



IVATF/1-IP/21
23/7/10

INTERNATIONAL VOLCANIC ASH TASK FORCE (IVATF)

FIRST MEETING

Montréal, 27 to 30 July 2010

Agenda Item 3: Results of the EUR/NAT VATF Meeting (Plenary)

3.1: Evaluation of the Eyjafjallajökul eruption and lesson learned

EUROCONTROL/CFMU VOLCANIC ASH CRISIS REPORT

(Presented by Eurocontrol)

SUMMARY

This paper includes the presentation which sets out how the Eyjafjallajökul eruption evolved into a European aviation crisis, what measures were taken to unlock it and highlights some open issues that still need to be resolved to ensure an effective operational response to future volcanic ash events.

Presentation to the ICAO IVATF
Montréal, 27th - 30th July 2010

EUROCONTROL/CFMU VOLCANIC ASH CRISIS REPORT

Žarko SIVČEV
EUROCONTROL/CFMU
Network Operations



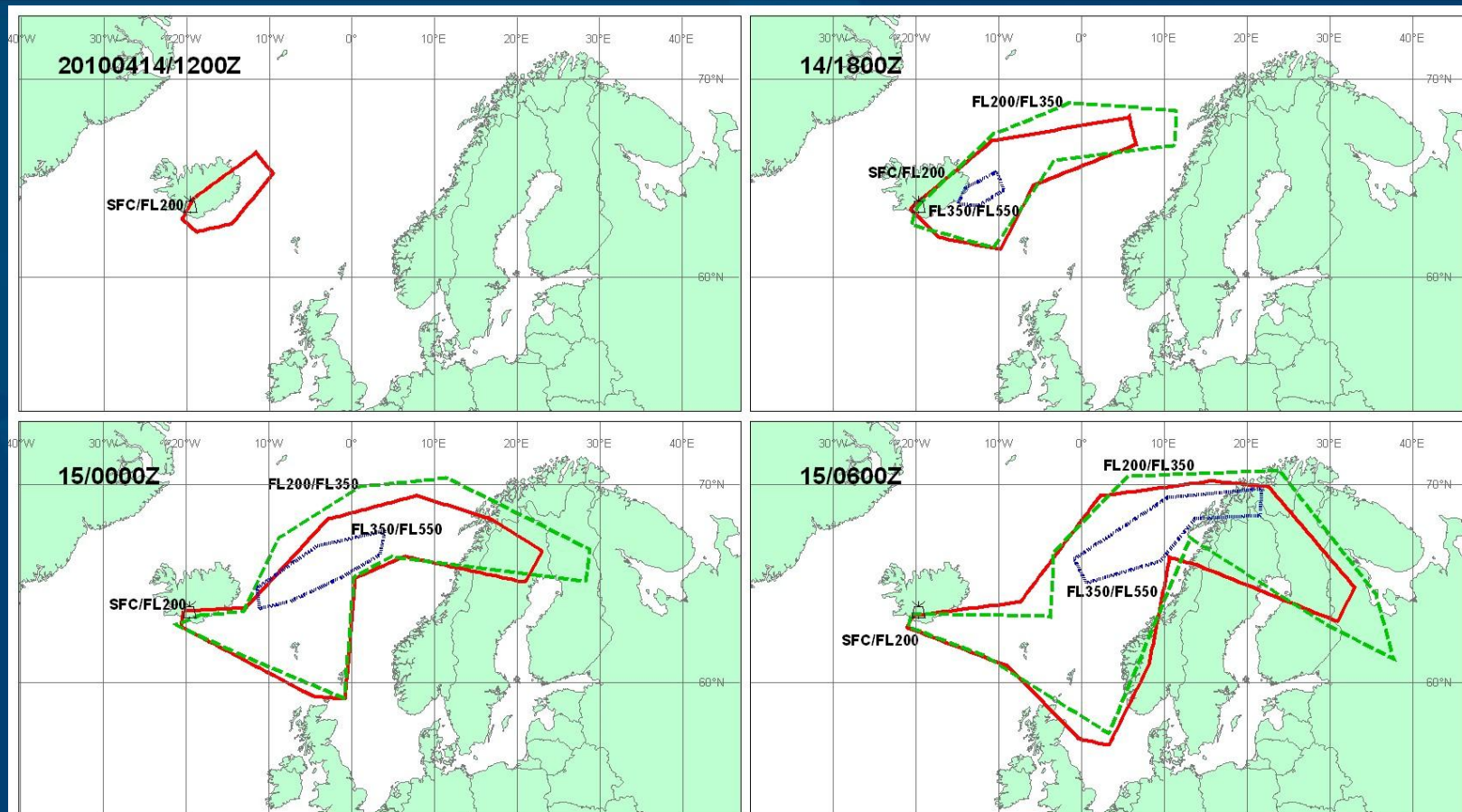
It all started on 14th April ...

1. 14th April - 28th April
2. European coordination
3. 3rd May to 23rd May
4. Volcanic ash - solutions sought
5. What if an eruption starts tomorrow?

1. 14th April - 28th April

From
contingency
to crisis

VAAC London - First Volcanic Ash Advisory - 14th April



VA ADVISORY
DTG: 20100414/1200Z
VAAC: LONDON
VOLCANO:
EYJAFJALLAJOKULL
PSN: N6338 W01937
AREA: ICELAND

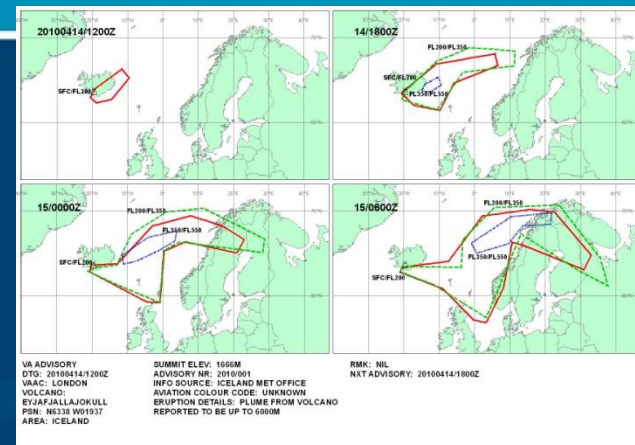
SUMMIT ELEV: 1666M
ADVISORY NR: 2010/001
INFO SOURCE: ICELAND MET OFFICE
AVIATION COLOUR CODE: UNKNOWN
ERUPTION DETAILS: PLUME FROM VOLCANO
REPORTED TO BE UP TO 6000M

