



ICAO Asia/Pacific Office MET / ATM Seminar

Meteorology / Air Traffic Management Seminar

Fukuoka Japan 24 – 26 January 2011

ATM Operational Needs

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ifatca

International Federation of Air Traffic Controllers' Associations



ICAO / WMO ASIA/PAC Meteorology / Air Traffic Management Seminar

- 1985** MID/ASIA/PAC Seminar on
Co-ordination between ATS and
Aeronautical Meteorological
Services

- 2006** MET/ATM Co-ordination Seminar

- 2010** MET/ATM T/F 1 Meeting
*WMO Commission for Aeronautical
Meteorology (CAeM) 14th Meeting*

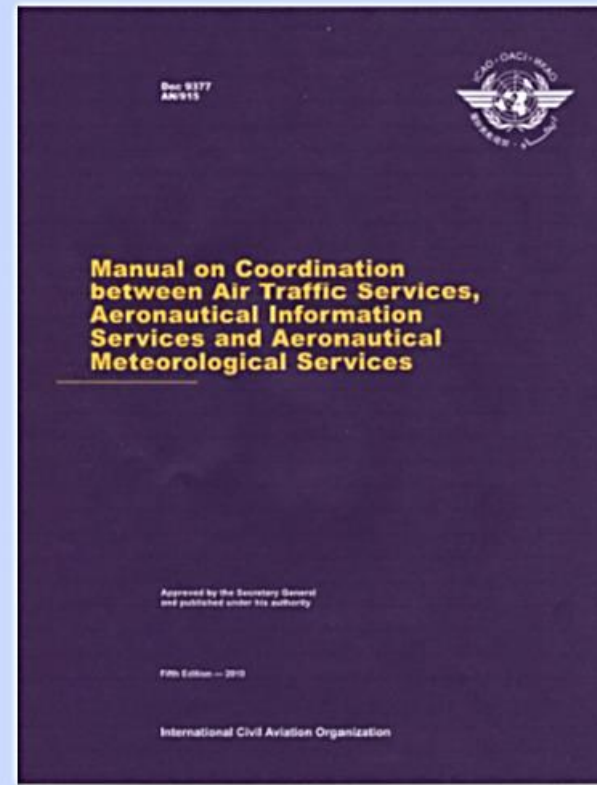
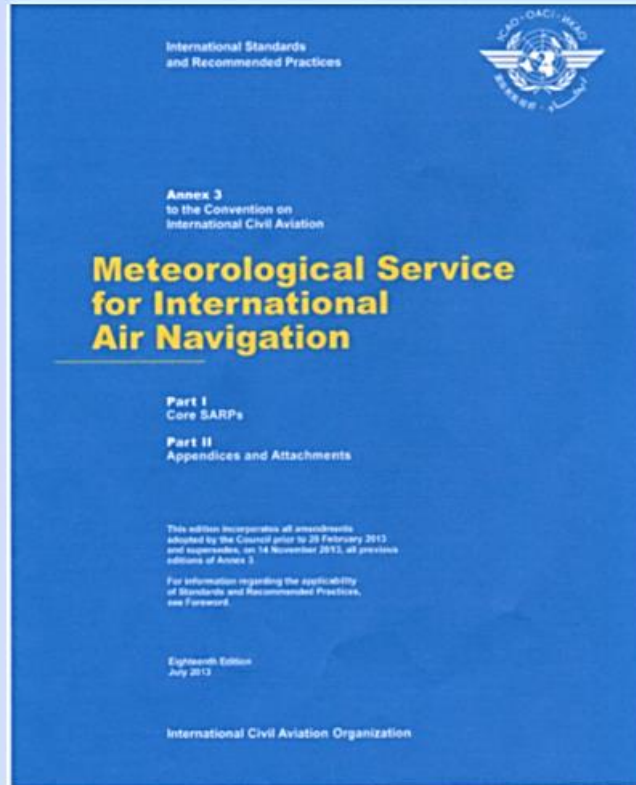
- 2011** MET/ATM Seminar
MET/ATM T/F 2 Meeting

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Annex 3

10.1.1 The associated aerodrome meteorological office or meteorological watch office shall, **after coordination with the air traffic services unit**, supply, or arrange for the supply of, up-to-date meteorological information to the unit as necessary for the conduct of its functions.

