



**Agenda Item 1: Review of Project H2 – Implementation of the International Airways
Volcano Watch (IAVW)**

Analysis of IAVW Implementation in the SAM Region

(Presented by the Secretariat)

SUMMARY	
This working paper contains the status of IAVW Implementation in the SAM Region.	
References:	
<ul style="list-style-type: none">• Annex 3 – <i>Meteorological Service for International Civil Aviation</i>• Doc 9691 – <i>Manual on Volcanic Ash Radioactive Material and Toxic Chemical Clouds</i>• Doc 9766 – <i>Handbook on International Airways Volcano Watch (IAVW)</i>• Report of the GREPECAS Third Meeting of the Programmes and Projects Review Committee (PPRC/3)• Report of PPRC/4 Meeting	
ICAO strategic objectives:	<i>A - Safety</i> <i>B – Air navigation capacity and efficiency</i> <i>E – Environmental protection</i>

1. Introduction

1.1 ICAO Annex 3 includes in Chapter 3, as part of the States' Meteorological Offices, the States' Volcanic Ash Advisory Centres and Vulcano Observatories.

1.2 Annex 3, in Chapter 7 and Appendix 5, indicates that Meteorological Watch Offices should prepare and disseminate SIGMET for volcanic ash and radioactive material, besides other phenomena.

1.3 PPRC/3 Meeting reviewed the continuation of IAVW Project in both Regions, and this task was again carried out during PPRC/4 Meeting.

2. Discussion

2.1 The implementation of Project H2 – Implementation of the International Airways Volcano Watch (IAVW) provided continuity to SIGMET exercises on volcanic ash, which have been carried out since 2009. The analysis of the last SIGMET exercises on volcanic ash is reviewed in another working paper, presented by Argentina. However, the Secretariat understands that capacities have strengthen in this area in the CAR/SAM Regions, thus, the Meeting could suggest the PPRC the suspension of these exercises.

2.2 In addition, the Guide for the preparation and dissemination of SIGMET messages for the CAR/SAM Regions was reviewed.

2.3 In compliance with PPRC/3 Conclusion 3/9, NACC and SAM Regional Offices proceed to review the protocols for volcanic ash exercises. Simultaneously, the Regional Office carried out SIGMET workshop in 2016, in Colombia, Venezuela, Suriname and Guyana, as well as a SIGMET Seminar at the SAM Regional Office.

2.4 PPRC/4 Meeting decided to reactivate Project H2 in the CAR Region and extend it to the SAM Region as well.

2.5 During 2016 and the first semester of 2017, teleconferences were held to follow up Project H2. The difficulty to close the revision and update of the Guide for the preparation and dissemination of SIGMET messages for the CAR/SAM Regions was evidenced. The Meeting shall recall that the referred guide should have been aligned to the Template submitted by ICAO Headquarters in order to comply with Action Agreed 5/4 of the disbanded METSWG. It would be important that the Meeting define specific actions to complete the revision and update of this document not later than the first semester of 2018.

2.6 The Meeting could also note that the Region should agree on a procedure in case of release of radioactive material in the FIR. The Meeting should consider specific actions to be implemented in order to ensure the necessary reaction in case of release of radioactive material. As you shall recall, the task related to the Contingency Plan for Radioactive Material is now the responsibility to the ATM area. However, OPMET/2014 and COM/MET/2015 Meetings reviewed the documentation related to SIGMET for radioactive material and formulated recommendations regarding the review of the AFTN addresses template of the Area Control Centres available in the website <http://www.icao.int/safety/meteorology/iavwopsg/Quick%20Launch%20Menu%20Documents/Nuclear%208-letter-code%20database.pdf>, besides the review of the ATS/MET cooperation agreements, in order to include procedures regarding the release of radioactive material in the FIRs under their watch responsibility.

2.7 The purpose of the Project was to promote the letters of cooperation agreement among MET, AIM and ATM units, and the volcano observatories for volcanic eruptions or presence of volcanic ash clouds occurrences in the FIRs under the watch responsibility. States attending the Meeting could inform on the arrangements so far developed on this activity.