RMK: NIL
NXT ADVISORY: 20100414/1800Z

VAAC London - First Volcanic Ash Advisory - 14th April

CFMU activates its volcanic ash contingency procedure

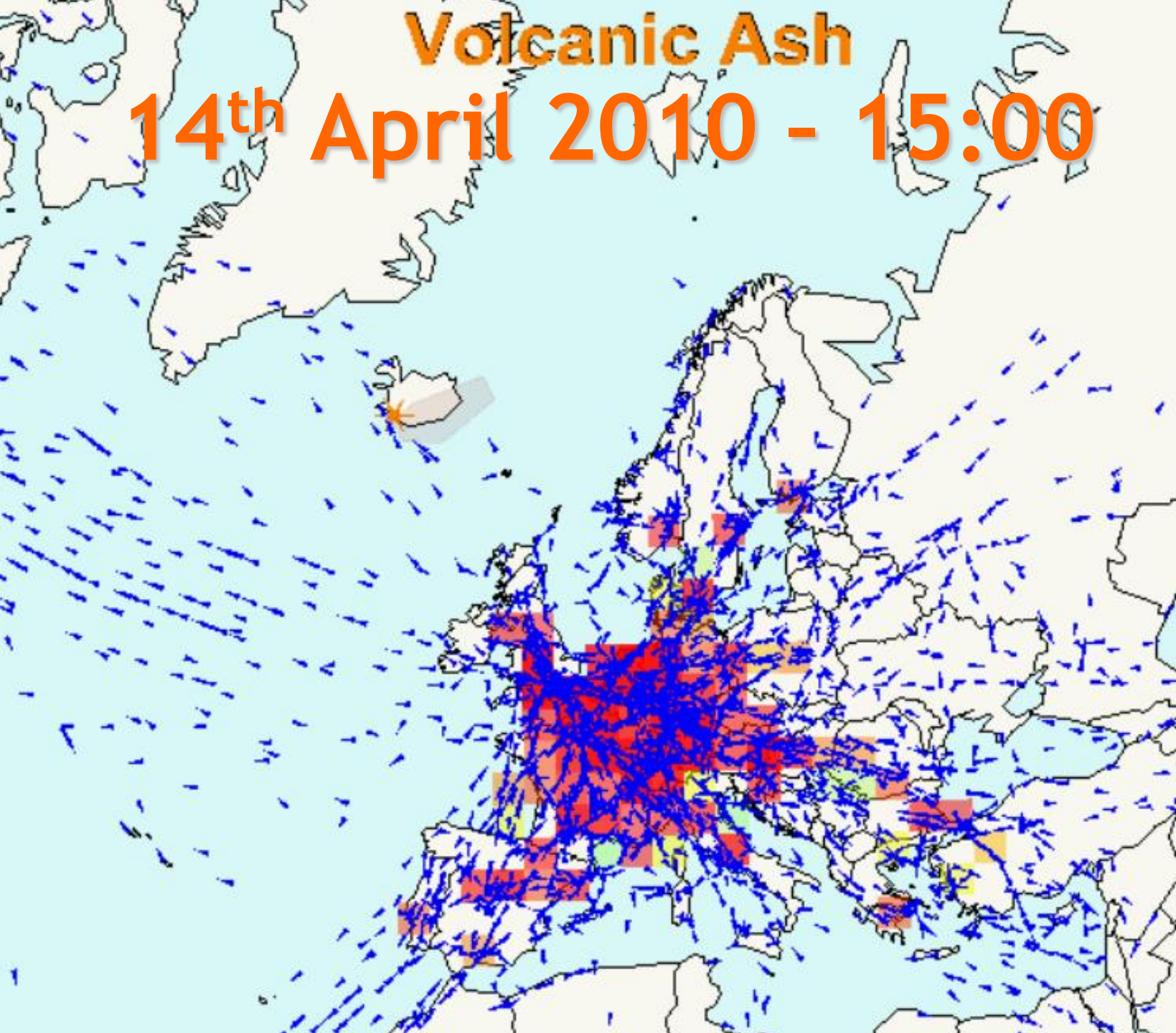
- Early warning - issue information on volcanic ash activity
- On request of national ATC providers : CFMU Applies measures
- Facilitate information exchange - organise teleconferences