Doc 9377

3.3.1 (c) **Any additional meteorological information as agreed upon locally** (such as forecasts of surface wind for the determination of possible runway changes in the case of TWRs)

7.2.3 **The information will be tailored to meet ATM requirements in terms of content, format and timeliness.**

Performance management will be an important part of the **quality assurance of meteorological information.**



ICAO / WMO ASIA/PAC **Meteorology / Air Traffic Management Seminar**

After MET/ATM Task Force Meeting 1, ICAO conducted a survey of regional ANSPs to determine what MET products they considered to be important.

12 replies were received from: Australia, Hong Kong China, India, Japan, Malaysia, Mongolia, New Zealand, Pakistan, Philippines, South Korea, Singapore and USA.

- Briefings by forecasters
- Trend forecasts
- Convective forecasts
- Timely updating of forecasts
- Integrity of data
- Tailoring information to unit requirements – tower, approach/terminal, area



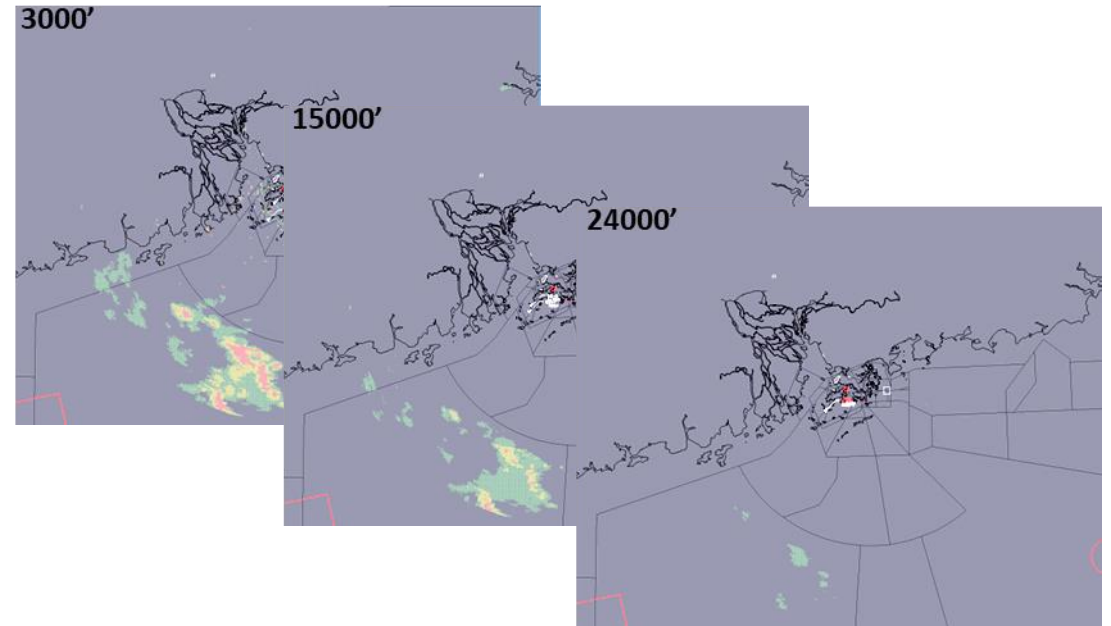
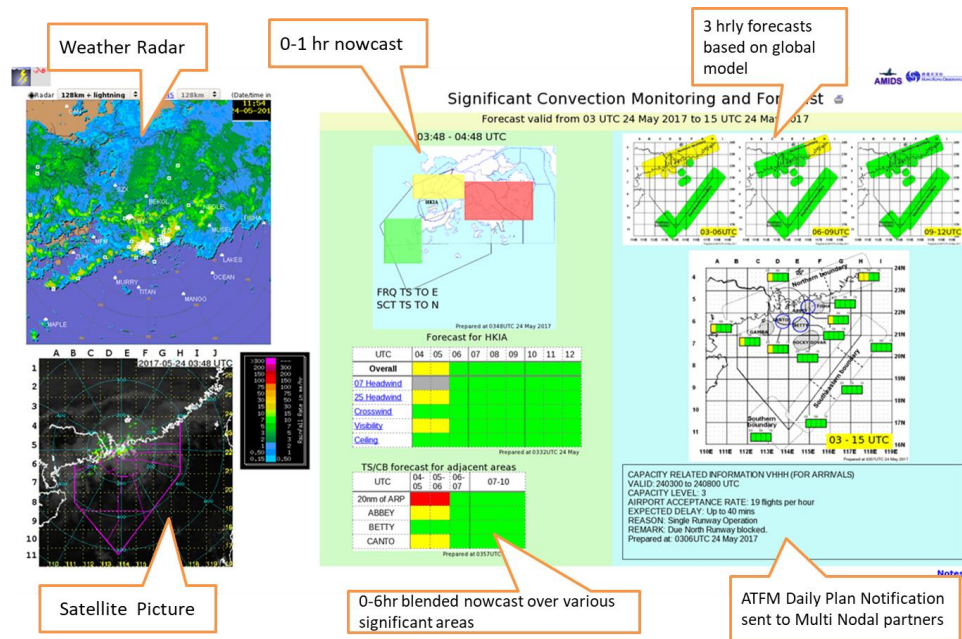
MET/ATM Seminar Singapore 26-31 May 2019



