International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)
Seventeenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/17)
(Cochabamba, Bolivia (Plurinational State of), 21 to 25 July 2014)

Agenda Item 4: **Regional Air Navigation Planning and Implementation Performance Framework: Review of Programmes and Projects**

4.7 Aeronautical Meteorology (MET) Programme Projects

MET PROGRAMME PROJECTS – SAM REGION

(Presentada por la Secretaría)

SUMMARY

This working paper presents the current status of the Aeronautical Meteorology Programme regional implementation activities and related projects approved by the Eleventh Aeronautical Meteorology Subgroup (AERMETSG/11) Meeting.

References

- Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March to 1 April 2011
- Report of the Eleventh Meeting of the Aeronautical Meteorology Subgroup (AERMETSG/11), Lima, Peru, 28 to 30 November 2011
- Report of the First GREPECAS Programmes and Projects Review Committee (PPRC/1) Meeting, Mexico City, Mexico, 25 to 27 April 2012
- Report of the Second GREPECAS Programmes and Projects Review Committee (PPRC/2) Meeting, Lima, Peru, 16 to 18 July 2013
- ICAO Twelfth Air Navigation Conference (AN-Conf/12), Montreal, Canada, 19 to 30 November 2012

ICAO Strategic Objectives:	A - Safety D - Economic Development of Air Transport E - Environmental Protection

1. Introduction

1.1 Pursuant to GREPECAS Decision 16/47, the Eleventh Meeting of the Aeronautical Meteorology Subgroup (AERMETSG/11), held on 28-30 November 2011, approved Draft Decision 11/06 through the "fast-track" procedure of GREPECAS. In this regard, the aforementioned decision turned the AERMET Subgroup into the MET Programme for the CAR and SAM Regions, covering the following projects:

- WAFS implementation project (CAR/SAM)
- IAVW implementation project;

- QMS/MET implementation project; and
- OPMET exchange optimisation project, including SIGMETs (WS, WV, and WC)

1.2 The meeting should take note that the projects approved by GREPECAS are closely related to the tasks that the AERMETSG was performing in collaboration with the Secretariat, and that the tasks of several projects were already being advanced.

2. Discussion

2.1 The MET Programme consists of one project for the CAR/SAM Regions and three projects for the SAM Region:

2.2 Project MET H1 (CAR/SAM), *Implementation of the World Area Forecast System (WAFS)* – this project was completed in 2012. Several meetings with the project coordinator and the WIFS (WAFS internet file service) focal points of SAM States were held through the *GoToMeeting* tool to support implementation. All SAM States made the transition from the ISCS (global satellite telecommunications system) to the WIFS.

2.3 Project MET H2, *Implementation of the International Airways Volcano Watch (IAVW)* – the tasks *Regional contingency plan in case of volcanic activity* and *Regional contingency plan in case of accidental release of radioactive material* related to this project were transferred to the ATM area. With the support of the coordinator of this project, a Protocol was prepared for the volcanic ash SIGMET exercise, which was conducted on 1 - 2 December 2012, and on 7 – 8 December 2013. These exercises are programmed to be carried out once a year. Likewise, an update was made of the SIGMET Guide, which is constantly under review.

Compliance analysis based on the indicators/goals of Project MET H2-SAM

Exercise	VAA received on time	VAA received with delay	SIGMETs received on time	SIGMETs received with delay
2012	***90%***	***10%***	***85%***	***15%***
2013	***98%***	***2%***	***95%***	***5%***

2.4 Until the exercise of 2013, a joint cooperation with AIM has not been reached, since the results received in the SAM Office do not reflect ASHTAM issuance of ASHTAM, which are part of the exercise.

2.5 In the exercise of 2012, the Meteorological Watch Offices (MWO) that should participate in the exercise did not prepared SIGMET, but in the exercise of 2013, all the MWO affected by the exercise had active participation.

2.6 With regard to the second indicator of the project, during 2013 there were no reports of aircraft encounters with volcanic ash in the SAM Region.

