learning about the situation of participating States and organisations, regarding the Methodology for the Calculation of Airport and ATC Capacity and ATFM procedures for the Airport Strategic Phase, Airport Tactical Phase, Airspace Strategic Phase, and Airspace Tactical Phase.

1.2 Consequently, the meeting considered that it was necessary to carry out a survey on tasks 1.2.1 and 1.2.2, described in **Appendix A** to this working paper. The results of the survey on these two tasks would be presented to the SAM/IG/2 meeting.

1.3 The SAM/IG/2 meeting, held in Lima, Peru, in November 2008, noted that up to that date only four States of the SAM Region had answered the ATFM Questionnaire and considered that the administrations that had not yet submitted their replies should answer the Questionnaire as soon as possible and send the reply *via* email to the ICAO SAM Office by November 30, 2008.

2. Discussion

2.1 The answers from each participating State to the aforementioned survey are reported in **Appendix B**, while a general summary of all replies is reported in **Appendix C** to this working paper.

2.2 The resulting data will serve as a point of reference regarding the regional status of implementation and will be used for follow up of this item in the future.

3. Suggested action

4. The meeting is invited to:

- a) Take note of the information provided herein; and
- b) Review the information from each State, particularly, and if applicable update such information

APPENDIX A

SAM/IG/1 ATFM QUESTIONNAIRE ON TASK 1.2.1

The purpose of this survey is to obtain information to know the current status of States and international organisations with regard to:

- a) The methods for calculating airport and ATC capacity;
- b) ATFM procedures for the following phases:
 - ✓ Airport Strategic Phase,
 - ✓ Airport Tactical Phase,
 - ✓ Airspace Strategic Phase,
 - ✓ Airspace Tactical Phase.

This information will enable the (SAM/IG) Implementation Group to meet its planning and harmonisation objectives.

Put an “X” on the corresponding answer. Please include your comments, if you so deem relevant. If necessary, attach additional sheets of paper. If applicable, send copies of the documents to the following email address: mail@lima.icao.int.

1. Does your administration currently have a methodology, basic or complex, for calculating airport capacity? If your answer is YES, please send a copy of the methodology to the following email address: mail@lima.icao.int.

YES

NO

If the answer is YES, please provide the available airport data on your main airports in the table below. Please note that, for purposes of this table:

Total Capacity = Airport Acceptance Rate (AAR) + Airport Departure Rate (ADR).

Airport name	Runway configuration	AAR			(ADR)	Total Capacity
		VFR	MVFR	IFR		

Table 1

Comments

2. Does your administration currently have a methodology, basic or complex, for calculating en-route sector capacity? If your answer is YES, please send an electronic copy of the methodology to the following email address: mail@lima.icao.int.

YES

NO

If the answer is YES, please provide information about your main airports in the table below. Under the column "Time increments" please indicate whether sector capacity is calculated by 15-minute, 60-minute, or other time increments.

ACC	Sector name	Sector altitude	Sector capacity	Time increment

Table 2

Comments

3. Does your administration currently have procedures to support the following ATFM phases?

a) Airport Strategic Phase

YES

NO

b) Airport Tactical Phase

YES

NO

c) Airspace Strategic Phase

YES

NO

d) Airspace Tactical Phase

YES

NO

Comments

SAM/IG/1 ATMF QUESTIONNAIRE ON TASK 1.2.2

a) Flow management data processing and display:

1. Does your administration have a system to receive, process, and display flight plan data (FPL, RPL, etc.)?

YES

NO

2. Does your administration have a database that includes airspace information (for example, ACC, WGS 84 boundary coordinates, WGS 84 sector boundary coordinates, NAVAIDs, airways, special use airspace) and airport information (for example, runways, runway design, apron design, parking gate information)?

YES

NO

3. Does your administration have an ATFM system that displays air traffic?

YES

NO

4. Does your administration have a system that allows automatic or manual exchange of messages to support decision-making for ATFM (for example, SLOT assignment messages, slot adjustment messages, delay report messages, alternate route messages)?

