



ICAO

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

TAILORED WEATHER SERVICE FOCUSED ON AIR TRAFFIC FLOW MANAGEMENT

(Presented by the Republic of Korea)

SUMMARY

This paper presents on tailored weather service focused on air traffic flow management provided by Aviation Meteorological Office of the Republic of Korea.

1. INTRODUCTION

1.1 This year, AMO presents a typhoon scenario with in-depth analysis at CDM (Collaborate Decision Making Meeting) hosted by the ATCC (Air Traffic Command Center).

1.2 The scenario included forecasts of wind direction/speed (including gust), cross wind and precipitation at the closest moment that a typhoon approaches each airport in the Republic of Korea.

1.3 The information was sent by aviation meteorologist to related units such as ATCC, ACC, APP and airlines through CDM.

1.4 This information enabled efficient air traffic flow management and ZERO flight back by typhoon in 2020.

1.5 This paper accounts for weather information to support CDM in detail.

2. DISCUSSION

Provided information

2.1 Weather Analysis Report – the AMO provides weather analysis reports twice a day (0000/0700 UTC) for relevant units such as ATCC. The reports are disseminated through ATFM system

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run by MOLIT (Ministry of Land, Infrastructure and Transportation) and contents of the report are as follow:

- Recipient Range : Major foreign and national airports, Incheon FIR and nearby FIR;
- Issue Times : 0000/0700 UTC;
- Content: The report includes analysis of weather phenomena expected to affect the management of air traffic flow within 24 hours. It includes TAR, en-route forecast, SIGMET information, weather charts from numerical models, satellite/radar images, WINTEM, turbulence, volcanic ash information. When significant weather that cause limit ATFM are expected to occur in nearby FIR, numerical weather prediction data, satellite/radar images from KMA (Korea Meteorological Administration). And also, it include overseas SIGMET information and TAF decode of foreign major airports.

2.2 Significant Weather (Typhoon) Scenario – If a typhoon is expected within Incheon FIR, maximum 5-day track forecast based on information from National Typhoon Center of KMA are presented. The scenario contains detailed hourly information such as forecast of cross wind, precipitation and wind direction/speed (including gust) at the moment of typhoon's nearest approach to each airport. Also, past cases of similar typhoon events are offered to help decision making in flight operation.

Method of dissemination

2.3 The FMT (Flow Management Terminal) system operated by MOLIT is being used to deliver weather information including satellite/radar images, TAF, METAR in real time.

Future Plan

2.4 In 2021, when significant weather events (such as heavy snowfall, fog) causing massive flight cancellation and returns are anticipated, a weather scenario will be made and disseminated through CDM in order to minimize abnormal operation of flights caused by severe weather conditions

2.5 With consultation with MOLIT, weather information system will be set up to provide detailed information such as low visibility for airport operating procedures, weather conditions for selection of runway-in-use, take off/landing weather minima, expected time of windshear that are not included in TAF.

Major Airports' Expected Wind (9. 6. 19KST valid)

TIME(KST) AIRPORT	9.6.		9.7.								9.8.					
	18	21	00	03	06	09	12	15	18	21	00	03	06	09	12	15
RKPC	030		350	330	310	270	270									
	20G35	20G35	25G40	35G55	40G60	40G60	20G40	20G35								
RKJY	020		040		360	280	250									
	20G35	30G45	30G50	35G60	40G60	35G60	20G40	20G35								
RKPK	020		040	060	070	080	180	210								
	20G35	20G40	25G45	30G50	40G65	50G80	45G70	30G50	25G45	20G35						
RKPU	010		060	080	010	260	240									
	20G35	20G40	25G45	35G50	40G60	45G80	40G70	30G55	30G45	20G35						
RKJB			360		340	310	270									
		20G35	20G40	30G45	35G55	30G50	25G45	20G35	20G35							
RKNY					070		140	210				230				
				20G35	25G45	40G60	50G70	50G70	40G60	35G50	35G45	35G45	20G40	20G35	20G35	
RKSS					360	350	340	310	310	270	260	250				
				20G35	20G35	25G40	30G45	25G45	20G40	20G40	20G35	20G35				
RKSI					360		340	280	260	250						
				25G40	25G40	35G50	35G50	35G50	30G40	30G40	20G35	20G35	20G35			

More than 25G35KT
 More than GUST 60KT
 Cross Wind



Impact on ATFM and ATM (9. 1. 10:00 KST issued)

