



WORKING PAPER

ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other Issues to be considered by the Technical Commission

INTEGRATED WEB-BASED AERONAUTICAL INFORMATION SYSTEM HANDLING (I-WISH) AND ITS INVOLVING ON COLLABORATIVE DECISION-MAKING (CDM) IN HANDLING VOLCANIC ASH IMPACTS AND VOLCANIC ASH EXERCISE

(Presented by Indonesia)

EXECUTIVE SUMMARY

This working paper presents Integrated Web-based Aeronautical Information System Handling (I-WISH) as a media used to support the process of collaborative decision-making (CDM) in one-window-system, where the CDM process is a key enabler in any air traffic flow management (ATFM) strategy, allowing for the sharing of all relevant information among decision-makers and supporting an ongoing dialogue between the various stakeholder.

Action: The Assembly is invited to:

- a) urge the Council to provide procedure and guidance material to handle volcanic ash in one-window-system;
- b) urge the Council to discuss the I-WISH system as the official media to handle the impact of volcanic ash;
- c) invite States to acknowledge the use of I-WISH for States with volcanoes; and
- d) invite ICAO and States to endorse I-WISH as a tool to handle volcanic ash impact to aviation safety.

<i>Strategic Objectives:</i>	This Working Paper relates to Safety and Air Navigation Capacity and Efficiency Strategic Objectives.
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken with resources available in the 2020-2022 Regular Programme Budget.
<i>References:</i>	Annex 3 — <i>Meteorological Service for International Air Navigation</i> Doc 9766, <i>Handbook on the International Airways Volcano Watch (IAVW) — Operational Procedures and Contact List</i> Doc 9971, <i>Manual on Collaborative Air Traffic Flow Management</i> Report of the Fourth Meeting of The Asia and Pacific Volcanic Ash Exercise Steering Group (APAC VOLCEX/SG/4)

1. INTRODUCTION

1.1 Guidance material for conducting volcanic ash exercise in Indonesia were as follows:

1.1.1 ICAO Doc 9766, *Handbook on the International Airways Volcano Watch (IAVW) — Operational Procedures and Contact List* mention “Volcanic ash exercise should be conducted by ICAO on a regional basis in order to practice and develop inter-agency response to volcanic activity, in order to maintain safety, regularity and efficiency of aviation in the event of a volcanic eruption”.

1.1.2 In accordance with Civil Aviation Safety Regulation (CASR) Part 174 concerning Aeronautical Meteorological Information Services, it accommodates the mechanism for handling the impact of volcanic ash to aviation safety.

2. DISCUSSION

2.1 Based on the report of the Fourth Meeting of the Asia and Pacific Volcanic Ash Exercise Steering Group (APAC VOLCEX/SG/4), ICAO suggested Indonesia to create a media official for handling the impact of volcanic ash for civil aviation in Indonesia. The Directorate General of Civil Aviation (DGCA) Indonesia has conducted official media, namely I-WISH. Launched in September 2018, I-WISH is an early awareness system regarding the operations of aircraft that are known or suspected of being contaminated with volcanic ash or at aerodrome with runway volcanic ash contamination. I-WISH will ensure harmonization among authorities in order to provide a structure for decision-making on handling volcanic ash impacts to aviation safety.

2.2 I-WISH is a system that supports the implementation of CDM by involving regulator, air navigation services provider, meteorological agency, volcanologic agency, airport operator, airline operator, ground handling and other stakeholders in order to build operational concept for flight into ash contaminated airspace and for closure of airspace.

2.3 The mechanism for handling the impact of volcanic ash has been set out in the Minister Decree number PM 95 of 2018 concerning CASR Part 174 concerning aeronautical meteorology information services.

2.4 I-WISH system has been applied on APAC VOLCEX 18/02 and already reported on the APAC VOLCEX/SG/6 years 2019. It also has been applied during the volcanic eruption of Agung Mountain years.

2.5 The gained achievements of I-WISH system on APAC VOLCEX 2018 based on the report APAC VOLCEX/SG/6 were as follows:

- a) The I-WISH system very well appreciated from all the players in the VOLCEX APAC 18/02 and the countries of the APAC VOLCEX/SG/6 meeting.
- b) I-WISH has facilitate the better communication and support the CDM process in one-window-system.
- c) All stakeholders in flight operations, carry out their respective duties and functions, in accordance with Ministerial Decree Number 95 year 2018 concerning CASR Part 174 related aeronautical meteorology information services.