Europe enters an ash aviation crisis
on Thursday 15 April

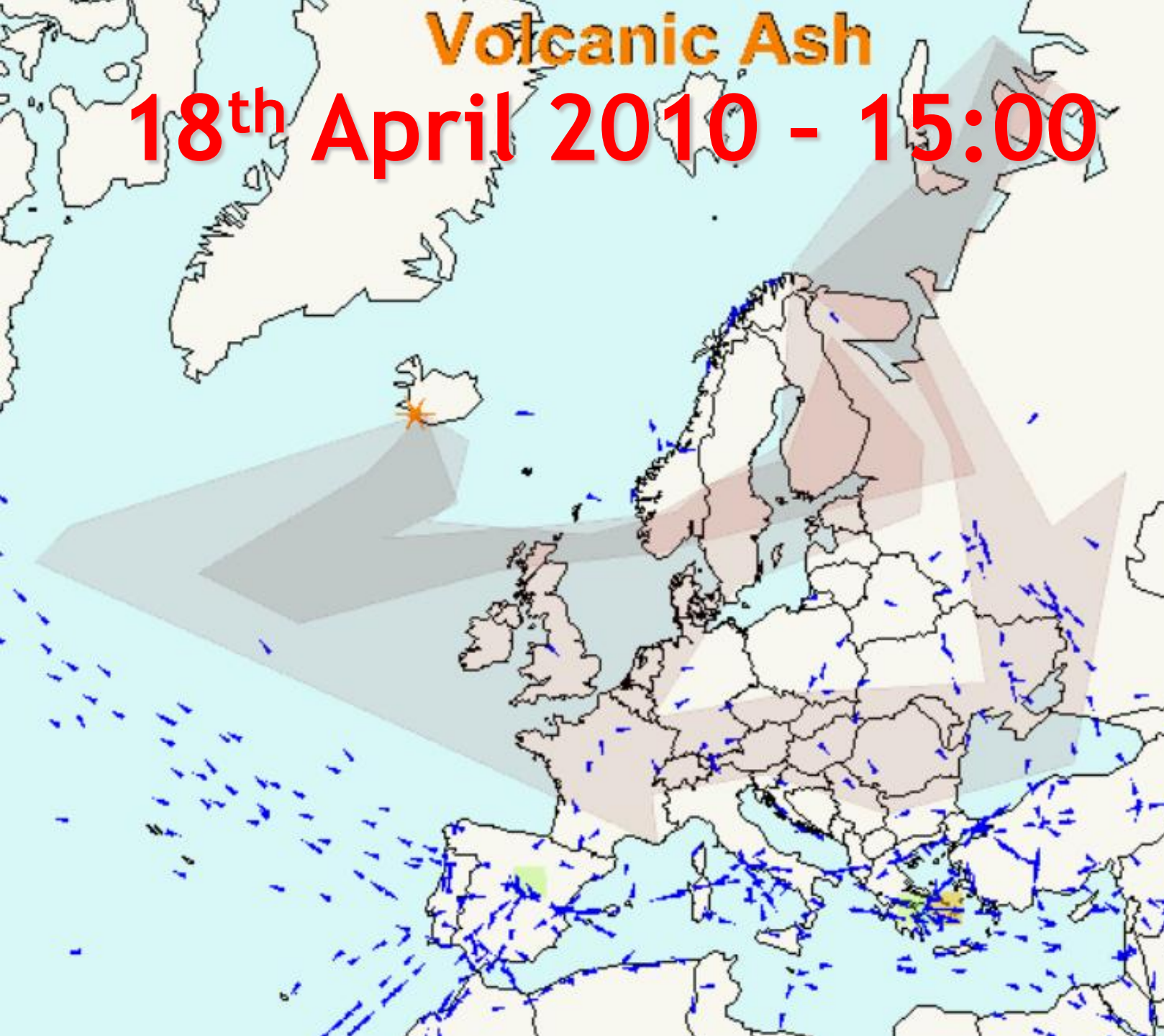
Volcanic Ash

14th April 2010 - 15:00



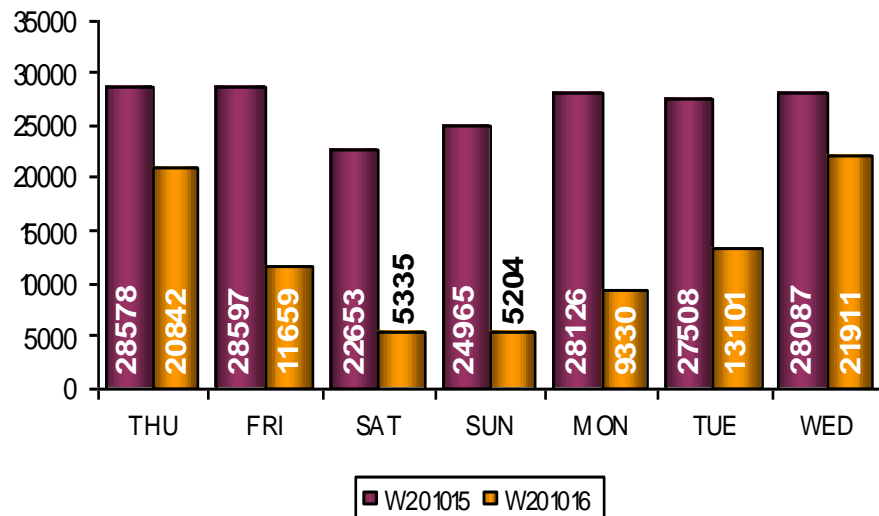
Volcanic Ash

18th April 2010 - 15:00



Impact on the European traffic 15 April - 21 April

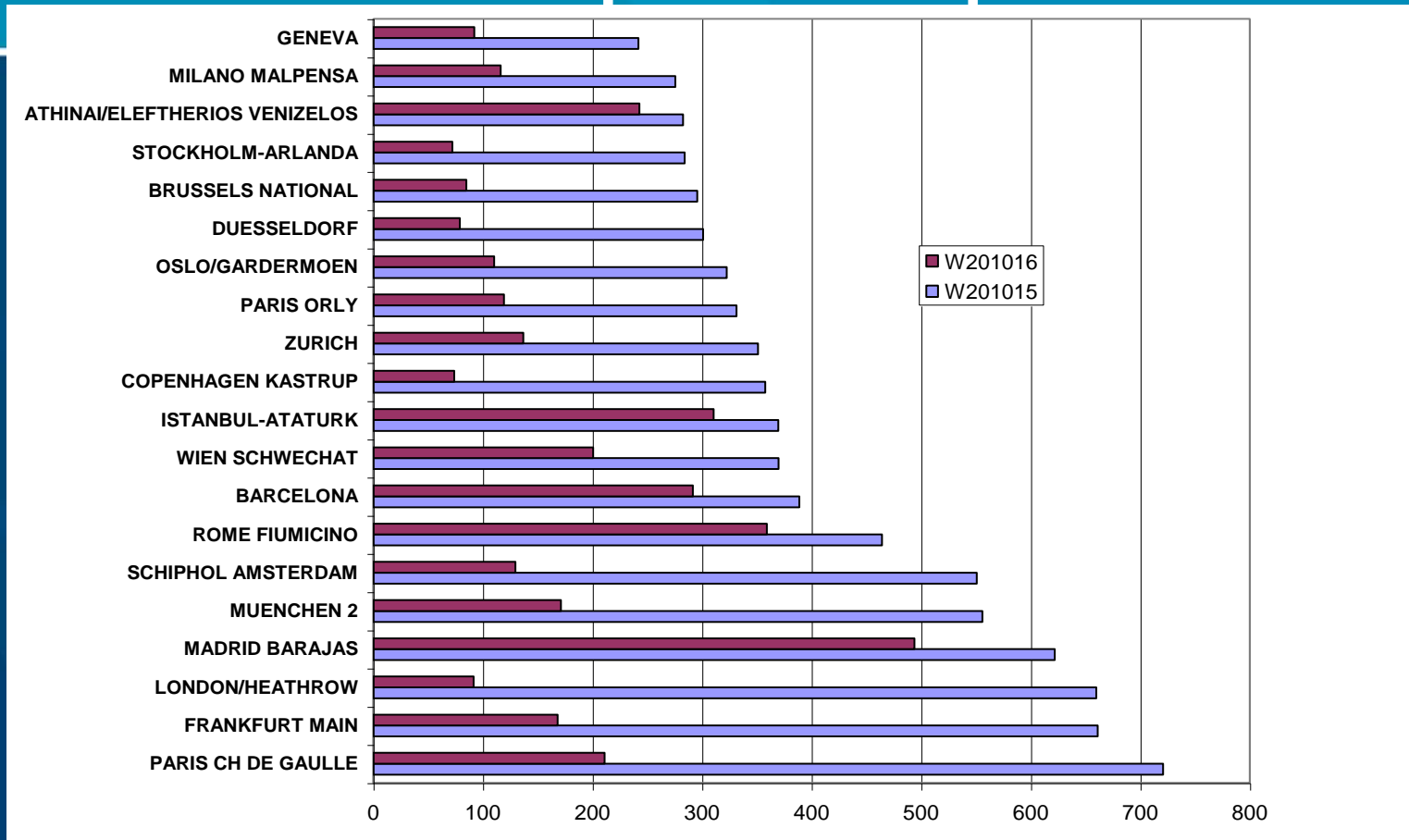
Daily Traffic per Volcano Activity Week



- 54% of flights not operated
- More than 100,000 flights
- 1% of annual traffic

Impact on Airports (traffic)

