



ICAO BANGKOK | UNITING AVIATION

Meteorological information supporting ATFM

Presented by the Secretariat
International Civil Aviation Organization

Cross Border ATFM Workshop
Bangkok, Thailand, 17-18 Nov 2015



Contents

- Role of MET to support ATFM
- Types of MET to support ATFM
- Future development of MET to support ATFM



Role of MET information to support ATFM

ATFM
Capacity /
Demand

1



Air traffic volume is increasing

2



Weather phenomena affect air traffic flow



Role of MET information to support ATFM

Support assessment of **DEMAND** and **CAPACITY** variations due to:

- **Strong winds**
- **Heavy rain, snow, volcanic ash deposition**
- **Poor visibility/low cloud ceiling**
- **Lightning**
- **Convective clouds**
- **Turbulence/wind shear**
- **Volcanic ash cloud, tropical cyclone, thunderstorms**



Types of MET information provided to support ATFM

ICAO Annex 3 — *Meteorological Service for International Air Navigation*

- General provisions
- WAFS, MET offices
- MET observations, reports
- Aircraft observations, reports
- Forecasts
- SIGMET, AIRMET, aerodrome/wind shear warnings, wind shear alerts
- Climatological information
- Service for operators/flight crew members



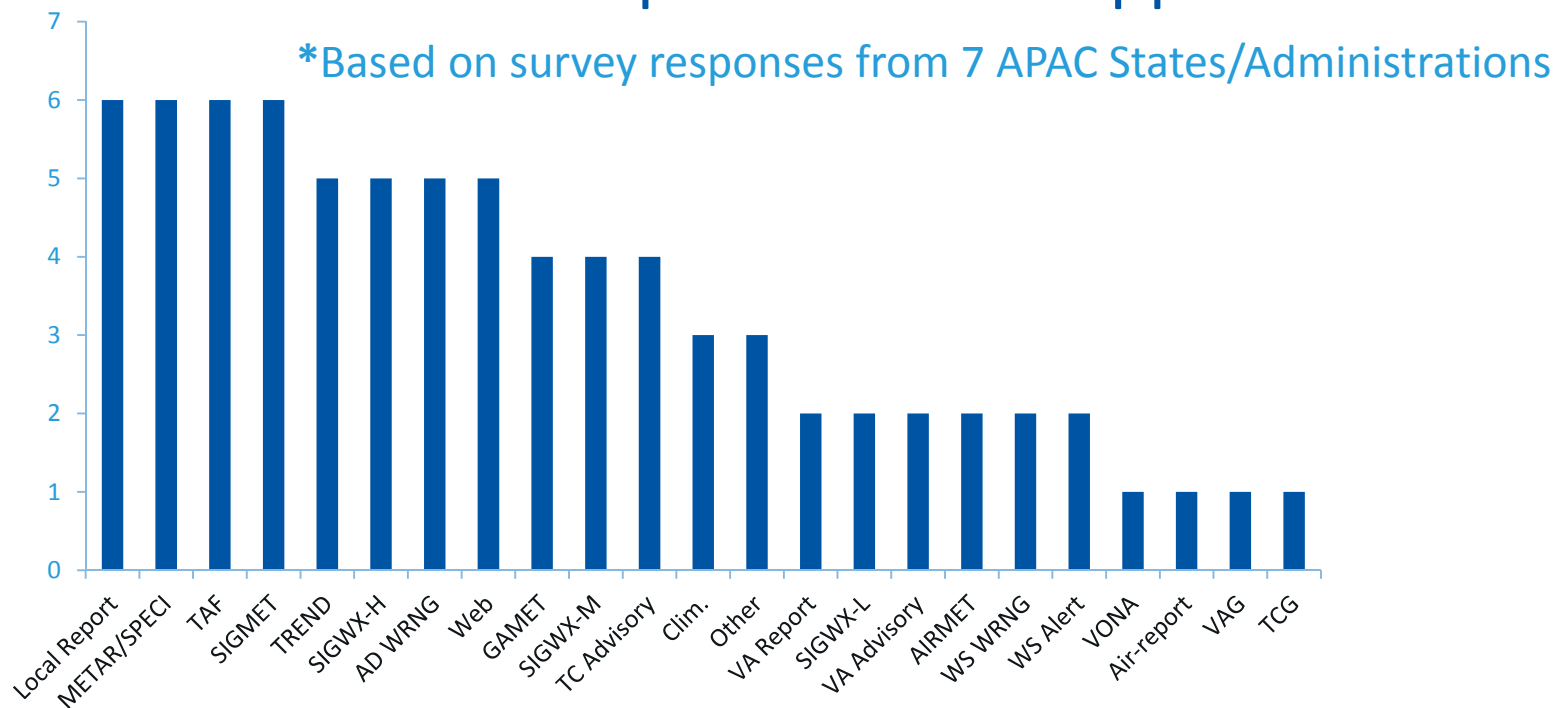
Types of MET information provided to support ATFM

