Workshop on the Provision of Information on Volcanic Eruptions and Ash Clouds, Yaoundé, Cameroon, 16–20 June 2025

Sharing Experiences on Conducting Volcanic Ash Exercises

PPT-10.1B – RVA DRC

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Sharing Experiences on Conducting Volcanic Eruptions

1. NATIONAL SIMULATION

1. Volcanic Eruption Simulation in Goma
(July 3, 2017)

- Organized by North Kivu Civil Protection Service
- Involved ~2,000 families (~11,000 people)
- Scenario: potential eruption of Nyiragongo and Nyamulagira, focusing on evacuation to Affia Stadium
- Participants: traditional leaders, households from various Goma neighborhoods
- Supported by: MONUSCO, World Bank, OCHA, WFP, government agencies, South Kivu representatives, etc.

Volcanic Eruption Simulation (Ctnd)

- ✓ **Main objectives**
- Evaluate the national volcanic evacuation plan
- Test community preparedness and response capacity
- ✓ **Key issue identified**
- Warning siren volume too low, ineffective for alerting the full population → critical improvement needed
- ✓ **Significance**
- Shows Congolese authorities' proactive commitment to disaster risk reduction
- Highlights the importance of evacuation procedures, given fast-moving lava flows and ash fallout risks that can block routes or require sheltering

Sharing Experiences on Conducting Volcanic Eruptions

2. INTERNATIONAL VOLCEX

2. AFI VOLCEX 23/01 (December 7, 2023)

- Regional volcanic ash exercise led by ICAO
- Simulated eruption of Nyiragongo, with ash cloud affecting multiple Flight Information Regions (FIRs) up to flight level 350
- Ash modeled moving west at 37 km/h, impacting 11 countries:
  • DRC (Kinshasa), Republic of Congo (Brazzaville), Gabon (Libreville), Cameroon (Yaoundé), Central African Republic (Bangui), Tanzania (Dar Es Salaam), Uganda (Entebbe), Rwanda (Kigali), Angola (Luanda), Burundi (Bujumbura), Kenya (Nairobi)

AFI VOLCEX 23/01 (December 7, 2023)

- Demonstrate coordination among aviation stakeholders: ANSPs, ATC, AIS, volcanic observatories, VAACs, MWOs, SAR, military, users
- Ensure rapid dissemination of critical aviation messages (VONA, VAA/VAG, SIGMET, NOTAM, AIREP)
- Test telecom network operational status

AFI VOLCEX 23/01 (December 7, 2023)

- **Main objectives**
- Evaluate team performance in volcanic ash emergency management
- Verify cross-border agreements for information sharing
- Demonstrate timely information sharing via telecom and internet
- Show transmission of aircraft reports on volcanic ash
- Provide recommendations for procedure improvements

AFI VOLCEX 23/01 (December 7, 2023)

✓ **Participants**

- Aviation agencies from 11 African countries
- Airlines including Busy Bee DR Congo, South African Airways

✓ **Actions taken**

- OVG issued VONA messages
- VAAC Toulouse issued VAA and VAG
- MWOs issued SIGMETs
- NOTAM offices (NOFs) issued NOTAMs
- Regional ACCs implemented air traffic control measures
- Airlines simulated aircraft reports

AFI VOLCEX 23/01 (December 7, 2023)

✓ **Key lessons learned**

- Improve NOTAM message formats
- Ensure full airline participation and timely aircraft reporting
- Adapt some MWO systems for volcanic ash SIGMETs (SIGMET WV)
- Focus more on standardized phraseology for ash events
- Issue official notices to secure participation from all key stakeholders (including SAR)
- Resolve delays in receiving critical messages (like SIGMETs)
- Expand message distribution lists to cover all relevant recipients
- Ensure flight crews are trained in volcanic hazard recognition.

AFI VOLCEX 23/01 (December 7, 2023)

Significance

- Highlights international, ICAO-led effort to prepare for volcanic ash aviation impacts, particularly from Nyiragongo
- Emphasizes the cross-border nature of volcanic ash hazards and the need for harmonized procedures

3. Conclusion and Q&A

- Stay informed, stay prepared.
- Collaborate with RVA and meteorological authorities.
- Reinforce real-time reporting and information sharing.
- Questions and feedback welcome.