15 April - 21 April

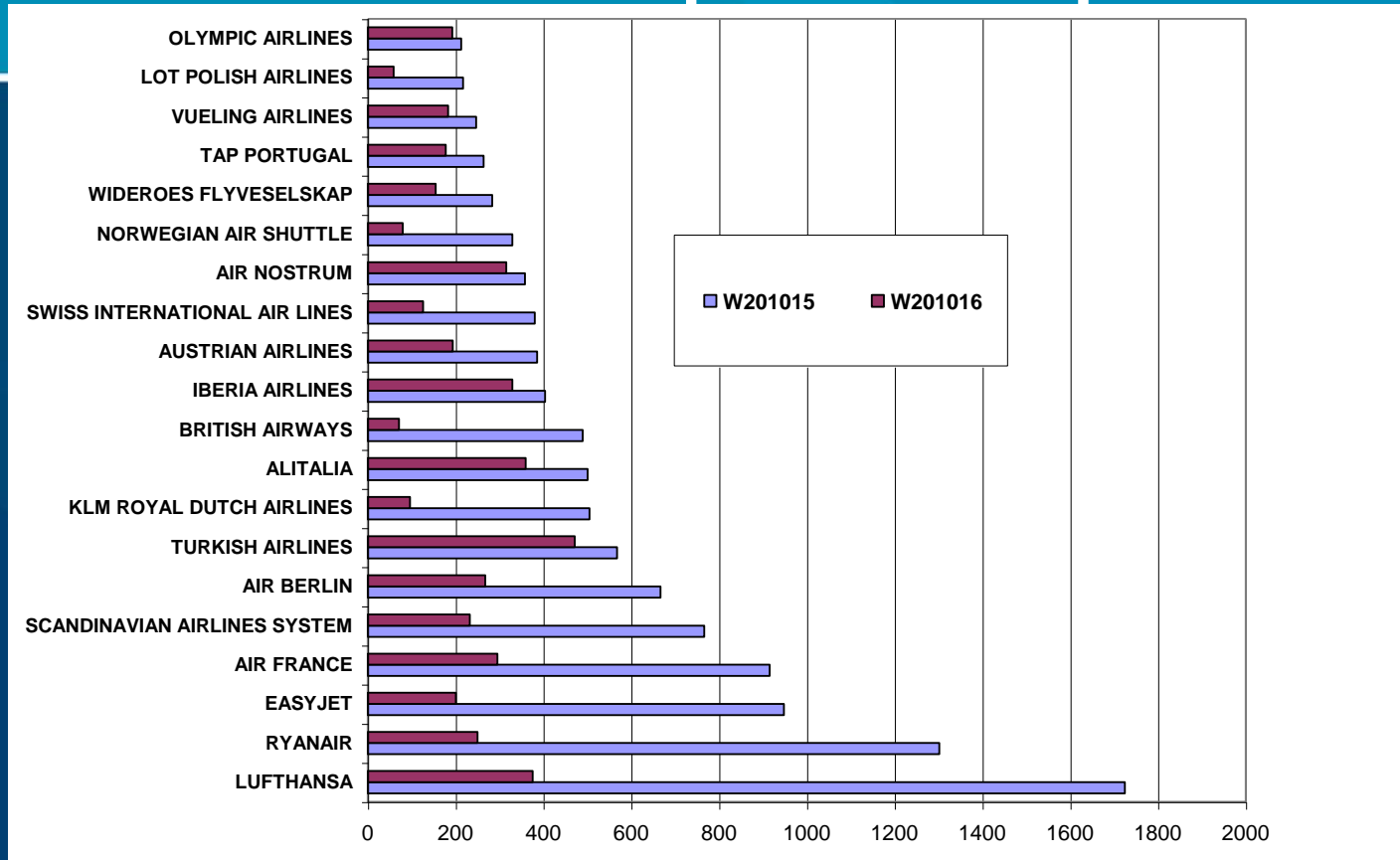


In the area directly affected by the ash - 70% reduction

Outside of the area directly affected by the ash - 23% reduction

Impact on Aircraft Operators (traffic)

15 April - 21 April



In the area directly affected by the ash - average reduction of 67%

Outside affected areas - average reduction of 20%

Several airlines lost more than 80% of foreseen traffic

UNLOCKING THE CRISIS: 19TH APRIL

2. European Coordination

Unlocking the crisis: 19th April



- Close coordination - EC & EUROCONTROL
 - EC - political leadership
 - EUROCONTROL - network management expertise
- EUROCONTROL proposes three options
- Teleconference of the EUROCONTROL Provisional Council (AM) & EU Council of Ministers (PM) - **option 3**

OPTION 3

- NO FLY ZONE
- Contaminated Zone
- Ash Free Zone

Buffer
60NM

States
to decide on
NO FLY ZONE

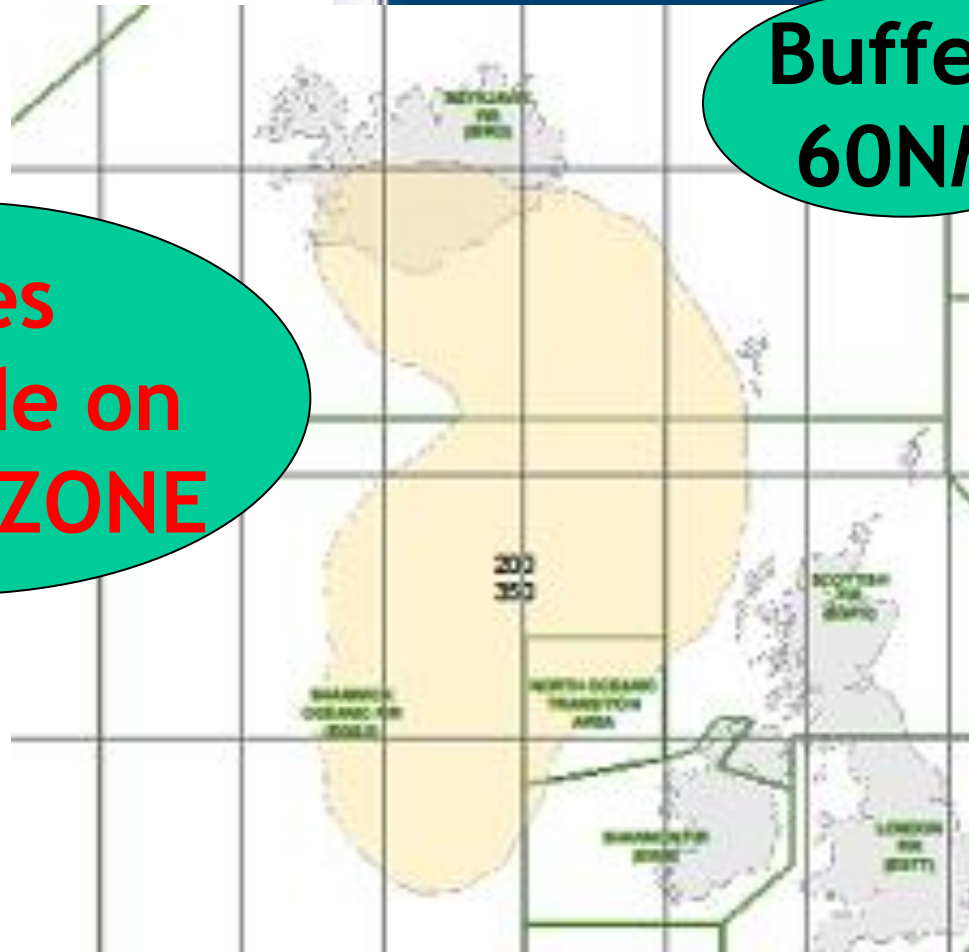
BufferZone_24apr2010-00h00 (issued 23apr2010-1