YES

NO

5. Does your administration have a system to monitor the status of air navigation infrastructure?

YES

NO

6. Does your administration have a system to monitor and display airport acceptance rates (AAR) at major airports?

YES

NO

7. Does your administration have a system to monitor and display en-route sector capacity?

YES

NO

8. Does your administration have a system to monitor and display the aircraft mix that uses the airspace or airports?

YES

NO

b) Surveillance systems:

1. In the table below, list the type of surveillance systems used by the airspace structure of your administration.

ACC surveillance system	TMA surveillance system	Other surveillance system

Table 3

c) AIS/MAP:

1. In the following lines, list the AIS and MAP databases that your administration has to support ATFM.

2. Are they available in electronic format?

YES

NO

3. What is the updating cycle for AIS databases?

UPDATED EVERY 28 DAYS

UPDATED EVERY 56 DAYS

d) Meteorological information:

1. In the following lines, list the specific meteorological products and/or web sites that your administration has available to support ATFM.

e) Data for historical and statistical analysis:

1. In the following lines, list the type of databases your administration keeps in order to support the analysis of air traffic operations and meteorological activities.

f) Communication systems and processes to support CDM and inter-facility coordination:

1. List the types of communication systems that your operational units have with:

(a) other centralised ATFM organisations

(b) other FMUs, FMPs, and/or ATS units

(c) operators and airspace users

(d) airport authorities

(e) meteorological authorities

(f) aeronautical information services

(g) transmission of radar and ADS data to the ATFM centre

APPENDIX B

REPLY TO ATFM SURVEY
(SAMIG/2-Ref. LT 2/3A.5-SA722 of 8/9/2008)

STATES	ARG	BOL	BRA	CHI	COL	ECU	GUY (S/R)	FGU (S/R)	PAN	PAR	PER	SUR (S/R)	URU	VEN
TASK 1.2.1 General														
1. Does your administration currently have a method, basic or complex, to estimate airport capacity?	S*	N	S*	N	S*	N			N	N	N		N	N*
2. Does your administration currently have a method, basic or complex, to estimate en-route sector capacity?	N	N	S*	N	N	N			N	N	N		N*	N
3. Does your administration currently have procedures to support the following ATFM phases?														
a) Airport Strategic Phase	N	N	S*	N*	N*	N			N	S	N		N*	N
b) Airport Tactical Phase	N	N	S	S	S	N			N	N	N		S	N
c) Airspace Strategic Phase	N	N	S	N	N	N			N	S	N		N	N
d) Airspace Tactical Phase	N*	N	S	N	S	N			N*	S	N		S	N
TASK 1.2.2 a) Flow management data processing and display:														
1. Does your administration have a system to receive, process, and display flight plan data (FPL, RPL, etc.)?	S/R	S	S	S	S	S			S	S	S		S	S
2. Does your administration have a database that includes airspace information (for example, ACC, WGS 84 boundary coordinates, WGS 84 sector boundary coordinates, NAVAIDs, airways, special use airspace) and airport information (for example, runways, runway design, apron design, parking gate information)?	S/R	S	S	S	S	S			N*	S	P		N	S
3. Does your administration have an ATFM system that displays air traffic?	N	N	S	S	S	N			N	N	N		N	N
4. Does your administration have a system that allows automatic or manual exchange of messages to support decision-making for ATFM (for example, SLOT assignment messages, slot adjustment messages, delay report messages, alternate route messages)?	N	N	S	N	N	S			N	N	N		N	N
5. Does your administration have a system to monitor the	S/R	S	S	S	S/R	S			N	S	N		N	N

Y = Yes/Sí
 * = Ver comentarios en original/ See comments in the original
 N = No

P = Parcialmente/Partially
 N/A = Not applicable/No aplicable
 S/R = Without answer/ sin respuesta

STATES	ARG	BOL	BRA	CHI	COL	ECU	GUY (S/R)	FGU (S/R)	PAN	PAR	PER	SUR (S/R)	URU	VEN
status of air navigation infrastructure?														
6. Does your administration have a system to monitor and display airport acceptance rates (AAR) at main airports?	N	S	S	N	N	S			N	N	N		N	N
7. Does your administration have a system to monitor and display en-route sector capacity?	N	S	S	N	N*	N			N	S	N		N	N
8. Does your administration have a system to monitor and display the aircraft mix that uses the airspace or airports?	N	N	S	N	N	S/R			N	N	N		N	N
TASK 1.2.2 b) Surveillance systems:														
In the table below, list the type of surveillance systems used by the airspace structure of your administration.	S*	N*	S*	S*	S*	S*			S*	N/A	S*		S*	S*
TASK 1.2.2 c) AIS/MAP:														
In the following lines, list the AIS and MAP databases that your administration has to support ATFM.	S*	S*	S*	N*	S*	S*			N*	S*	P*		N*	N
Are they available in electronic format?	S	N	S	S	N	S			N	S	N*		N	N
What is the updating cycle for AIS databases? 28 or 56 days?	S/R	S 56	S 28	S 28	S/R	S 56			S/R	S 56	N/A		S 28	S 56