2.7 Project MET H3, *QMS/MET Implementation* – by the end of 2012, 100% of SAM States had established the QMS/MET system in accordance with ISO standard 9001:2008. From the total of States that have established the QMS/MET system, five States have obtained certification by an approved organisation, and nine States have a documentary scheme in place and are in the process of certification. The audit trials will be scheduled to start in November 2014, as well as the preparation of surveys to

States on MET personnel, Tables of compliance with Annex 3 standards and MET procedures and Tables of compliance with CAR/SAM ANP, Part IV, which will be of utmost importance when assessing aeronautical meteorological personnel competencies. The results obtained in this process are the following:

QMS/MET Implementation – SAM Region			
STATE	**Implementado**	**Certificado**	**En proceso de certíficación**
ARGENTINA	✓	✓	
Bolivia	✓		25%
Brazil	✓	✓	
Chile	✓	✓	
Colombia	✓		30%
Ecuador	✓		40%
French Guiana	✓	✓	
Guyana	✓		25%
Panama	✓		35%
Paraguay	✓		90%
Perú	✓	✓	
Suriname	✓		35%
Uruguay	✓		25%
Venezuela	✓		30%

2.8 Project MET H4, *OPMET Exchange Optimisation, including SIGMETs (WS, WV, WC, and WR), meteorological warnings and alerts* – the COM/MET meeting, held in August 2012, took note that SAM States were not having operational difficulties due to lack of OPMET data and, when required, they used the International OPMET Databank of Brasilia (IODB) without any problem. Consequently, it was agreed that, starting in 2014, it would not be necessary to continue with the coordinated control of OPMET exchange in the SAM Region. Likewise, the Brasilia OPMET data bank will apply its controls 4 times a year only in CAR and SAM States, only taking into account AOP aerodromes listed in the CAR/SAM FASID Table MET 1A. To date, 85% of OPMET data is received at the Brasilia IODB and in each of the States. The following Table shows the result of the metrics related with this Project:

OPMET Control	Data Bank	States
Reception of Data 2012	94%	85%
Reception of Data 2013	90%	92%

2.9 In the last controls carried out by the International OPMET Data Bank of Brasilia, problems were detected in the communication circuits between Argentina and Brazil, since the reception was only of 78% of OPMET data submitted by Argentina.

2.10 **Appendices A, B** and **C** contain a description of each of the three projects for the SAM Region, still in activity.

2.11 In terms of conflict management, the Meeting should take note that problems are inevitable in any project, including scarce resources, timetable priorities, and personal work styles, thus the need to minimise difficulties.

2.12 In this regard, and pursuant to GREPECAS Conclusion 16/49, with a view to the proper development of MET Programme Projects, it is essential to have the necessary human resources. Therefore, the commitment undertaken by project directors and members regarding the conduction of activities must be supported by their respective Administration. This implies the capability to support the use of *GoToMeeting* technology.

2.13 AN-Conf/12 recommendations assigned to MET and contained in Appendix B to the PPRC/2 Meeting report, are presented in **Appendix D** to this working paper, with the corresponding actions taken for each recommendation.

3. Conclusion

3.1 With regard to MET Projects for the SAM Region, the following can be concluded:

3.2 Project H1 (CAR/SAM) - *Implementation of the World Area Forecast System (WAFS),* was considered completed in CRPP/2 Meeting in 2013 since the proposed goals of this project were accomplished.

3.3 Project MET H2, *Implementation of the International Airways Volcano Watch (IAVW),* – has developed its tasks and reached the assigned targets. It is important to continue with volcanic ash exercises in order to maintain aeronautical meteorological personnel involved in safety well trained. It would also be important, further to continuing with this task, to start contacting vulcanological centres, which are not under the States' Civil Aviation Authority jurisdiction, in order to establish letters of agreement including communication channels so that information on volcanoes pre-eruptive and eruptive activities reach air navigation services on time and in the format specified by Doc 9766— *Handbook on the International Airways Volcano Watch (IAVW).*

3.4 Project MET H3, *QMS/MET Implementation* has been very fruitful for SAM States, since 100% of the States have implemented this system in their aeronautical meteorological services and, so far, 50% have obtained Certification by a QMS/MET system approved organization in accordance with Standard ISO 9001:2008. Within the framework of this project, MET personnel competencies should be stressed, therefore, work with States should be developed by surveys on WMO requirements compliance regarding aeronautical meteorological personnel in every working position involving this service, and urge Civil Aviation Training Centres (CATCs) of SAM States to implement in their training programmes, courses including the Basic Instruction Package for Meteorologists working in the different areas of aeronautical meteorological services (Meteorological Observers, Aeronautical Meteorological Forecast Assistant, Aeronautical Meteorological Forecaster, Aeronautical Climatology), contained in Doc No. 1083 – WMO (PIB-M), in order to comply with Doc 7475 – *Modus Vivendi between the International Civil Aviation Organization and the World Meteorological Organization.* Also, trial audits should start developing, and for this purpose, it should be recalled that in the Region there are Leader

Auditors in Meteorological Services, who have been formed for this task, with the support of regional projects.