John Wagstaff Asia Pacific Representative IFATCA

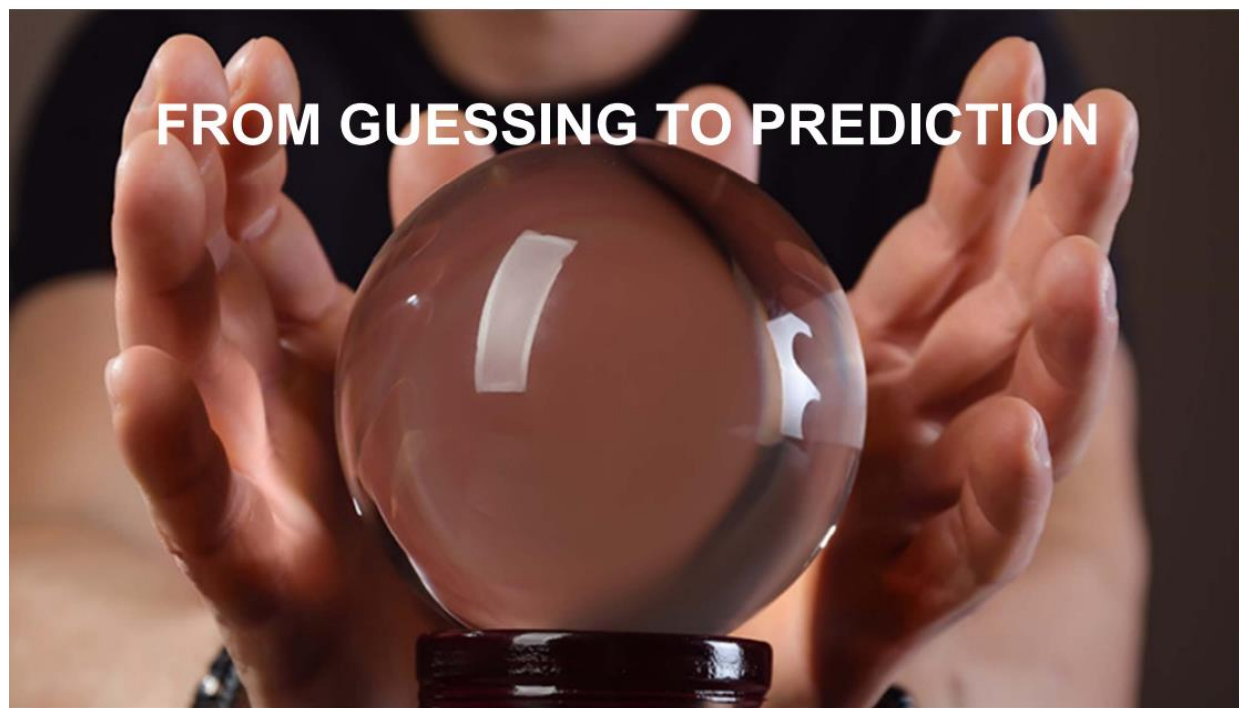
As a result of the MET/ATM Collaboration over the past 9 years a number of new MET products have been introduced at some airports:

- Meteorological Services for Terminal Area (MSTA)
- Constant Altitude Plan Position Indicator (CAPPI)



ICAO APAC Meteorology/Air Traffic Management (MET/ATM) Webinar 30 May 2022

When ATC Meets MET





IFATCA asked its members what MET information could assist them in providing a better ATC service ?

