

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**
**Second Meeting of the AFI Volcanic Ash Steering Group (AFI VOLCEX/SG2)**  
*(Virtual, 18 July 2022)*
**Agenda Item 4 AFI VOLCEX 23 Exercise scenario planning**
**WP4.1. Exercise scenario planning**
*(Presented by the Secretariat)*

<b>SUMMARY</b>
<p>This paper provides an update on the volcanic ash (VA scenario design and its planning and propose action to be taken by the Democratic Republic of Congo as Exercise Leader State</p> <p>Action by the meeting in <b>paragraph 3</b></p>
<p><b>REFERENCE(S):</b></p> <ul style="list-style-type: none"> <li>• AFI Volcanic Ash Exercise Operational Instructions (OPINS)</li> <li>• AFI VOLCEX 21/01 Report</li> <li>• Doc 9766 Handbook on the IAVW</li> <li>• ToR of AFI VOLCEX SG</li> </ul>
<p><b>Related ICAO Strategic Objective(s):</b></p> <ul style="list-style-type: none"> <li>• <b>A</b> – <i>Safety</i>, <b>B</b> – <i>Air Navigation Capacity and Efficiency</i></li> </ul>

**1. INTRODUCTION**

1.1. The Decision 24/28 of APIRG/24 endorsed the AFI Volcanic Ash Exercise Operational Instructions (OPINS) and Directives to guide the planning and conduct of the volcanic ash exercise.

1.2. In accordance with the provision of the OPINS, the volcanic ash exercise should be conducted every two years in the AFI Region.

1.3. The 2023 exercise will be led by the Democratic Republic of Congo as Exercise Leader under a scenario of eruption of the volcano Nyiragongo, Goma refenced 223030.

**2. DISCUSSIONS**

2.1. The Exercise Leader should develop a clear scenario of the VA exercise in collaboration of all the stakeholders, specially the AFI VAAC of Toulouse.

2.2. The volcano subject of the exercise should be identified as follows:

- Volcano Name: Nyiragongo;
- Volcano number: 223030;
- Position: S01.52 S E29.25
- Area: Goma, DRC

2.3. The scenario should provide clear indications of :

- Eruption with volcanic ash cloud up to *FLxxx moving [direction]* at *x-x knots* to impact ATS routes and airspace within *XXX FIR (CODE)* and *XXXX FIR (CODE)*.
- Volcanic ash deposition at *xxxx (CODE)* and *xxxx aerodromes (CODE)* in *[State]*, will impact operations and airport closure.
- Schematics of the information flow between operational units in a volcanic ash exercise.

2.4. Participating agencies have agreed to the following chronological list of the actions to be undertaken before and during the exercise as provided in Appendix A to this WP.

2.5. The scenario messages include VONA, VAA/ VAG, VA Exercises SIGMET, NOTAM, AIREPs, exercise tele-conferences/web-conferences, e-mail exchanges and instant messaging chats, etc.

### **3. ACTIONS BY THE MEETING**

**3.1** The meeting is invited to:

- a) note the information contained in this paper;
- b) comment the Appendix of to this working paper; and
- c) urge the Democratic Republic of Congo to develop a comprehensive schedule of a clear scenario of the 2023 VA exercise by the end of August 2023.

----- END -----

## Appendix A Diagram of Actions to be undertaken during the exercises

Date /Time (UTC)	Players	Event /Action
[1 month prior to the exercise]	<ul style="list-style-type: none"> <li>• Exercise leader</li> <li>• ICAO Secretariat</li> </ul>	Publish final version of exercise directive
[1 week prior to the exercise]	NOF/s [name/s]	Issue preparatory NOTAMs to inform the aviation community of the exercise
[Exercise date, 0100]	Exercise leader	Send email message to all players to announce commencement of the exercise
<b>[Exercise date, 0100]</b>	<b>VO [name]</b>	<b>Issue 1<sup>st</sup> exercise VONA (initial eruption details)</b>
[Exercise date, 0100+]	<b>VAAC Toulouse</b>	Issue 1 <sup>st</sup> exercise VAA/[VAG] based on VONA
[Exercise date, 0100+]	<b>MWO Antananarivo</b>	Issue 1 <sup>st</sup> exercise SIGMET based on VONA
[Exercise date, 0100+]	ACC/NOF [name/s]	Issue 1 <sup>st</sup> exercise NOTAM based on SIGMET
[Exercise date, 0200]	<b>VAAC Toulouse</b>	Issue 2 <sup>nd</sup> exercise VAA/VAG based on observations/reports
[Exercise date, 0200+]	<b>MWO Antananarivo</b>	Issue 2 <sup>nd</sup> exercise SIGMET based on VAA/VAG
[Exercise date, 0200+]	Exercise leader	Send email message inviting [selected players] to join [teleconference/web conference] at [time]
[Exercise date, 0200+]	ACC/NOF [name/s]	Issue 2 <sup>nd</sup> exercise NOTAM based on SIGMET
[Exercise date, 0200+]	ACC/ATM Centre/s [names]	Apply ATFM measures based on SIGMET
[Exercise date, 0200+]	AOs [name/s]	Take appropriate flight planning actions: e.g. reroute or cancel flights
[Exercise date, 0215]	AO [name]	Report aircraft observation [volcanic ash/no volcanic ash] as special air-report
[Exercise date, 0215+]	ATS unit/s [name/s]	Relay and record special air-report
<b>[Exercise date, 0230]</b>	<b>VO [name]</b>	<b>Issue 2<sup>nd</sup> exercise VONA (updated eruption details)</b>
[Exercise date, 0245]	Exercise leader, [list selected players]	Exercise [teleconference/web conference] to discuss the latest situation
[Exercise date, 0300]	<b>VAAC Toulouse</b>	Issue 3 <sup>rd</sup> exercise VAA/VAG based on observations/reports
[Exercise date, 0300+]	<b>MWO Antananarivo</b>	Issue 3 <sup>rd</sup> exercise SIGMET based on VAA/VAG
[Exercise date, 0300+]	ACC/NOF [name/s]	Issue 3 <sup>rd</sup> exercise NOTAM based on SIGMET
[Exercise date, 0300+]	ACC/ATM Centre/s [names]	Apply ATFM measures based on

		<b>SIGMET</b>
[Exercise date, 0300+]	AOs [name/s]	Take appropriate flight planning actions: e.g. reroute or cancel flights
[Exercise date, 0600]	<b>VAAC Toulouse</b>	Issue 4 <sup>th</sup> exercise VAA and VAG based on observations/reports
[Exercise date, 0600+]	<b>MWO Antananarivo</b>	Issue 4 <sup>th</sup> exercise SIGMET based on VAA/VAG
[Exercise date, 0600+]	ACC/NOF [name/s]	Issue 4 <sup>th</sup> exercise NOTAM based on SIGMET
[Exercise date, 0600+]	ACC/ATM Centre/s [names]	Apply ATFM measures based on SIGMET
[Exercise date, 0600+]	AOs [name/s]	Take appropriate flight planning actions: e.g. reroute or cancel flights
[Exercise date, 0645]	<b>Exercise leader</b>	<b>Send email message to all players to announce cessation of the exercise</b>
[Exercise date, 0645]	VO [name]	Cancel exercise VONA
[Exercise date, 0645]	<b>VAAC Toulouse</b>	Cancel exercise VAA/VAG
[Exercise date, 0645]	<b>MWO Antananarivo</b>	Cancel exercise SIGMET
[Exercise date, 0645]	ACC/NOF [name/s]	Cancel exercise NOTAM