

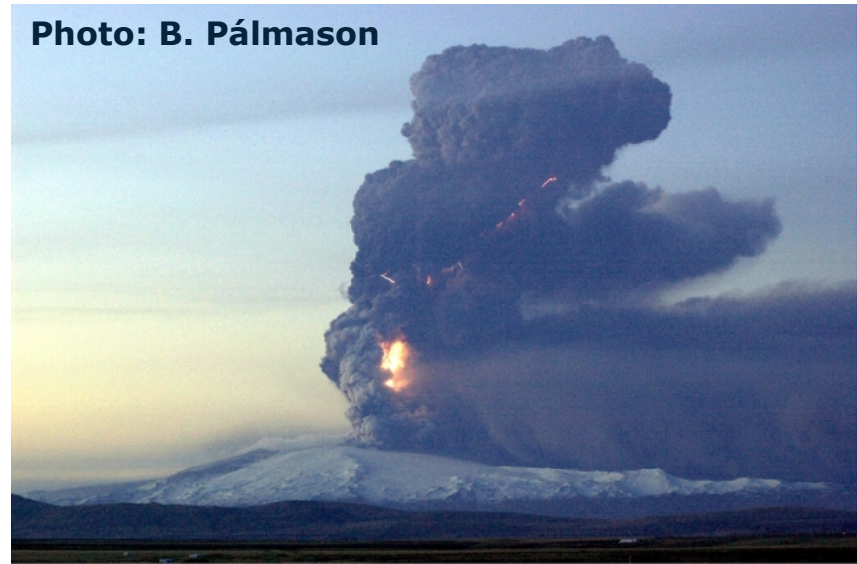
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# Eldgosavöktun

## Hlutverk Veðurstofu Íslands

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Photo: B. Pálmason



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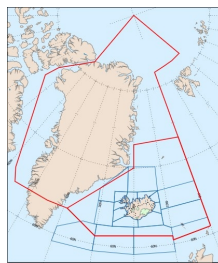
# Skilgreiningar á hlutverki VÍ

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- ▶ Lög um Veðurstofu Íslands
- ▶ Lög um veðurbjónustu
- ▶ JF-samningur
- ▶ ICAO Annex 3
- ▶ EUR doc 019/NAT Doc 006
- ▶ (VA contingency plan)
- ▶ EUR SIGMET guide

# Hlutverk VÍ – ICAO Annex 3 Meteorological Watch Office

- ▶ Meteorological Watch Office (MWO):
  - ▶ Continuous MET watch over AoR
  - ▶ MET products (TAF, METAR...)
  - ▶ SIGMET issuance and dissemination
- ▶ 7.1.4 Recommendation.— SIGMET messages concerning volcanic ash cloud and tropical cyclones should be based on advisory information provided by VAACs and TCACs, respectively, designated by regional air navigation agreement.
- ▶ Supply VOLC info (from SVO) to VAAC/ACC/FIC
- ▶



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# Hlutverk VÍ – ICAO Annex 3 State Volcano Observatory

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**Contracting States that maintain volcano observatories monitoring active volcanoes shall arrange that selected State volcano observatories, as designated by regional air navigation agreement, observing:**

- a) significant pre-eruption volcanic activity, or a cessation thereof;**
- b) a volcanic eruption, or a cessation thereof; and/or**
- c) volcanic ash in the atmosphere**

**shall send this information as quickly as practicable to its associated ACC, MWO and VAAC.**

***Note.— Pre-eruption volcanic activity in this context means unusual and/or increasing volcanic activity which could presage a volcanic eruption.***

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# Hlutverk London VAAC – ICAO Annex 3

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- ▶ Monitor satellite data to detect the existence and extent of volcanic ash in the atmosphere in the area concerned;
- ▶ Activate the volcanic ash numerical trajectory/dispersion model in order to forecast the movement of any ash “cloud” which has been detected or reported;
- ▶ Issue advisory information, disseminate to MWO, ACC, FIC, other VAAC ’s if affected, ..... and several others
- ▶ Issue updates at least every 6 hrs
- ▶ Shall maintain a 24 hr watch

# Ferlið – frá upplýsingamiðlun til ákvarðana

- ▶ Lykilaðilar: London VAAC, VÍ, ACC
- ▶ VÍ miðlar upplýsingum til London VAAC and ACC
- ▶ London VAAC gefur út VAA, mikið til byggt á númerísku dreifingarlíkani. Dreifing til viðeigandi MWO, ACC, FIC og annarra “hagsmunaaðila”
- ▶ VÍ og önnur MWO ‘s gefa út SIGMET (T0-T+6)
- ▶ ACC/FIC gefa út NOTAM and ASHTAM
- ▶ ACC veitir flugrekstri clearances/non-clearances fyrir starfsemi innan þeirra ábyrgðarsvæða.

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# Eyjafjallajökull 2010

## VÍ – London VAAC

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- ▶VA status reports gefnar út af VÍ á 3 klst fresti, og oftar ef nauðsyn ber til:
- ▶Plume height (key parameter)
- ▶Plume activity (height and variation in height)
- ▶Color/shade of the plume
- ▶Lightning activity
- ▶seismic and hydrological activity
- ▶surface and upper air observations
- ▶Contact by phone between forecasters at IMO and London VAAC, all significant changes reported promptly
  
- ▶IMO gives further guidance to local stakeholders

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- ▶ Ferlar mótaðir betur, drög að skipulagi vegna öskudreifingar
  - ▶ Hlutverk hvers og eins negld niður
  - ▶ Samskipti við flugrekstraraðila
  - ▶ Skipan tengiliða þegar eldgos er í gangi
  - ▶ Reglulegir samráðsfundir þegar eldgos er í gangi



# Stóri dómur eftir Eyjafjallajökul

- ▶ Eftirlitskerfi ófullnægjandi
- ▶ Vöktun á "Source term" stór veikleiki
- ▶ Getum keyrt milljón dreifingarlíkön, en ekkert þeirra mun ná hinu sanna ástandi við þessar aðstæður
- ▶ Jarðvöktunarkerfi þarf einnig að betrumbæta til framtíðar
- ▶ Þéttara net SIL-stöðva á "strategic" staðsetningum
- ▶ GPS/Strain net má líka betrumbæta
- ▶ Halda þarf áfram með góðar VOLC æfingar, fá fleiri að borðinu
- ▶ Þörf fyrir hærri upplausn á dreifingarlíkani fyrir Ísland.

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# Ongoing improvements

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- ▶ Investment in mobile X-band, dual-polarization radar, ongoing process
- ▶ Will be deployed within 25-30 km from source (volcano)
- ▶ Should distinguish better between ash and cloud/water droplets
- ▶ Should give better real-time measurements of plume height
- ▶ Could give better estimates of source mass rate
- ▶ Italian Civil Protection loaning out similar radar in the meantime
- ▶ Will arrive in Iceland in a month
- ▶ Several research initiatives ongoing with regard to monitoring
- ▶ SO<sub>2</sub>, LIDAR
- ▶ FP7 research projects lurching
- ▶ Investment in second C-band radar in the eastern part of Iceland

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# Spurningar?

Photo: Þ.M. Pétursson

