EMS Annual Meeting Abstracts
Vol. 15, EMS2018-498, 2018


# Special meteorological forecasting services for Helsinki Airport in high-impact snowfall events

Janne Ylläsjärvi, Jarkko Hirvonen, Timo Erkkilä, Simo Neiglick, Antti Pelkonen, Ilari Lehtonen, and Joonas Eklund

Finnish meteorological institute, Finland

Heavy snowfall causes disruption to air traffic even in environments where snowfall is a common phenomenon in winter. Most airport operations are planned based on normal weather situations, so in the peak hours of an airport, heavy snowfall has the potential to cause delays for air traffic, since the removal of snow from runways and taxiways, de-icing and ground handling requires more time than in normal day-to-day operations.

For the winter seasons 2016-2017 and 2017-2018, Finnish meteorological institute (FMI) has provided special meteorological forecasts for Helsinki Airport to help cope with heavy snowfall events. The winter season 2016-2017 was a test and training season, but during the winter 2017-2018 forecasting services were provided based on a commercial contract between FMI and Finavia (Finnish airport operator).

It was agreed between FMI and Finavia that if there is a possibility for high-impact weather due to snowfall, FMI gives early information to Helsinki Airport Operational Control Centre (APOC) two days in advance. APOC then decides based on their expertise if the forecasted weather conditions are really high impact for running the airport or if it is just normal wintry disturbance.

In high-impact weather situations, APOC then initiates a dedicated weather meeting usually on a day before the forecasted weather event. All relevant stakeholders of the airport are present in the meeting to discuss the best practices on how to cope with the upcoming weather situation based on the latest forecast from an experienced FMI aviation forecaster who is also present at the meeting.

Based on two winter seasons of collaboration, the preparation for high-impact snowfall events has improved and value of detailed and accurate weather forecast in such events has been proven to customers. In addition, close cooperation with the various airport stakeholders has significantly increased the FMI meteorologists' knowledge of weather impacts to aviation customers and therefore even further improved the forecasts and communication in these high-impact weather events.