APAC **survey** of MET information supporting ATFM

- State letter Ref.: T 4/3.2.7:AP152/15 (MET)
- Which States are providing MET information to support ATFM?
- What types of MET information are provided to support ATFM?
- Assist the MET Sub Group, ATFM Steering Group, APAC Seamless ATM plan initiatives



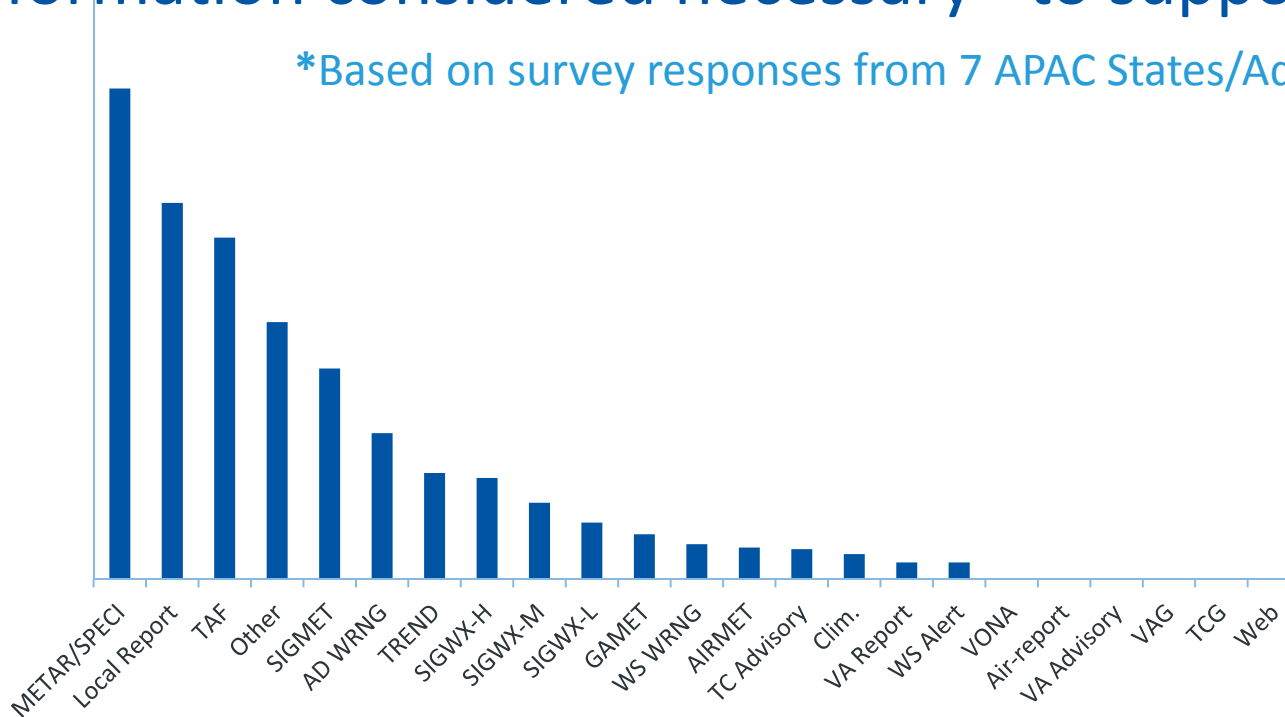
Types of MET information provided* to support ATFM

