International Civil Aviation Organization

INFORMATION PAPER

Twenty-fourth Meeting of the Meteorology Sub-group (MET SG/24) of the Asia and Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)

Web-conference, 16 – 20 November 2020

Agenda Item 5: Research, development and other initiatives

OPERATIONAL SMS IN NEW ZEALAND

(Presented by New Zealand)

SUMMARY

This paper presents an update on the Safety Management System implemented by the Meteorological Service of New Zealand (MetService).

1. INTRODUCTION

1.1 Civil Aviation Rule (CAR) Part 100, under the New Zealand Civil Aviation Rule structure, requires certificated organisations in the aviation industry to implement a system for safety management. MetService, as a certificated provider of meteorological services to aviation, was required to have in place a Safety Management System (SMS) by February 2018, meeting a minimum level of 'present and suitable'. MetService achieved certification of its SMS by the Civil Aviation Authority of New Zealand (CAA NZ) in November 2017.

1.2 An SMS is a formal risk management framework, which is put in place to improve safety. Under an SMS, organisations have systems for hazard identification and risk management, safety targets and reporting processes, procedures for audit, investigations, remedial actions, and safety education.

1.3 An SMS is not simply about the 'health, safety and wellbeing' of people, but that forms an essential element of the SMS. An SMS is broader and is about the wellbeing of the entire organisation, from the people themselves, to the procedures and processes they work with, the dissemination methods and tools connecting the organisation to its customers, as well as the resilience and integrity of the final product received by the customer.

1.4 An SMS is not the same as a QMS. It enhances an existing QMS, taking the risk management aspect further with the addition of an appropriate organisational culture where incident reporting and risk identification is freely encouraged at all levels.

2. DISCUSSION

SMS within MetService

2.1 Safety at MetService is about how we look after ourselves, each other and our company as we work towards our mission of 'helping people stay safe and make informed decisions, based on the weather'. We are committed to delivering the highest levels of safety and quality for anyone who uses our products and services, be this aviation or otherwise. To maximise opportunities to grow, we operate under 'just culture', where mistakes are seen as a way for us to learn. Ultimately, we all have a duty of care to each other and to our customers.

2.2 Under Safety Management Systems, safety is viewed from a systems perspective. This encompasses organisational, human, and technical factors. As a result, we consider the impact of organisational culture and policies on the effectiveness of safety risk controls; and end to end viewpoint. In the past, data collection and analysis efforts were limited to the use of data collected through investigation of accidents and serious incidents, now these are supplemented with a new proactive approach to safety. The new approach is based on routine collection and analysis of data using proactive as well as reactive methodologies to monitor known safety risks and detect emerging safety issues.

2.3 The MetService SMS incorporate ISO 9001:2015 quality management systems plus 6 other elements, emergency response planning, hazard identification, safety investigation, safety training & education, change management and safety performance.

SMS in Action

2.4 'Just culture' and proactive reporting of incidents and issues are a key and essential component of a functional system, as is the creation of an 'easy-of-use' method for reporting, logging and tracking both faults and identified opportunities for improvement.

2.5 Two recent examples of SMS in action are provided:

2.5.1 January 2020: Upon reissuing a tropical cyclone SIGMET, the aviation meteorologist on duty noticed that the previous TC SIGMET had not been removed from the graphical SIGMET display product – resulting in a double-up of TC SIGMETs. Further, the new TC SIGMET was not displaying within the aviation team's SIGMET production tool, meaning it could not be cancelled. The meteorologist on duty swiftly logged the delay. An investigation by the SMS manager determined that while the root cause was human error, there was a system issue identified whereby risk of the incident re-occurring was significant – in fact, the SIGMET production tool was found to be configured in such a way that the meteorologists were quite likely to repeat the error. This was due to the SIGMET production tool not allowing meteorologists to cancel future SIGMETs. The tool was reconfigured, and a procedure created and supplemented with training, allowing for meteorologists to cancel future SIGMETs. The meteorologist was thanked for their proactive logging of their error, which allowed changes to be made to reduce the risk of recurrence.

2.5.2 February 2020: Learning from incidents and challenges faced by peers is a simple way to ensure proactive risk management. MetService and CAA NZ regularly participate in the Bureau of Meteorology Australia's Aviation Industry Services Working Group meetings, providing opportunities for both countries to collaborate on

common areas of work. A recent meeting highlighted an issue at an Australian airport where airport construction can interfere with the siting of an automatic weather station. MetService was able to learn from the Bureau of Meteorology's challenge and have now drafted a new clause to be inserted into property contracts with NZ certificated aerodromes, as they come up for renewal. The clause effectively gives an acknowledgement of the SMS requirement to manage change and ensures all parties are reminded of each other's special stakeholder status and their commitment to safety management.

3. ACTION BY THE MEETING

3.1 Note the information contained in this paper.

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