



Agenda Item 2: Review of Project H2 - Implementation of the monitoring of volcanoes in international airways (IAVW)

Analysis of the implementation of the IAVW in the SAM Region

(Presented by the Secretariat)

SUMMARY	
This working paper contains the status of the implementation of the IAVW in the SAM Region	
REFERENCES	
<ul style="list-style-type: none">• Annex 3 - <i>Meteorological Service for International Air Navigation</i>• Doc 9691 - Manual on clouds of volcanic ash, radioactive materials and toxic chemicals• Doc 9766 - Manual of Volcanoes Surveillance in International Airways - <i>IAVW Handbook (International Airways Volcano Watch)</i>• Report of the SAM/MP/2 Meeting, Lima, September 18 to 22, 2017• Report of the SAM COM/MET/2019 Meeting	
ICAO strategic objectives:	<i>A - Safety</i> <i>B – Air navigation capacity and efficiency</i> <i>E – Environmental protection</i>

1. Background

1.1 Annex 3 of the ICAO includes in Chapter 3, as part of the Meteorological Offices in the States, the Volcanic Ashes Advice Centers and the Volcanological Observatories of the States.

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

1.3 The CRPP/3 reviewed the continuation of the IAVW Project in both regions, a task again carried out during the CRPP/4 Meeting.

1.4 The Second MET Projects Meeting analyzed Project H2 considering amendment 78 to Annex 3 of ICAO.

2. Discussion

2.1 The implementation of Project H2 - *Implementation of the IAVW*, gave continuity to the SIGMET exercises for volcanic ash that they were carrying out since 2009. The analysis of the last SIGMET exercises by volcanic ash is reviewed in another working paper, presented by Argentina.

2.2 The Meeting The CRPP/4 Meeting decided to reactivate Project H2 for the CAR Region in addition to extending it for the SAM Region.

2.3 The Second Meeting on Projects of the MET Program (MP/2) had considered that, based on the points introduced by the Proposal of Amendment 78, issues related to SIGMET improvements, of Tropical Cyclones and the release of radioactive material, should be introduced in this Project, in order that the name of the Project should be modified to extend its scope to all types of SIGMET and not only restrict it to those referred to Volcanic Ash. In this regard, the MP issued Conclusion MP/2-1 whereby it modified the Project and the scope thereof in the terms found in **Appendix A** to this working paper.

2.4 The Meeting should note that the exercises for 2017 and 2018 have not been carried out with the purpose of using the link provided by the VAAC of Washington for cases of volcanic ash. However, according to the report of the State of Ecuador, the use of it has not been possible. For this reason, on June 4, 2019, in coordination with the VAAC of Buenos Aires, an exercise has been carried out for the States associated with the VAAC of Buenos Aires. The Project Coordinator is preparing the corresponding report.

2.5 Regarding the implementation of the VONA, the purpose of the VONA implementation project was to promote letters of cooperation agreements between the MET, AIM and ATM units, and volcanological observatories for cases of volcanic eruptions or the presence of ash clouds volcanic areas in the FIRs under the responsibility of surveillance. The States present at the Meeting could report the arrangements made to date on this activity.

2.6 The MP/2 had also analyzed the lack of procedures for the release of radioactive material into the atmosphere, radioactive or toxic clouds. On this point, the Meeting urged the States, first to comply with the provisions of Annex 3 regarding the release of radioactive material into the atmosphere, and in an additionally way. Likewise, the subject was analyzed this year at the meetings COM/MET and SAM/IG/ 23. In this last meeting, the conclusion SAM/IG/23-04 has been issued in relation to coordinations. States should invoke this conclusion to develop the necessary procedures for cases of radioactive material release, radioactive or toxic clouds. Additionally, the States could report on the procedures implemented for these cases. The Secretariat prepares a catalog to follow up on it.

2.7 Regarding the concern of the Meeting, regarding the requirement of the 30 KM radius for cases of radioactive material, of what may happen outside it, representatives of the SAM Region could express this concern at the next meeting of the MET Panel.

SIGMET Guide for the CAR/SAM Regions

2.8 The MP/2 Meeting noted the need to update the Guide for preparation and dissemination of SIGMET messages for the CAR/SAM Regions and noted that the process requires the contact details of the agencies involved, which have been requested to the States. The Secretariat reminded the Meeting that there is an Agreed Action 5/4 of the METWSG that defined that the regions should have a Guide for the issuance of SIGMET messages and that the existing Guide should be adapted to the template attached to this Agreed Action. The Secretariat urged the States to provide the necessary information when a new round of consultation is held, in order to complete the review and update of the SIGMET Guide in the

first half of 2018. With the support of project RLA/06/901, the guide has been revised and updated to the requirements of the aforementioned agreement and the recommendations of the MET Panel. However, until now, the States have not provided the feedback for it.

Coordination procedure between adjacent OVMs

2.9 The State of Ecuador reminded the COM/MET 2019 Meeting that the MP/2 considered the cases in which there are problems related to the surveillance of severe en route phenomena. In this sense, SIGMET messages issued for the same phenomenon have been observed, but affecting several FIRs. The problems observed refer to inconsistencies in the information of affected areas, differences in the levels of ceilings and inconsistency in the information related to severe phenomena between the limits of the flight information region (FIR). The Meeting recognized the difficulty for coordination between the States, but understands it necessary to establish coordination procedures using the currently available technological means (chat, teleconference, among others), in order to issue coherent reports among the Meteorological Surveillance Offices involved that faithfully reflect the occurrence of the phenomena, issuing homogeneous reports and allowing a continuity in the description of the phenomena.

2.10 The non-existence of coordination procedures between adjacent LMOs of FIRs presents an opportunity for improvement for the monitoring of severe phenomena that affect more than one FIR at the same time. The Meeting, when analyzing the proposal of communication exercises between adjacent LMOs, understood that the occurrence of the phenomena should be analyzed, characterized and defined sub-regional groups according to the climatology of the events. From this it follows that, initially, work should be done on communication exercises between the following FIRs:

- FIR Ezeiza, Montevideo and Curitiba
- FIR Resistencia, Asuncion, La Paz, Curitiba and Brasilia
- FIR Mendoza and Cordoba
- FIR Lima and Guayaquil
- FIR Lima, Amazonia and Brasilia
- FIR El Dorado and Lima
- FIR Lima and La Paz
- FIR El Dorado, Maiquetia and Panama
- FIR Maiquetia, Georgetown and Paramaribo
- FIR Puerto Month and Comodoro Rivadavia

2.11 The States could report on the first steps implemented to carry out these coordinations.

Suggested Action

3.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) review the information provided in Appendix A;
- c) provide the requested information on procedures for radioactive material and coordinations among the OVMs for monitoring of phenomena; and
- d) agree on the actions it deems necessary.
