



Agenda Item 4: Follow up to the implementation of safety and air navigation regional priorities

COLLABORATIVE AERDROME SAFETY HOTSPOTS (CASH)

(Presented by France)

SUMMARY

The CASH (Collaborative Aerodrome Safety Hotspots) trial aims at drawing attention of commercial and general aviation pilots to the aeronautical context and main specific threats related to an aerodrome. Identification of these threats is the product of a collaborative work between operators on the platform (airline operators, air navigation service providers, aerodrom operators, Leur identification est issue d'un travail collaboratif entre opérateurs de la plate-forme (exploitants aériens, exploitant de l'aérodrome, prestataire de service de navigation aérienne, aeroclubs, french meteorological service provider...) by analyzing and comparing data from their safety management system.

ICAO Strategic Objectives:

A: Safety

1. Introduction

1.1 Most airports have specific threats which are known by the different airport stakeholders: airport operator, Air Navigation Service Provider, based or frequent flyer airlines, weather services and general aviation. These insiders represent together a valuable amount of information and experience. The information is indicated in the Aeronautical Information Publication but it can be not sufficiently visible or explicit.

1.2 An aircraft operator might not have a comprehensive overview of the specific threats related to the airport. Knowing these threats would be a valuable benefit to safety for those who are not familiar with the airport or for operators who would like to open new lines. The idea is to draw the attention of the flight crews by sharing widely the information known by the local users as a collaborative initiative.

2. A need to improve safety data sharing

2.1 When preparing flights, pilots have to deal with a large amount of information, in particular concerning departure, destination and alternate airports.

2.2 An AIP (Aeronautical Information Publication), the official document used for issuing permanent aeronautical information, must comply with some requirements regarding its structure and

content as these are defined at international level. However, this means of conveying information does not always adequately allow distinctive local features to be highlighted or published while knowledge of such features by the flight crew appears to be a plus for the conduct of the flight.

2.3 Such information may in particular originate from pilot feedback and occurrence analysis made by aerodrome operators or air navigation service providers. It may also concern the aeronautical, aerological or geographical environment of the aerodrome.

3. The CASH concept to answer the need

3.1 Early 2015, the French Civil Aviation Authority has set up a working group made of representatives of the French DGAC and operators for the creation of a platform dedicated to safety data sharing related to an aerodrome. The platform would be available to any operators involved on the aerodrome (air navigation service providers, airline operators, aerodrome operators...), and would gather the most significant safety risks related to the specific aerodrome.

3.2 The final purpose was to launch a trial whose aim would be to make such information available to crews in explicit summary form and organized to match the sequence of a flight. The goal would be to facilitate flight crew knowledge of the specific context of a given aerodrome, to provide a shared and improved vision of the aeronautical environment and, ultimately, to strengthen the overall safety performance.

3.3 The trial has been named CASH, for "COLLABORATIVE AERODROME SAFETY HOTSPOTS", and was officially launched early June 2016. Five aerodromes had initially agreed to take part in it: Bastia - Poretta, Beauvais - Tillé, Calvi – Sainte-Catherine, Nice – Côte d'Azur and Paris - Charles de Gaulle; a sixth, Toulouse-Blagnac, was added later.



3.4 For each aerodrome part of the trial, the CASH data has been defined locally through a collaborative process involving representatives of operators based on or using the aerodrome (airlines, the

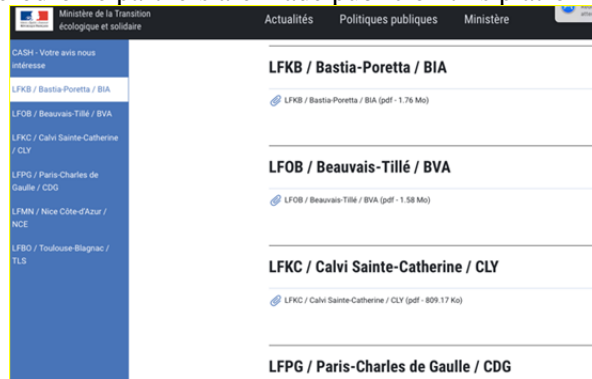
aerodrome operator, local services of the French weather office (Météo France), air navigation services providers, flight clubs and other users). Collected information to publish through CASH have been validated by LST (Local Safety Team) of each aerodrome. The role of the Oversight authority in the trial is limited to the coordination of the working group and to the monitoring of the trial. It has no say in the content of the CASH information, which is developed by the operators involved only.