Y = Yes/Sí
 * = Ver comentarios en original/ See comments in the original
 N = No

P = Parcialmente/Partially
 N/A = Not applicable/No aplicable
 S/R = Without answer/ sin respuesta

STATES	ARG	BOL	BRA	CHI	COL	ECU	GUY (S/R)	FGU (S/R)	PAN	PAR	PER	SUR (S/R)	URU	VEN
TASK 1.2.2 d) Meteorological information:														
In the following lines, list the specific meteorological products and/or web sites that your administration has available to support ATFM.										S/R				
METAR	S	S*	S	S*	S	S			S		S		S	S
SPECI	S	S	S	S	S	S			S		S		S	N
TAF	S	S	S	S	S	S			S		S		S	S
SIGMET	S	S	S	N	S	S			S		S		S	S
ATIS	S	N	N	N	N	S			N		S		S	N
SATELLITE IMAGE	S	N	S	S	N	S			N		S		S	N
WAFS	S	S	N	N	S	S			N		S		S	S
ROUTE FORECAST	S	N	N	S	N	N			N		S		S	N
GAMET	S	S	S	S	N	N			N		S		S	N
UPPER WINDS	S	S	S	S	N	N			N		S		S	N
WEB CAMARA	N	N	N	S	N	N			N		N		N	N
METEOROLOGICAL RADAR	S	N	S	N	N	N			N		N		S	N
AIREP	S	S	S	N	N	N			N		N		S	S
AIRMET	S	S	S	N	N	N			N		N		S	N
TASK 1.2.2 e) Data for historical and statistical analysis:														
In the following lines, list the types of databases your administration keeps in order to support the analysis of air traffic operations and meteorological activities.	S*	S*	S*	S*	S*	S*			S*	S*	S*		S*	S*
TASK 1.2.2 f) Communication systems and processes to support CDM and inter-facility coordination:														
List the types of communication systems that your operational units have with:														
(a) other centralised ATFM organisations	N	S*	S*	S*	N	S*			N	N	N		N	S
(b) other FMUs, FMPs, and/or ATS units	N	S*	S*	S*	N	S*			S*	N	S*		S*	S
(c) operators and airspace users	N	S*	S*	S*	N	S*			S*	S*	S*		S*	S
(d) airport authorities	N	S*	S*	S*	S/R	S*			S*	S*	S*		S*	S
(e) meteorological authorities	N	S*	S*	S*	S*	S*			S*	S*	S*		S*	S
(f) aeronautical information services	N	S*	S*	S*	S*	S*			S*	N	S*		S*	S
(g) transmission of radar and ADS data to the ATFM centre	N	N/A	S*	N	S*	N			N		N		N	S

S = Yes/Sí
 * = Ver comentarios en original/ See comments in the original
 N = No

P = Parcialmente/Partially
 N/A = Not applicable/No aplicable
 S/R = Without answer/ sin respuesta

APPENDIX C

**TABLE 1: REPLY TO ATFM SURVEY
(SAMIG/2–Ref. LT 2/3^a. 5 SA 722 of 8/9/2008)**

QUESTIONS	RESULTS OBTAINED FROM REPLIES FROM 11 SAM STATES
TASK 1.2.1 General	
1. Does your administration currently have a method, basic or complex, to estimate airport capacity?	YES: 3 NO: 8
2. Does your administration currently have a method, basic or complex, to estimate en-route sector capacity?	YES: 1 NO: 10
3. Does your administration currently have procedures to support the following ATFM phases?	a) Airport Strategic Phase: YES: 2 / NO: 9 b) Airport Tactical Phase: YES: 4 / NO: 7 c) Airspace Strategic Phase: YES: 2 / NO: 9 d) Airspace Tactical Phase: YES: 4 / NO: 7
TASKA 1.2.2 a) Flow management data processing and display:	
1. Does your administration have a system to receive, process, and display flight plan data (FPL, RPL, etc.)?	S/R: 1 YES: 10
2. Does your administration have a database that includes airspace information (for example, ACC, WGS 84 boundary coordinates, WGS 84 sector boundary coordinates, NAVAIDs, airways, special use airspace) and airport information (for example, runways, runway design, apron design, parking gate information)?	S/R: 1 YES: 7 NO: 2 P: 1
3. Does your administration have an ATFM system that displays air traffic?	YES: 3 NO: 8