File Edit Format View Help

VOLCANO: EYJAFJALLAJOKULL 1702-02
PSN: N6338 W01937

VOLCANIC ASH CONCENTRATION: BLACK PLUS BUFFER ZONE
MODEL RUN: 20100423/1800
VALIDITY TIME: 20100424/0000
FLIGHT LEVEL: SFC/FL200
REMARKS: MODEL DATA

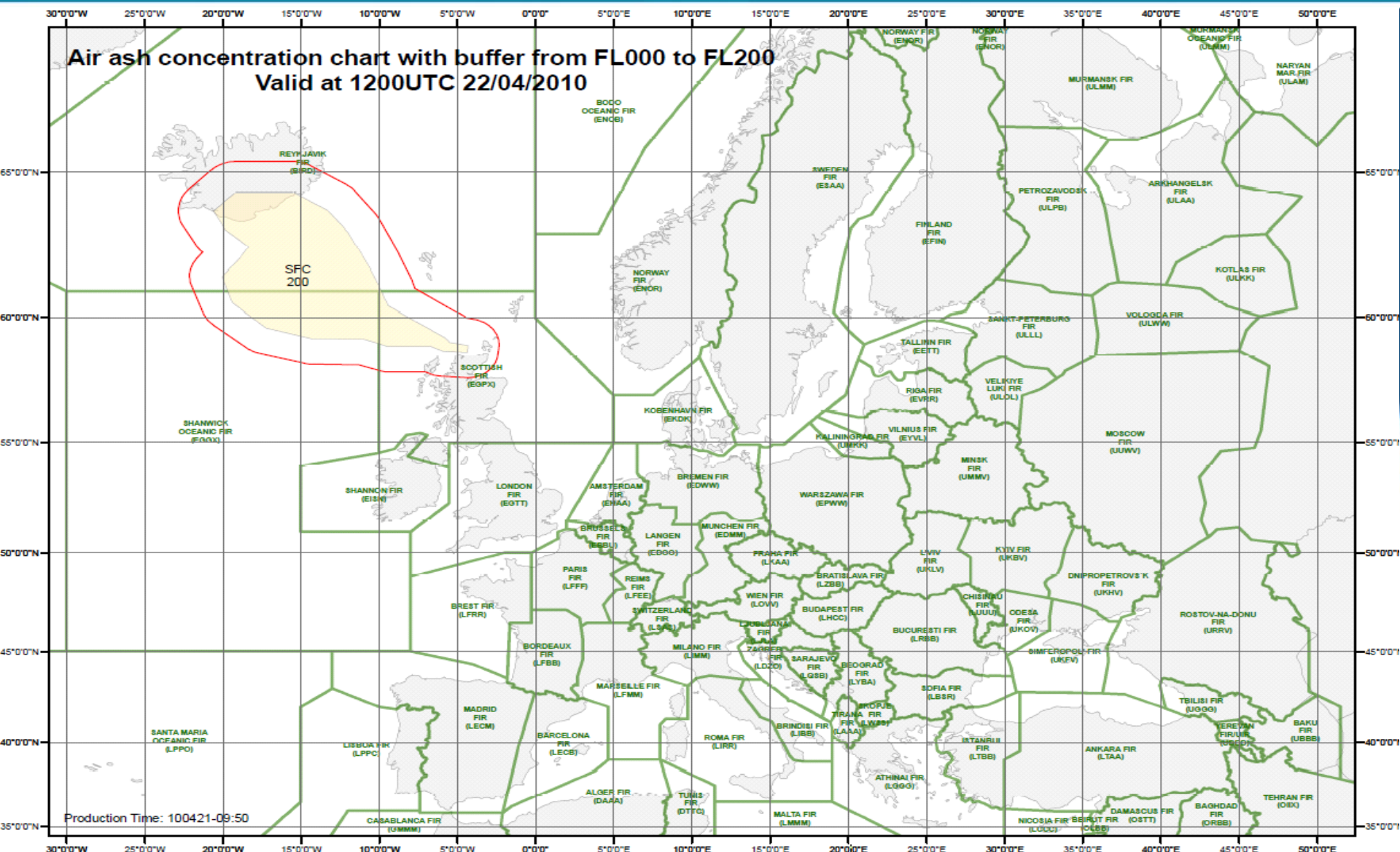
POLY 1
N654800,W0274200
N651800,W0290200
N643500,W0302200
N634300,W0310100
N625900,W0303100
N624300,W0284300
N624700,W0265400
N630100,W0255000
N631300,W0245200
N631000,W0234800
N630300,W0222600
N624000,W0214900
N621100,W0204600
N620000,W0192000
N620300,W0173700
N620700,W0151900
N623800,W0141200
N631700,W0134300
N634700,W0125600
N643200,W0121100
N651300,W0124500
N653300,W0141200
N655700,W0154400
N660700,W0171300
N662300,W0192900
N662300,W02231100



NEW ROLE FOR EUROCONTROL/CFMU

- Early warning - issue information on volcanic ash activity
- On request of national ATC providers : CFMU applies measures
- Facilitate information exchange - teleconferences
- Publish charts to assist states in deciding on NO FLY ZONE

EUROCONTROL - NO FLY ZONE Proposal - April 20th - 28th



NO ASH IN EUROCONTROL ZONE - April 28th - May 3rd BUT...

3. 3rd May to 23rd May

3rd May - Volcanic ash procedures restarted...

- Closures in UK and Ireland, then Portugal, Spain, Italy, Morocco
- 11th May – UK CAA/Met Office remove the 60NM buffer following a safety assessment - States retain prerogative to add the 60NM buffer
- 18th May - UK CAA/Met Office issue a new CHART: black, grey, red
- 21st May – **EASA** issue a Safety Information Bulletin:
 - **NO FLY ZONE,**
 - **ENHANCED PROCEDURES ZONE: GREY AND RED,**
 - **NORMAL ZONE**

NEW VAAC LONDON CHART



Met Office

Modelled Ash Concentration from FL000 to FL200 at 1200 UTC 18/05/2010

Issue time: 201005181200

This is a guidance product generated from model data and is supplemental to the official VAAC London Volcanic Ash Advisory and Volcanic Ash Graphic products. FIR boundaries are indicated for reference