- d) Information on volcanic eruptions is clearly received by all relevant units in a timely manner. Information on volcanic eruptions issued are also recorded in I-WISH.
- e) Collaboration and discussion carried out in I-WISH media between stakeholder worked very well, including the exchange of information provided periodically following the results of observations and analysis of each related unit, and quick responses taken by the receiving unit.
- f) Volcanic ash information issued by exercise players are collected and recorded properly in the I-WISH system. eased the players and observers to conduct the exchanges and monitoring process.

2.6 This system will display all information needed in CDM, such as:

- a) the latest volcanic ash information including the estimated spread of volcanic ash in the airspace based on SIGMET and ASHTAM;
- b) affected airports in the area of volcanic ash distribution; and
- c) domestic and international routes.

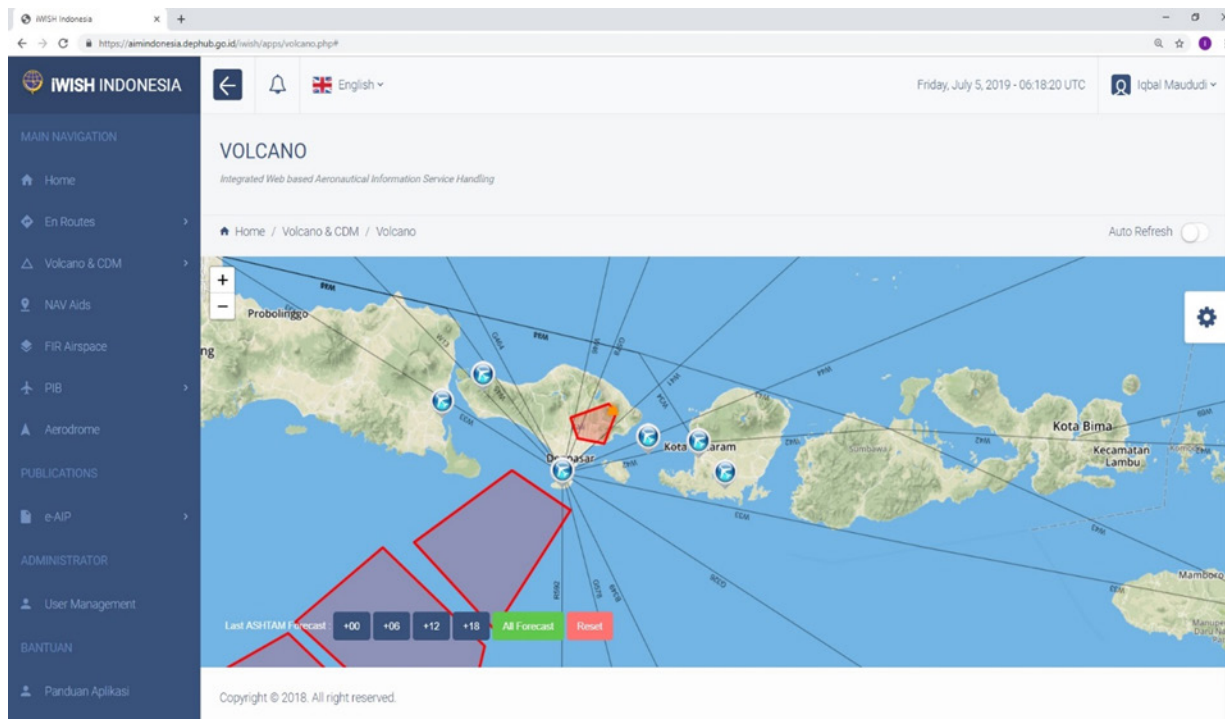


Figure 1. Forecast display

2.7 The I-WISH system has the concept of integration by creating an application programming interface (API) on an I-WISH system that is connected to another system (another data source). I-WISH system is very possible to do integration with other systems with existing schemes or with the following schemes:

- a) Using the DGCA content management system (CMS) scheme will provide an input module for managing volcanoes, VONA, SIGMET etc.
- b) Using the email parser scheme by sending an email with a format that has been adjusted as the needs of the system.

2.8 And next, I-WISH would enable us to monitor volcanic ash and CDM processes via smartphone, namely I-CHAT so that the process of exchange information and coordination can be done anywhere and anytime.

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