Telephone conference on the effects of the volcanic ash cloud on the ATM network – towards a harmonized approach

19 April 2010 – 11.00CET

1. Introduction

Given the unprecedented nature of the impact in Europe of the continued volcanic activity, EUROCONTROL and the European Commission have looked at alternative ways of addressing the situation keeping safety at the forefront.

The following options are offered in support of discussions and to facilitate Member States and EU decisions on the way forward. Member States are ultimately responsible for restricting use of their airspace. However, a harmonized approach would be called for.

2. Current Situation

The unprecedented disruption to European civil aviation commenced in the early morning on Thursday 15th April 2010. At time of writing (Sunday midday) it is expected that more than 63,000 flights will have been cancelled over four days.

Date	Day	Total traffic	Traffic same day previous week	Percentage change
14/04/10	Wed	28087	27912	0.6%
15/04/10	Thu	20842	28578	-27.1%
16/04/10	Fri	11659	28597	-59.2%
17/04/10	Sat	4886	22653	-78.4%
18/04/10	Sun	***5000***	24965	-80.0%
19/04/10	Mon		28126	
20/04/10	Tue		27508	
Sunday figure based on assumption at 1200UTC Sunday				

Air traffic control services are not being provided to civil aircraft in the major part of European airspace. As a consequence all Instrument Flight Rules (IFR) flights that could penetrate any area within the lateral and vertical footprints of the forecast area of potential ash are not permitted to operate. The restrictions are being applied through Air Traffic Flow Management

regulations implemented by the CFMU following the request of each Air Navigation Service Provider.

In some airspace, flights are permitted to operate above or below areas of potential ash coverage. The restrictions are being implemented for different periods, e.g. closed for up to six hours in advance, closed until next day, etc. Some airports have been closed by NOTAM, as have some airspace. However, there is no single coordinated approach to restricting the use of the airspace.

The only guidance material available globally is the set of ICAO documents ICAO Manual (Doc. 9691 – Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds, ICAO EUR Doc 019: Volcanic Ash Contingency Plan, ICAO NAT VCP: Contingency Plan for handling traffic in the event of Volcanic Ash penetrating the airspace of North Atlantic Region. ICAO Manuals are developed and published under the authority of the Secretary General of ICAO and is intended to support implementation of standards and recommended practices.

All 3 scenarios rely on the best available quality data of volcanic ash spread and concentrations. The objective to ensure safety at all times remains untouched. Efforts have been initiated to obtain more data, using specific non-passenger carrying flights and specially equipped aircraft. These initiatives need to be supported and encouraged and the information collated by a designated body which can then feed back to the met and volcanic ash advisory centers in order to further improve the significant weather reports and forecasts.

Given the unprecedented nature of the event, a prudent initial reaction was adopted which reduced risk to the absolute minimum. Member States are now invited to review these restrictions and to agree on a harmonized European approach.

3. Alternative Scenarios

To assist in finding urgently an appropriate solution to this continuing situation EUROCONTROL and the European Commission can offer the following alternative scenarios for further consideration.

Option 1: The harmonized / coordinated application of current procedures

This approach consists of the harmonized and coordinated application of the current scenario based on the no risk application of current scientific advice.

Characteristics/Principles
It is a no risk approach based on a risk forecast map issued by the Volcanic Ash Advisory Center (VAAC) based the Handbook on the International Airways Volcano Watch, published by ICAO. The VAAC advisories assume

no natural dispersion of the ash with time except as affected by wind and precipitation, and do not include details of concentration levels. There are no estimates as to the amount of volcanic ash which could be potentially hazardous to aircraft operations and which could then be used as a threshold value for risk assessment.

Decisions are taken on a national level, based on the VAAC 'no risk' advisories.

Application

- Issue early warnings to Aircraft Operators (AOs) after receiving info from VAAC.
- Restrictions to flights applied through ATFCM measures coordinated with States/ANSPs concerned.
- Teleconferences to exchange information between all concerned

It would now additionally require agreement for harmonized application including coordinated opening of airspace declared free from ash contamination and uniform application of guidelines (particularly permitting flights to operate above and below areas within the indicated area of potential ash coverage).

Option 2: AOs assume responsibility for decision to operate in potentially affected areas

This approach focuses on providing as much information as possible to the aircraft operators who, in turn, assess the information and make the final operational decision regarding the operation of the aircraft and its tactical conduct.

A primary objective during volcanic ash episodes is to ensure the aviation community receives timely, consistent information about the ash cloud's position, altitude and projected trajectory and drift.

ICAO recommends that flight operators avoid the area of known or forecast ash clouds, while recognizing that final responsibility for flight decisions rests with the pilot in command. Alternative routes to avoid would be suggested by ATC but ultimate decision left to the pilot in command to determine the best course of action for the flight. It reverses the current European assumption that flying through ash should be prohibited.

This option is similar to the US approach. In the US, access is closed through a temporary flight restriction around the physical location of the volcano (e.g. within a radius of 20 miles of the source of the eruption).

This option would entail a significant amount of re-routings which would substantially curtail capacity in dense areas.

Option 3: Limited no-fly zones

This option involves a no-fly zone limited to the visible ash plume as determined by satellite images. An adequate buffer area (in line with ICAO guidelines) would also be defined. This would be updated on an initial six-hour basis. AOs would have discretion as to flying in the remaining area identified by the VAAC and would base that decision on the full range of volcanic ash information made available to them.

The Member States would implement the no-fly zone based on satellite imagery charts of the current position of the visible volcanic plume together with the forecast plume propagation. The charts will be sent to CFMU every 6 hrs including the 24 hr forecast of the plume propagation. Restrictions to flights through the no-fly zone will be put into effect through ATFCM measures coordinated with the States/ANSPs concerned.

Additional information will also be sought in each case concerning the actual spread of ash particles through reports.

4. Recommendations

Members of the Provisional Council and CEO's of ANSPs are, in the pursuit of a harmonised, safe and efficient European approach, requested to:

a. Agree that a prudent initial reaction was adopted which reduced risk to the absolute minimum but that it is now time to agree on a harmonized European approach.
b. Consider the different alternative scenarios as they are set out in section 3
c. Express their preference for the further pursuance by EUROCONTROL and the European Commission for the urgent actions required to initiate the preferred scenario within the shortest possible timeframe.