- **Improved accuracy – automated systems/manual assessment**
- **Timely delivery – reduce period of forecasts**
- **Extent and duration of event**
- **Unexpected convective activity**
- **Lead time for warnings of extreme conditions – snow, fog, typhoon**
- **Colour coded graphics to show intensity or severity of events**

MET ↔ ATM

High level communication and coordination

8.11.2018



相片由天文台提供 Photo provided by HKO

◀ CAD senior officials visited the Hong Kong Observatory (HKO) and were briefed by the Director of the HKO, Mr Shun Chi-ming (front row, first right), and HKO senior management on the latest development in aviation weather services and to explore opportunities for further co-operation.

民航處管理層到訪香港天文台，聽取天文台台長岑智明（前排右一）及管理人員講解航空氣象服務的最新發展，雙方並交流進一步加強合作。

MET ↔ ATM

Working level communication and coordination ?

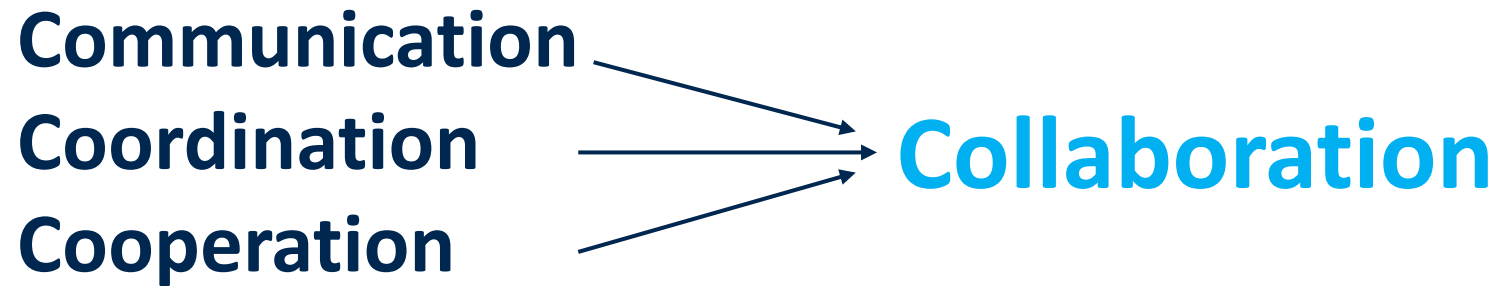


MET/ATM Seminar Bangkok 1 May 2023



Can We Do Better ?

MET ↔ ATM



ICAO APAC Meteorology/Air Traffic Management (MET/ATM) Seminar 1 May 2023

PROVISIONAL PROGRAM – MET/ATM SEMINAR

Objective:

To provide an opportunity for States and Organizations to share information, experiences and ideas on planning and implementing meteorological services (MET) to support air traffic management operations (ATM), including air traffic flow management (ATFM). The Seminar will focus on *collaborative arrangements* and the integration of MET information into ATM.

Topics:

1. Framework of ICAO provisions supporting the integration of MET information into ATM.
2. The benefits and *challenges of collaboration between MET and ATM communities* and integrating MET information within States' ATM systems.