3.5 With regard to Project MET H4, *OPMET Exchange Optimisation,* it could be concluded that OPMET tests and exchanges carried out at a regional bases, and the controls developed by the International OPMET Databank of Brasilia (IODB) have established that the Regional does not have operational problems. This project could be closed or considered completed, but the IODB should be invited to continue with the quarterly controls to detect any problem that may arise in this activity and, in this way, eventually advise States to search for correction of the problem.

3.6 Our gratitude is expressed to the experts who have worked in the different projects, demonstrating commitment and professionalism, and we are sure that they will continue collaborating in the implementation of the projects in force.

4. Suggested action

4.1 The Meeting is invited to:

a) take note of the information presented in this working paper;

b) review the information contained in Appendices A, B, C and D; and

c) agree on any other action it may deem appropriate.

- - - - - -

APPENDIX A

PROJECT FOR THE IMPLEMENTATION OF THE INTERNATIONAL AIRWAYS VOLCANO WATCH (IAVW)

SAM Region	**PROJECT DESCRIPTION (DP)**	**DP N° H2**	
Programme	**Title of the project**	**Start**	**End**
Aeronautical meteorology *(Programme coordinator: Nohora Arias)*	Implementation of the international airways volcano watch (IAVW) *Project coordinator:* ***Jorge Oscar Leguizamón*** *(Argentina):* *Experts contributing to the project:* *Olver Boolsen (Argentina)* *Walter Ríos (Bolivia)* *Oscar Bermudez (Colombia)* *Lourdes Martínez (Peru)*	December 2011	November 2013
Objective	Ensure that States in the implement the IAVW and the standards and recommended practices of Annex 3 and Part VI – MET of the CAR/SAM ANP, Basic and FASID, concerning the issuance and distribution of the reports of en-route weather phenomena likely to affect the safety of aircraft operations, and the evolution of such phenomena in time and space (SIGMET WS, WV, WC, and WR).		
Scope	The project will comprise all meteorological watch offices (MWO) of the SAM Region listed in Table MET 1B of the CAR/SAM FASID, in coordination with the ACCs/FICs/NOFs, and Volcanic Ash Advisory Centres (VAAC) Buenos Aires and Wellington (New Zealand). Procedures for the issuance of reports and coordination among the affected areas should be defined, as well as transfer of responsibilities between one MWO and others. Procedures will be defined for the transfer of responsibilities and assistance among the CMRE and the MWOs.		
Metrics	Testing of volcanic ash SIGMETs shall result in continuous improvements once project deliverables are available to the States.		
Strategy	All tasks will be carried out by experts nominated by SAM States participating in the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through the "GoToMeeting" tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
Goals	a) 100% of acceptance of SIGMET tests, regarding transmission and reception of SIGMET WV; and b) No aircraft encounters with volcanic ash clouds in the SAM Region in 2012 and 2013.		
Rationale	The severity, persistence, and increased frequency of volcanic events with ash dispersion in the SAM Region and their repercussions on the provision of air navigation services call for tools to allow the personnel involved in the different air navigation areas to receive, properly use, and disseminate quality information related to such events. Likewise, based on Japan's experience, contingency plans are needed not only for this type of events but also for radioactive clouds when more than one FIR in the Region is involved.		
Related projects	➢ Optimisation of the en-route airspace structure ➢ Implementation of the new flight plan format (FPL) ➢ Implementation of ATFM		