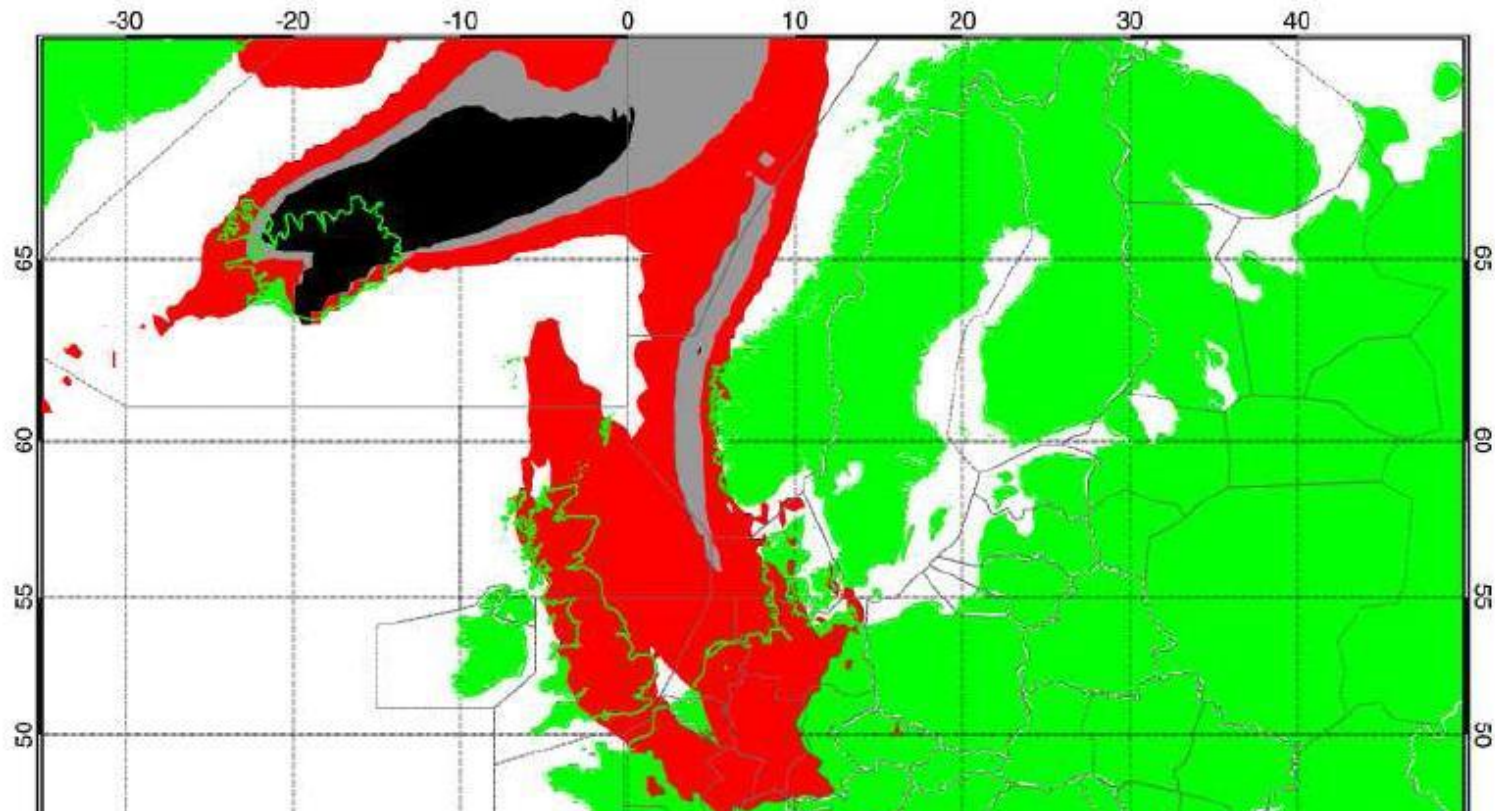
Predicted area where volcanic ash may be encountered



Predicted area of ash concentrations in which flights are permitted with an appropriate safety case and agreement from engine and airframe manufacturers



Predicted area of ash concentrations that exceed acceptable engine manufacturer tolerance levels





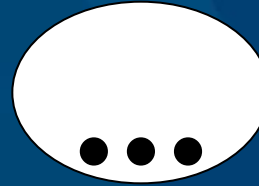
4. Volcanic ash - solutions sought

Lessons learned

AOs

Regulators

ANSPs



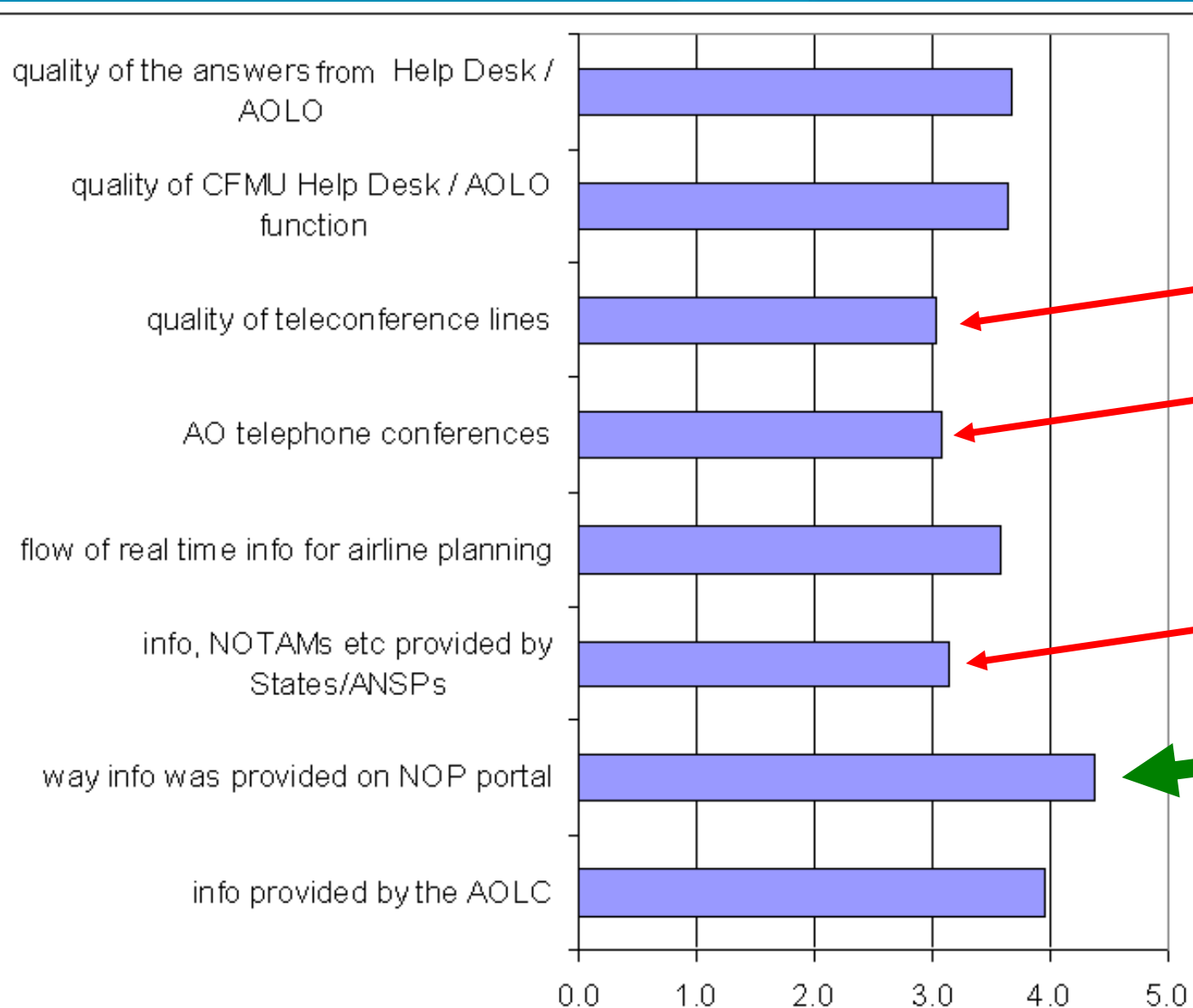
CFMU

VAACs

IVATF




Lessons learned - AOs



CFMU Network Operations Portal (NOP)