Y = Yes/Sí

* = Ver comentarios en original/ See comments in the original

N = No

P = Parcialmente/Partially

N/A = Not applicable/No aplicable

S/R = Without answer/ sin respuesta

QUESTIONS	RESULTS OBTAINED FROM REPLIES FROM 11 SAM STATES
5. Does your administration have a system that allows automatic or manual exchange of messages to support ATFM decision-making (for example, SLOT assignment messages, slot adjustment messages, delay report messages, alternate route messages)?	YES: 2 NO: 9
5. Does your administration have a system to monitor the status of air navigation infrastructure?	S/R: 2 YES: 5 NO: 4
6. Does your administration have a system to monitor and display airport acceptance rates (AAR) at the main airports?	YES: 3 NO: 8
7. Does your administration have a system to monitor and display en-route sector capacity?	YES: 3 NO: 8
8. Does your administration have a system to monitor and display the aircraft mix that uses the airspace or airports?	YES: 1 NO: 9 S/R: 1
TASK 1.2.2 b) Surveillance systems:	
In the table below, list the types of surveillance systems used by the airspace structure of your administration.	YES: 9 NO: 1 N/A: 1
TASK 1.2.2 c) AIS/MAP:	
1. In the following lines, list the AIS and MAP databases that your administration has to support ATFM.	SI: 6 NO: 4 P: 1
2. Are they available in electronic format?	SI: 5 NO: 6
3. What is the updating cycle for the AIS database? 28 or 56 days?	SI: 56: 4 SI: 28: 3 S/R: 3 N/A: 1
TASK 1.2.2 d) Meteorological information:	
In the following lines, list the specific	METAR: YES: 10 NO: 1 S/R: 3

Y = Yes/Sí
 * = Ver comentarios en original/ See comments in the original
 N = No

P = Parcialmente/Partially
 N/A = Not applicable/No aplicable
 S/R = Without answer/ sin respuesta

QUESTIONS	RESULTS OBTAINED FROM REPLIES FROM 11 SAM STATES
meteorological products and/or web sites that your administration has available to support ATFM.	SPECI: YES: 9 NO: 2 S/R: 3 TAF: YES: 10 NO: 1 S/R: 3 SIGMET: YES: 9 NO: 2 S/R: 3 ATIS: YES: 4 NO: 7 S/R: 3 SATELLITE IMAGE: YES: 6 NO: 4 S/R: 3 WAFS: YES: 7 NO: 4 S/R: 3 ROUTE FORECAST: YES: 4 NO: 7 S/R: 3 GAMET: YES: 6 NO: 5 S/R: 3 UPPER WIND: YES: 6 NO: 6 S/R: 3 WEB CAMERAS: YES: 1 NO: 10 S/R: 3 METEOROLOGICAL RADAR: YES: 3 NO: 8 S/R: 3 AIREP: YES: 5 NO: 6 S/R: 3 AIRMET: YES: 4 NO: 7 S/R: 3
TASK 1.2.2 e) Data for historical and statistical analysis:	
In the following lines, list the types of databases your administration keeps in order to support the analysis of air traffic operations and meteorological activities.	YES: 11
TASK 1.2.2 f) Communication systems and processes to support CDM and inter-facility coordination:	
List the types of communication systems that your operational units have with:	(a) other centralised ATFM organisations: YES: 5 NO: 6 (b) other FMUs, FMPs, and/or ATS units: YES: 8 NO: 3 (c) operators and airspace users: YES: 9 NO: 2 (d) airport authorities: YES: 9 NO: 1 S/R: 1 (e) meteorological authorities: YES: 10 NO: 1 (f) aeronautical information services: YES: 10 NO: 1 (g) transmission of radar and ADS data to the ATFM centre: YES: 3 NO: 7 N/A: 1

- END -

S = Yes/Sí
 * = Ver comentarios en original/ See comments in the original
 N = No

P = Parcialmente/Partially
 N/A = Not applicable/No aplicable
 S/R = Without answer/ sin respuesta