Project Deliverables	Relationship with the performance-based regional plan (PFF)	Responsible Party	Status of Implementation[1]	Date of Delivery	Comments
SIGMET guide revised and updated	PFF SAM MET 03	MET programme coordinator and project director		January 2013	The guide will include MWO responsibility handover procedures. The guide is in continuous revision
Regional contingency plan for volcanic activity events	PFF SAM MET 03	MET programme coordinator and project director		November 2012	Prior to its approval by GREPECAS, the ATM, MET, and AIM personnel of the Region shall approve the plan, for which a meeting will be held. This task has been passed to the ATM responsibility
Regional contingency plan for accidental release of radioactive material.	PFF SAM MET 03	MET programme coordinator and project director		November 2013	Prior to its approval by GREPECAS, the ATM, MET, and AIM personnel of the Region shall approve the plan, for which a meeting will be held. This task has been passed to the ATM responsibility
Protocol for the volcanic ash SIGMET exercise	PFF SAM MET 03	MET programme coordinator and project director		December 2012	The protocol for the volcanic ash SIGMET exercise reviewed and updated. On 1 and 2 December 2012 the test was carried out
Results of the exercise	PFF SAM MET 03	MET programme coordinator and project director		December 2012	Based on the results, values may be assigned to the quality of SIGMETs and their exchange as compared with previous exercises.

Project Deliverables	Relationship with the performance-based regional plan (PFF)	Responsible Party	Status of Implementation[1]	Date of Delivery	Comments
Protocol for the volcanic ash SIGMET exercise	PFF SAM MET 03	MET programme coordinator and project director		December 2013	The protocol for the volcanic ash SIGMET exercise reviewed and updated. The exercises should be carried out each year to keep personnel in continuous training. On 7 and 8 December 2012 the test was carried out
Results of the exercise	PFF SAM MET 03	MET programme coordinator and project director		December 2013	Based on the results, values may be assigned to the quality of SIGMETs and their exchange as compared with previous exercises.
Resources needed	Funds to conduct the meetings and to translate the regional volcanic ash contingency plan and the regional contingency plan in case of accidental release of radioactive material. Likewise, participants must be given facilities to participate in GoTo Meetings.				

- - - - - - -

1
Grey *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Activity started with some delay, but will be implemented on time*
Red *Activity not implemented on time; mitigation measures are required*

APPENDIX B

PROJECT FOR THE IMPLEMENTATION OF THE MET INFORMATION QUALITY MANAGEMENT SYSTEM (QMS/MET)

SAM Region	**PROJECT DESCRIPTION (DP)**		**DP N° H3**	
Programme	**Title of the Project**		**Start**	**End**
Aeronautical Meteorology *(Programme coordinator: Nohora Arias)*	Implementation of the QMS/MET *Project coordinator:* *Experts contributing to the project:*	***Ricardo Reyes** (Peru)* *Olver Boolsen (Argentina)* *Fernando de Abreu Pinto (Brazil)* *Xenia Guardia (Panama)* *Roberto Salinas (Paraguay)* *Lourdes Martínez (Peru)*	December 2011	December 2013
Objective	Assist States in the implementation of the QMS/MET and certification where applicable. Update and improve the QMS/MET guide to assist States in the production of MET documentation under ISO 9001: 2008, the implementation of Annex 3 and Part VI – MET of the CAR/SAM ANP, and the conduction of audit trials.			
Scope	Establishment and application of a duly organised MET service quality system at each MET unit of all SAM aerodromes listed in CAR/SAM ANP, and compliance with the standards and recommended practices of Annex 3 and the CAR/SAM ANP, Vol. I, Basic, and Vol. II, FASID, Part VI – MET.			
Metrics	Number of AOP aerodromes certified under ISO 9000: 2008, and list of aerodromes and their status of implementation of QMS/MET in each of their units.			
Strategy	All tasks will be carried out by experts nominated by SAM States participating in the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through the "GoToMeeting" tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.			
Goals	a) 100% of SAM States have established QMS/MET system in accordance with standard ISO 9001:2008 on 31 October 2012; b) 70% of SAM States apply QMS/MET system in accordance with standard ISO 9001:2008 on 31 October 2012; c) 50% of SAM States have QMS/MET system certified by an organization in accordance with standard ISO 9001:2008 on 31 October 2012; and d) 100% of SAM States have QMS/MET system certified by an organization in accordance with standard ISO 9001:2008 on 31 October 2013.			