<https://www.cfm.eucontrol.int/PUBPORTAL/gateway/spec/index.html>

**CFMU NOP**
Network Operations Portal

21:58 11/05/2010 38 UTC

TARGET DATE: 11/05/2010

SEARCH

Username: guest

PREFERENCES

HELP

Resources

Post-Operations

Tactical

PreTactical

Strategic

Contingency
The status of the CFMU operations is **NORMAL**.
CFMU Contingency Plan
This document addresses the contingency procedure to be carried out in the event of a long term failure of CFMU systems.
ANM
Valid on: 11/05/2010
Last Released: 11/05/2010 21:20
AIM

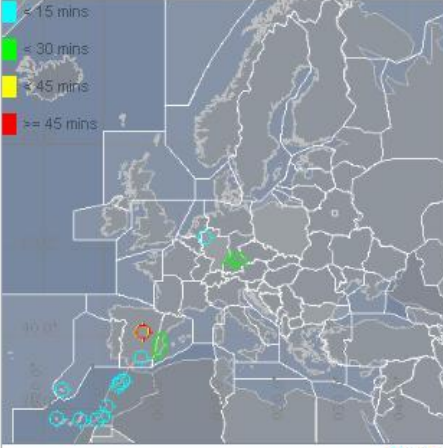
Description	Released On
XCD POSSIBILITY FOR LEPA	11/05/2010 20:33
TAXI TIME EHAM	11/05/2010 18:46
GMMM A.D	11/05/2010 18:11
TAXI TIME EDDF	11/05/2010 17:57

[More](#)
CRAM
Route [Go](#)
[Display full CRAM](#)
EAUP

TYPE	Valid WEF	Valid TIL
EUUP	11/05/2010 11:00	12/05/2010 06:00
EAUP	11/05/2010 06:00	12/05/2010 06:00
EUUP	10/05/2010 11:00	11/05/2010 06:00
EUUP	10/05/2010 06:00	11/05/2010 06:00
EAUP	10/05/2010 06:00	11/05/2010 06:00

[More](#)
RAD
The objective of the RAD is to facilitate flight planning, in order to improve ATFCM, while allowing aircraft operators flight planning flexibility. The RAD is updated on a AIRAC cycle-basis following a structured and standard process.
[RAD Homepage](#)
[1005 - 6 May](#)
[1005 - Increment](#)
[1005 - What's New](#)
[1006 - 03 June](#)
[Additional Documentation](#)
ATFCM Events

Occurrence	Event	ACCs
Axis		
Management		
01/04/2010 - South West Axis 2010	EGTT, EISN,	

ATFCM Network Situation
Last update: 11/05/2010 21:45

ATFCM Situation Data
Last update: 11/05/2010 21:51:00
Flights

Total	27793
Landed	25214 (91 %)
Airborne	1980 (7 %)
Expected	599 (2 %)

Delays (in minutes)

Cumulated	142483.0
Average/Flight	5.1
En-route	123285.0 (87 %)
Airport	19198.0 (13 %)
>= 30 min	1706

Delay Causes

Reason	Delay	Delay (%)
Others	58981	41 %
ATC Capacity	41900	29 %
Weather	27396	19 %
ATC Staffing	7517	5 %

Network Headline News
11/05/2010 **Volcanic Ash Update - 2100z**
Eruption of Icelandic volcano: Eyjafjallajökull.
Volcanic Ash Advisories and **Predicted ash concentration charts** are updated by VAAC London at 00:00 / 06:00 / 12:00 / 18:00 utc
The Ash Concentration Charts produced by London VAAC show the predicted area where volcanic ash may be encountered.
In accordance with the conclusions of the 19 April teleconference of Members of the Provisional Council, EUROCONTROL has been facilitating the implementation of the preferred solution since 20th April 2010.
To this end charts showing areas of concentrated contaminating ash produced in close proximity to the volcanic ash plume are available. These charts are necessary to enable the effective management of the areas above engine inlet and the 60 nautical miles buffer initially added has been removed and published as from 11-1200 UTC. States have the prerogative to add the 60nm buffer if they believe it is necessary to do so.
from FL000-FL200 11-1800
from FL200-FL350 11-1800
from FL000-FL200 12-0000
from FL200-FL350 12-0000
from FL000-FL200 12-0600
from FL200-FL350 12-0600
from FL000-FL200 12-1200
from FL200-FL350 12-1200
Next update: 12-0830 utc
BIRD (Iceland)
For no fly zone check notams:
SFC-FL200 A0509/10 11-1800z until 11-2359z
SFC-FL200 A0510/10 12-0000z until 12-0600z

13.5 million hits
in one day!