APAC User Requirements for SWIM-based MET Information Services Supporting ATFM



ICAO BANGKOK UNITING AVIATION

SWIM-based MET information services

- capable to geospatially and/or temporally filter a data set to provide the users' system only the tailored information required by the user

Sample data to be exchanged via SWIM-based MET Information Services to support ATFM operations

Sample MET data catalogue	Sample ATFM data catalogue
<u>Aerodrome</u> <ul style="list-style-type: none"> Surface wind and gust Headwind Windshear Turbulence Crosswind QNH Temperature and dew point RVR Visibility Cloud amount and type Lightning Radar data Wake vortex Weather phenomenon and intensity 	<ul style="list-style-type: none"> Departure aerodrome Destination aerodrome Flight identification Planned route/trajectory Estimated Off-Block Time (EOBT) Estimated Take-Off Time (ETOT) Estimated Landing Time (ELDT) Estimated Elapsed Time (EET) Calculated Take-Off Time (CTOT) Calculated Landing Time (CLDT) Target Off-Block Time (TOBT) Target Start Up Approval Time (TSAT) Target Take-Off Time (TTOT) Actual Off-Block Time (AOBT) Estimated Time Over (ETO) Calculated Time Over (CTO) Actual Time Over (ATO)
<u>Enroute</u> <ul style="list-style-type: none"> Wind Temperature CB clouds / deep convection area Icing Clear air turbulence Tropopause height SIGMET phenomenon and intensity Volcanic ash cloud Tropical cyclone Satellite data 	

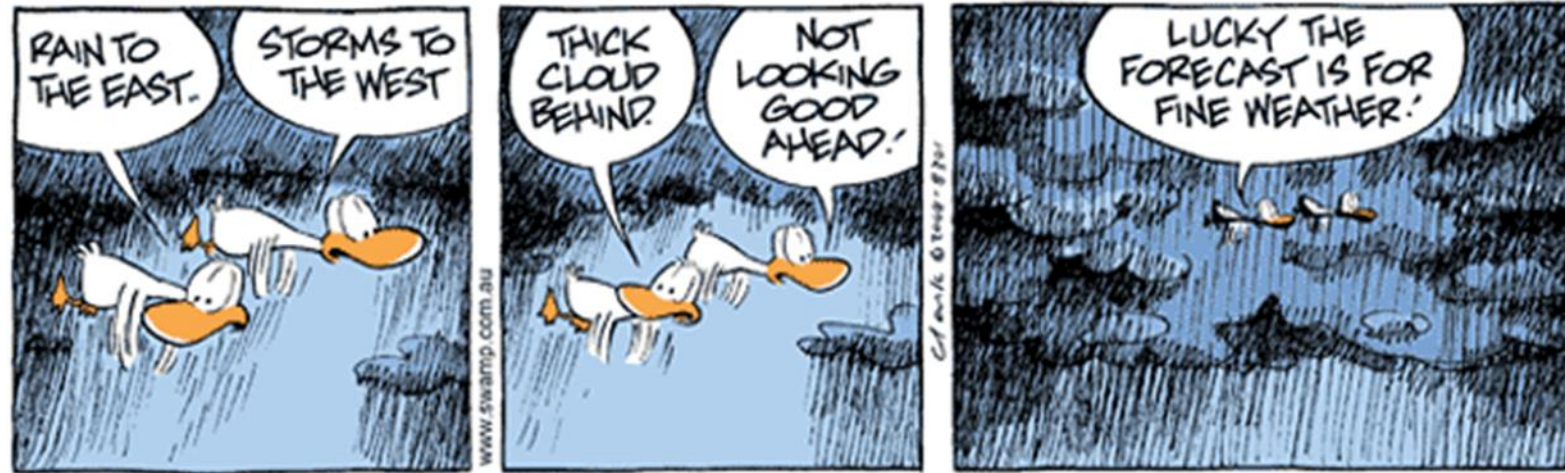
All of the above plus:

- **Improved accuracy – automated systems/manual assessment**
- **Timely delivery – reduce period of forecasts**
- **Extent and duration of event**
- **Unpredicted convective activity**
- **Lead time for warnings of extreme conditions – snow, fog, typhoon**
- **Colour coded graphics for easy assimilation of information**

Collaborative Arrangements

IFATCA represents controllers from **19 ANSPs** in the Asia Pacific area which is less than half of the number of ICAO contracting States in the APAC region. However IFATCA got 19 responses to the MET/ATM questionnaire they distributed.

To promote collaborative arrangements, IFATCA could canvass its members to ascertain which units are still lacking an effective means of dialogue with their MET provider. IFATCA could then communicate with those ANSPs and suggest initiatives that can be taken to establish a forum for contact at a working level between operational ATC and MET staff.



With thanks to Gary Clark