Rationale	More accurate and timely meteorological information will optimise flight path planning and prediction, thus improving ATM safety and efficiency; improved aerodrome reports and forecasts will optimise the use of available aerodrome capacity; and meteorological information will minimise the environmental impact of air traffic. Performance management will be an important part of meteorological information quality assurance.
Related projects	➢ Automation ➢ Improved ATM situational awareness

Project Deliverables	**Relationship with the regional performance-based plan (PFF)**	**Responsible Party**	**Status of Implementation**	**Date of Delivery**	**Comments**
Revised and updated QMS/MET guide.	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2013	The practical guide will facilitate the drafting of ISO 9000: 2008 documentation by MET service provider States.
Development of a State survey on MET personnel	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2014	One of the main problems facing MET service provider States is the lack of personnel with the competencies required by WMO and ICAO. State requirements will be officially communicated to ICAO contracting States.
Table of compliance with Annex 3 standards and MET procedures	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2014	In the first instance, strict compliance with ICAO standards related to the provision of MET services will be monitored.

Project Deliverables	Relationship with the regional performance -based plan (PFF)	Responsible Party	Status of Implementation[1]	Date of Delivery	Comments
Table of compliance with the CAR/SAM ANP, Part VI - MET.	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2014	Close monitoring of strict compliance with Part VI– MET of the CAR/SAM ANP.
Audit trials	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2015	Audit trials will be conducted to identify QMS/MET implementation issues and to propose strategies for their resolution.
Resources needed	Funds to conduct audit trials. States could cover the cost of trials by their lead auditors, since the experience obtained will contribute to improve the system. Likewise, participants must be given facilities to participate in GoTo Meetings.				

- - - - - -

[1] *Grey* *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Activity started with some delay, but will be implemented on time*
Red *Activity not implemented on time; mitigation measures are required*

APPENDIX C

PROJECT FOR THE OPTIMISATION OF OPMET EXCHANGE, INCLUDING SIGMETs (WS, WV, WC, AND WR), WARNINGS AND METEOROLOGICAL ALERTS

SAM Region	**PROJECT DESCRIPTION (DP)**		**DP N° H4**	
Programme	**Title of the project**		**Start**	**End**
Aeronautical meteorology *(Programme coordinator: Nohora Arias)*	*Optimisation of OPMET exchange, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts* *Project coordinator:* ***Cleber Souza Correa*** *(Brazil)* *Experts contributing to the project:* *Aníbal Castro Cárdenas (Bolivia)* *Valdeci Donizeti Juliar da Franca (Brazil)* *Domingo Torres (Ecuador)* *Celestino Lamboglia (Panama)* *Miguel Vara (Peru)* *Warsodikromo Truusje Soetinie (Surinam)* *Tjiettra Akloe (Surinam)* *José Ramón Pereira Bastida (Venezuela)*		December 2011	November 2013
Objective	Achieve at least 95% efficiency in the preparation and dissemination of OPMET information to SAM States by 31 November 2013			
Scope	Correct preparation and timely dissemination of OPMET information involves all MET service units [(EMA(s), OMA(s), MWO(s) and OPMET data banks] of all SAM aerodromes listed in the CAR/SAM ANP.			
Metrics	The percentage of OPMET messages received on time at the Brasilia International OPMET Data Bank (according to Annex 3, Appendix 10, OPMET control considers as messages received those OPMET messages with transit times of 10 minutes) and verification of proper and standard production (quality) of OPMET information at MET services [(EMA(s), OMA(s), and MWO(s)] (Annex 3, in Appendices 3, 4, 5, and 6, contains the (OPMET) message planning tables.			
Strategy	All tasks will be carried out by experts nominated by SAM States (Points of Contact – POC) and by experts contributing to the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through State letters sent by the ICAO Lima Office, by e-mail, and the "GoToMeeting" tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.			
Goals	a) Reach 85% in the reception of OPMET data of the SAM Region in the Brasilia on 31/12/12; and 95% on 31/10/13 b) Reach 85% in the reception of OPMET data in each SAM State on 31/12/12; and 95% on 31/10/13			
Rationale	More timely meteorological information will optimise flight path planning and prediction, thus improving ATM system safety and efficiency, pursuant to GREPECAS Conclusion 12/64 (CAR/SAM OPMET EXCHANGE CONTROLS). Meteorological information will also minimise the environmental impact of air traffic.			
Related projects	➢ Automation ➢ Implementation of ATFM ➢ Installation of AMHS at MET units having an international OPMET requirement ➢ Implementation of the MET information quality management system (QMS/MET) ➢ Enhanced ATM situational awareness ➢ Implementation of the new flight plan format (FPL)			