Lessons learnt - Crisis



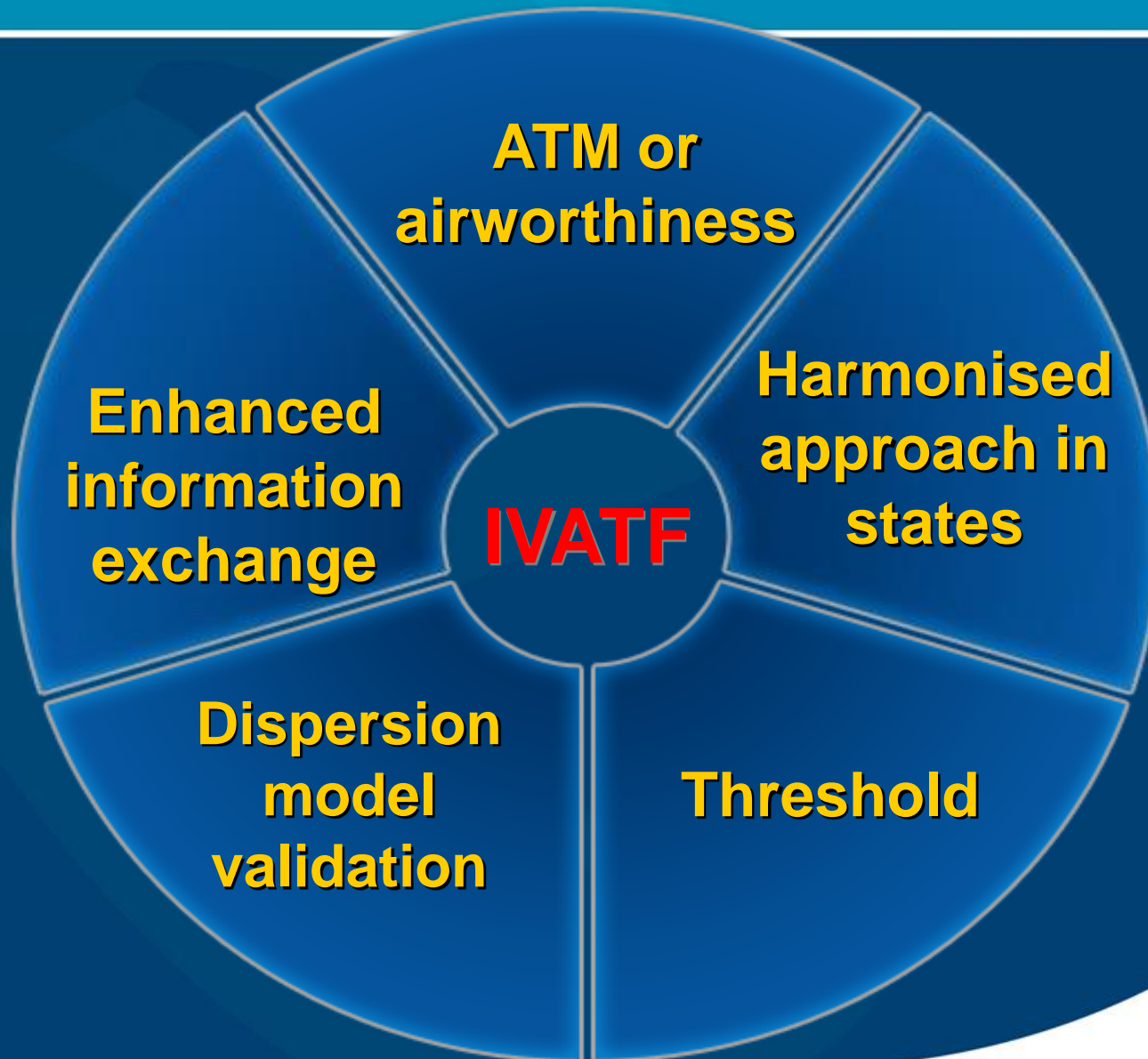
- EC, EUROCONTROL, EASA working together
- EUROCONTROL/CFMU facilitated:
 - Information sharing,
 - Pan-European coordination and
 - Implementation of appropriate network solutions (as foreseen for the future European Network Manager)
- EC & EUROCONTROL created a **European Aviation Crisis Coordination Cell (EACCC)**

European Aviation Crisis Coordination Cell

- Main role: to facilitate the management of crisis situations affecting aviation in the European (ECAC) region
- Activated when circumstances beyond the normal environment of operations are evident
- Responsibilities:
 - alert,
 - take initiatives,
 - propose measures to manage the crisis,
 - coordinate the implementation of these measures,
 - ensure that an external communication policy is properly executed


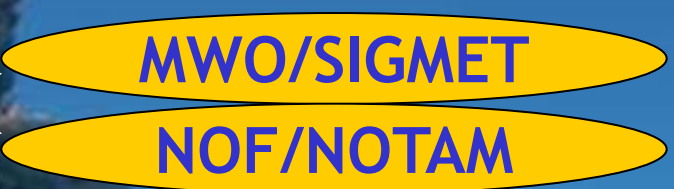
**EC & EUROCONTROL
EASA, AO, ANSP, Airports
ICAO, regulators & NSA
Military, acft manuf ...**

Volcanic ash - solutions sought...



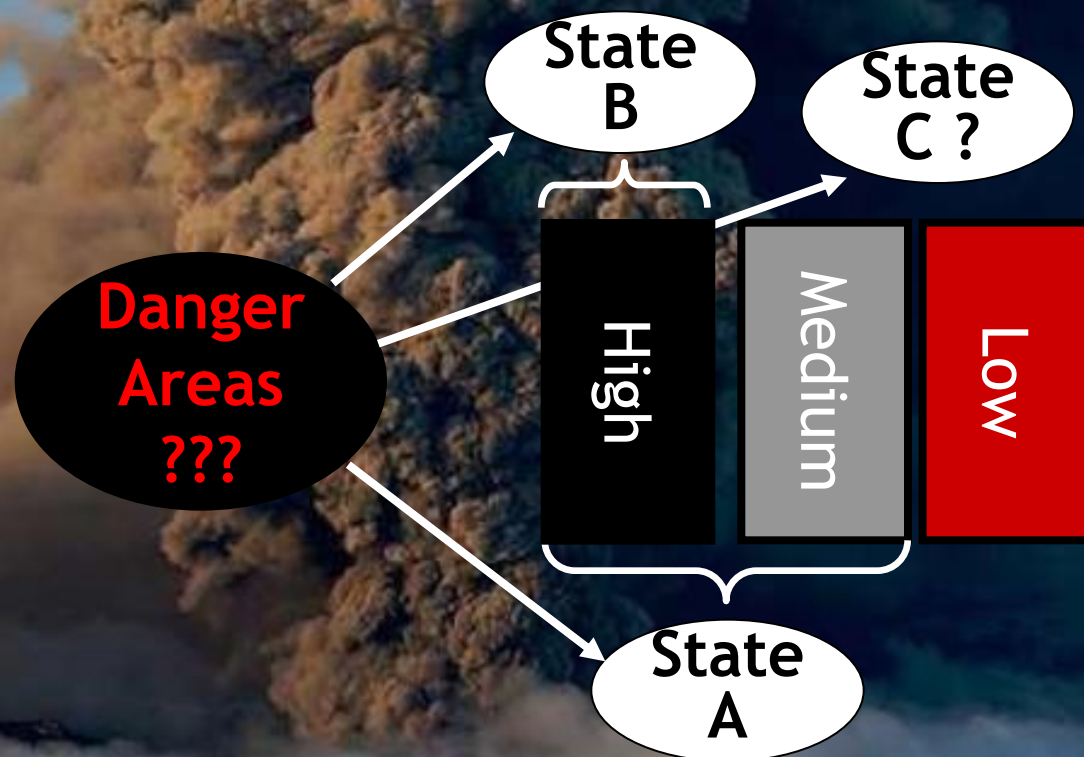
5. What if an eruption starts tomorrow?

Contingency
or crisis ?

- **Alert:** Icelandic MWO → VAAC → CFMU → Crisis Cell
- **Information:** VAAC →  → 
- **Measures:** States → CFMU
- **Information exchange:** teleconferences

**NOP
Porta
I**

**Harmonised
approach!**





EUROCONTROL

THANK YOU!