4. A specific way to publish and disseminate the gathered information

4.1 A dedicated internet platform on the French Ministry of Transport and Ecology was developed for the purpose of the CASH trial:

<https://www.ecologique-solidaire.gouv.fr/en/collaborative-aerodrome-safety-hotspots-eng>

All publication related to aerodrome partners are made public on this platform.



4.2 Publications are available in a defined form:

GENERAL ENVIRONMENT

LFKB / Bastia-Poretta / BIA

Risks related to wind, low clouds and thunderstorms

The moderate to strong and even very strong West wind causing tailwind at both thresholds of the runway, turbulence and then crosswind.
Low clouds, mist and fog at sunrise ;
Thunderstorms especially during summers but also in autumns and winter.

Wind
As a reminder, the direction of wind patterns at Bastia-Poretta airport is :
- Land breeze (night) : 220°
- Sea breeze (day) : 140°

Although the mountain chain to the West is generally a protection against the stronger West winds, the cases 1 and 2 below occur around 10 days a year.

Case 1 : moderate to quite strong wind coming from the west sector

The wind at runway 16 gains a North-West component which is canalized and accelerated by the Venturi effect in the Landona gorge up to 20/30 kt, while the wind at runway 34 has still a normal South-East breeze of 5/10 kt. Sometimes this breeze is strengthened by up to 15 kt due to a draught coming from the Golo valley. This draught created by diverging effect causes also turbulence as it leaves the valley. The airfield is then subject to horizontal windshear.

Case 2 : quite strong to strong wind from the South-West sector (Libecciu)

Even if there is no wind or very little wind on the airfield, turbulence may be generated by a strong horizontal and vertical windshear (wind above 500 m and/or in the Cap Corse). Indeed, strong turbulence appears on the lee side of the mountains and is generally observed on the East side of the Cap Corse as well as to the East of the airport usually above 2000 ft. This phenomenon is recognizable by the appearance of clouds with a lenticular shape over the turbulence. It is then very important to check the wind values and to be careful of the vertical windshear effects while on approach runway 34 that are liable to cause plane stall (a wind of 30 kt at 5000 ft in the boundary layer of Castagniccia and very little wind at sea level).

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ARRIVAL

LFPG / Paris-Charles de Gaulle / CDG

Entering a hold without clearance is a threat for following aircraft

Do not hold at the initial approach fix even if no approach clearance has been issued unless instructed by ATC. Follow the published standard approach path.

Best practice when handed over from Paris ACC to De Gaulle approach

On first contact with De Gaulle approach, report to ATC the latest speed instructed by the preceding sector (Paris ACC).

Simultaneous parallel approach


There are specific regulations to provide spacing between aircraft on parallel approach. At CDG, distance between Localizer courses is less than 3 NM which is the minimum radar separation. That's why aircraft closing in on parallel approach courses must be vertically (1000 ft) separated.

Application of defined minimum vertical speed for inbound aircraft to avoid potential separation minima infringement

Aircraft inbound for runways 09 L/R or runways 26 L/R must apply a minimum rate of descent of 1300 ft/min, except during speed reduction phases.

Video : 0745 AM, arriving at Paris CDG airport

Additional information on the origin of this constraint are given in the video left.



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4.3 In the CASH pages, pilots are advised that this data is published for basic guidance and information only and is not comprehensive. It constitutes additional information made available for flight preparation, but is by no means a substitute for the reference aeronautical information issued via AIPs (France), NOTAMs and AIP supplements.

5. Communication about the concept and its assessment

5.1 Various ways were developed to inform the pilot community of the trial, including a page in AIC France, articles in different information letters published by the French DGAC, a flyer made widely available as well as direct mails to airlines. A questionnaire was added to the CASH internet platform to have some feedback on the trial from the pilots as regards the format and the content.

5.2 About one year through the experiment, an assessment was made through questionnaires on the web platform. The number of visits to the CASH pages was less than expected, showing the difficulty in having the trial known by pilots despite the communication efforts made. That said, even if the number of visits and feedbacks was lower than expected, the general feeling was very positive, highlighting the presence of illustrations (including videos) and the clear explanations. This feedback encouraged the group behind the CASH trial to expand the experiment, both in time and geographically, opening doors to other voluntary airports. Then, at the end of 2017, a global assessment of the CASH trail will be done and a decision taken regarding the future of the project.

5.3 It has already been enacted that the trial would change its name into COLLABORATIVE AERODROME SAFETY HIGHLIGHTS as the word 'hotspot' already has its own meaning in the aeronautical world.

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