Project Deliverables	Relationship with the performance-based regional plan (PFF)[1]	Responsible Party	Status of Implementation [2]	Date of Delivery	Comments
OPMET guide revised and updated	PFF SAM MET 02	MET programme coordinator and project coordinator		September 2012	The OPMET guide prepared by the SAM Office will include procedures for preparing OPMET data and tables containing the AFTN addresses to which OPMET information must be sent worldwide in accordance with the CAR/SAM FASID, thus facilitating the preparation and issuance of MET messages.
Results of coordinated controls of annual SIGMET WV tests	PFF SAM MET 02	POC and BR OPMET data bank		February 2013	The measurement of SIGMET WV messages received on time at the Brasilia International OPMET Data Bank will give the actual percentage of OPMET data, and the verification of the proper preparation of SIGMET WV messages at MWO(s) will permit an assessment of OPMET information quality.
Results of the analysis of coordinated controls of annual SIGMET WV tests	PFF SAM MET 02	MET programme coordinator and project coordinator		May 2013	The results obtained from the coordinated controls of annual SIGMET WV tests will allow programme and project coordinators to adopt, if necessary, corrective action for subsequent coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts.
Results of coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts	PFF SAM MET 02	POC and BR OPMET data bank		August 2013	Timely measurements at the Brasilia International OPMET data bank will provide the actual percentage of OPMET data received, and the verification of the proper preparation of OPMET information at MET services [(EMA(s), OMA(s), and MWO(s)] will permit to assess the quality of OPMET information.
Results of the analysis of coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts	PFF SAM MET 02	MET programme coordinator and project coordinator		August 2014	The results obtained from coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts will give programme and project coordinators an idea of project results.

Project Deliverables	Relationship with the performance-based regional plan (PFF)[1]	Responsible Party	Status of Implementation [2]	Date of Delivery	Comments
Final project report	PFF SAM MET 02	MET programme coordinator and project coordinator		November 2013	The purpose of the final project report to be submitted by the programme coordinator is to enable the Lima SAM Office to check the achievements of the project and propose to the States future measures to maintain the level attained through OPMET controls.
Resources needed	Funds for meetings with project members in order to assess the results and propose corrective actions. States could use their human resources to conduct the foreseen OPMET tests and controls, and, if necessary, cover the financial costs, since the experience gained will result in an improvement of their own systems. Likewise, participants must be given facilities to participate in GoToMeetings.				

- - - - - -

1 Air navigation system Performance-Based Implementation Plan for the SAM Region

2 *Grey* *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Activity started with some delay, but will be implemented on time*
Red *Activity not implemented on time; mitigation measures are required*

APPENDIX D

FOLLOW UP OF AN-CONF/12 RECOMMENDATIONS

REC	Description	Follow up / clarification / impact in the contents of the Projects
1/1	The draft Fourth Edition of the Global Air Navigation Plan (Doc 9750, GANP)	Note was taken / Included in the projects' activities
1/2	Implementation	Note was taken / Included in the projects' activities
1/3	Guidance on business cases	Note was taken / Does not impact in the projects
1/4	Architecture	Note was taken / Does not impact in the projects
1/5	Time reference accuracy	Note was taken / Does not impact in the projects
1/15	Performance monitoring and measurement of air navigation systems	Note was taken / Does not impact in the projects
1/16	Access and equity considerations	Note was taken / Does not impact in the projects
4/7	ICAO aviation system block upgrades (ASBUs) relating to meteorological information	Note was taken / The next activities of the projects should align to this recommendation.
4/8	Crisis coordination arrangements and contingency plans	Note was taken / Included in the projects' activities.
6/1	Regional performance framework – planning methodologies and tools	Note was taken / The projects' activities were aligned to this recommendation
6/2	Guidelines on service priority	Note was taken / Does not impact in the projects
6/3	Assessment of economic, financial and social implications of air traffic management modernization and aviation system block upgrades deployment	Note was taken / Does not impact in the projects
6/4	Human performance	Note was taken / Will be considered in the projects' activities
6/11	Regional performance framework – alignment of air navigation plans and regional supplementary procedures	Note was taken / Does not impact in the projects.
6/12	Prioritization and categorization of block upgrade modules	Note was taken / Does not impact in the projects.
6/13	Development of Standards and Recommended Practices, procedures and guidance material	Note was taken / Included in the projects' activities.

- END -