2.8 **Appendix A** to this working paper presents the schedule of activities of Project H2 for the SAM Region. In order to comply with the reactivation of Project H2 for the CAR Region, the Meeting shall prepare the schedule of activities of the CAR Region, similar to the SAM Region.

2.9 Considering the above, the Meeting could formulate the following conclusion:

Draft Conclusion MP2/XX -

That, in order to update the work programme of Projects H2 of the CAR/SAM Regions, the authorization of the PPRC is requested to:

- a) discontinue SIGMET exercises on volcanic ash starting 2019, since it is considered that States have shown enough maturity in volcanic eruption cases or presence of volcanic ash clouds in their FIRs;

- b) establish, with the ATM area, protocols of procedures for cases of release of radioactive material in their FIRs;
- c) approval of the chart of activities for Project H2 for the CAR Region; and
- d) extend Project IAVW until 2020 but changing the name.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) consider Draft Conclusion of paragraph 2.9; and
- c) agree on the actions considered necessary.

APPENDIX A

PROJECT FOR THE IMPLEMENTATION OF THE INTERNATIONAL AIRWAYS VOLCANO WATCH (IAVW) AND PROTOCOLS IN CASE OF PRESENCE OF RADIOACTIVE MATERIAL

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H2	
Programme	Title of the project	Start	End
<p>Aeronautical meteorology</p> <p>(Programme coordinator: Jorge Armoa)</p>	<p style="text-align: center;">Implementation of the international airways volcano watch (IAVW)</p> <p><i>Project coordinator:</i> Roxana Vasquez Ferro (Argentina)</p> <p><i>Experts contributing to the project:</i> Jorge Leguizamon (Argentina)</p> <p>Lourdes Martínez (Peru)</p> <p>Walter Rios (Bolivia)</p> <p>Rodrigo Fajardo Rosell (Chile)</p> <p>Marco Ortiz (Ecuador)</p> <p>Celestino Lamboglia (Panama)</p>	December 2011	December 2020
Objective	Ensure that States in the implement the IAVW and the standards and recommended practices of Annex 3 and of Volume I, Part MET of the CAR/SAM electronic Air Navigation Plan (replaces Doc 8733 Basic), concerning the issuance and distribution of the reports of en-route weather phenomena and of release of radioactive material likely to affect the safety of aircraft operations, and the evolution of such phenomena in time and space (SIGMET WV).		
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. Number of States that have established national responsibility procedures and assistance among the civil aviation authorities, the national nuclear authority and the WMO.		
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	<ul style="list-style-type: none"> a) 100% of acceptance of SIGMET tests, regarding transmission and reception of SIGMET WV and ASHTAM; b) full availability of the information to avoid aircraft encounters with volcanic ash clouds in the SAM Region; and c) 100% of States States with national responsibility procedures and assistance among the civil aviation authorities, the nuclear authority and the MET service provider. 		

Rationale	The severity, persistence, and increased frequency of volcanic events with ash dispersion and radioactive clouds in the SAM Region and their repercussions on the provision of air navigation services call for tools to provide information that collaborates with the improvement or increase in safety levels.
Related projects	<ul style="list-style-type: none"> ➤ Optimisation of the en-route airspace structure ➤ Implementation of ATFM

Project Deliverables	Relationship with the performance -based regional plan (PFF)	Responsible Party	Status of Implementation¹	Date of Delivery	Comments
SIGMET guide revised and updated and aligned to the template provided by ICAO	PFF SAM MET 03	MET programme coordinator and project coordinator		June 2018	The guide will include the procedures for the transition of responsibilities of the MWO. This task will be developed by a working group established in the GREPECAS MET Projects Meeting, November 2015.
Development of Protocols for cases of release of radioactive material in the FIRs	PFF SAM MET 03	MET programme coordinator		2018	Teleconference to share the Protocol.
Development of workshops and courses on Radioactive Material	PFF SAM MET 03	MET programme coordinator		2018	
Development of exercises for the release of radioactive material in the FIRs	PFF SAM MET 03			Febrero 2019 Junio 2020	
Final Report of the Project		MET programme coordinator and project coordinator		1 st half of 2021	
Recursos necesarios	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