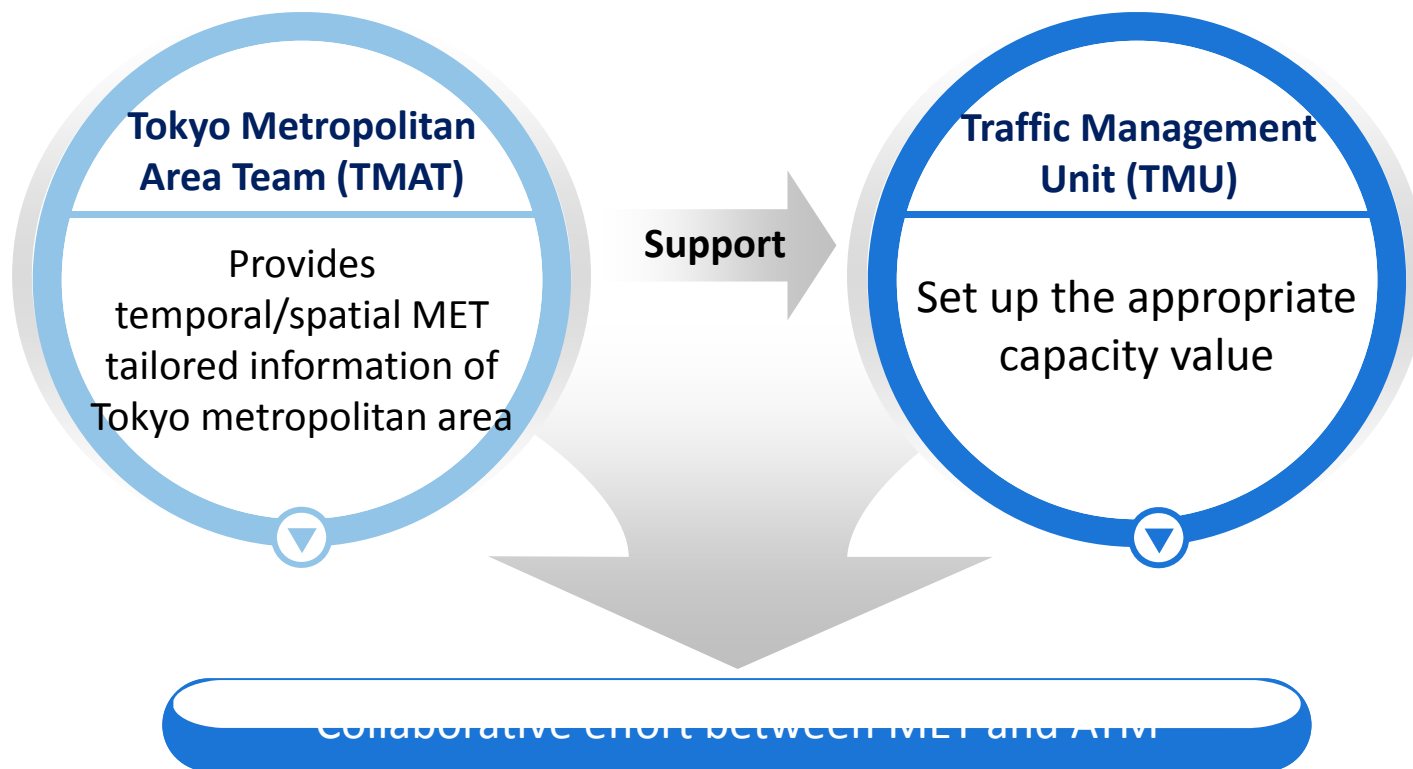




MET information considered necessary* to support ATFM

*Based on survey responses from 7 APAC States/Administrations







ATM Categorized Impact of weather Element prediction

Issued at 1930UTC 20 May 2015
ATMetC Tokyo Metropolitan Area TEAM, JMA

Sector/Time(UTC)	19			20					21					22					23					00					Level of Impact to ATM							
	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50	0		10	20	30	40	50		
T03 ▲		CB		CONV																																NONE
T03_W_NW Conv																																				SLIGHT
T03_W_NE Conv																																				SLIGHT
T03_W_SW Conv																																				SLIGHT
T03_W_SE Conv																																				HIGH
T07 ▲				CB					CONV					CONV																					SLIGHT	
T07_NW Conv																																				SLIGHT
T07_SW Conv																																				HIGH
T07_EAST Conv																																				SLIGHT
RJAA ▲		TS		TS CONV					CONV																									SLIGHT		
RJAA-1 Conv																																				MEDIUM
Wind																																				NONE
Cross																																				NONE
Gust																																				NONE
VIS																																				NONE
CIG																																				NONE
TS																																				HIGH
SN																																				NONE
blw3000 Wind																																				NONE
RJAA-2 Conv																																				MEDIUM

TMAT provides ATM-tailored MET information to support TMU depending on time and target area.

“Meteorological service for the terminal area”, MET/ATM Seminar, 24 June. 2015.



Future development of MET information

- Regional initiatives
 - Provide regional guidance for implementation of MET information to support ATFM
 - Provide input to support development of the regional ATFM Framework
 - Provide guidance to support development and implementation of the APAC Seamless ATM Plan



Future development of MET information

- Global initiatives
 - Updates to the GANP (including Block 1 ASBU) relating to MET information to support ATM (target: November 2018)
 - New provisions in Annex 3, Annex 11 and Doc 4444 related to MET information to support ATM (target: November 2018)
 - Guidance material MET information to support ATM (target: November 2018)



ICAO BANGKOK | UNITING AVIATION



ICAO

- North American Central American and Caribbean (NACC) Office
Mexico City
- South American (SAM) Office
Lima
- ICAO Headquarters
Montréal
- Western and Central African (WACAF) Office
Dakar
- European and North Atlantic (EUR/NAT) Office
Paris
- Middle East (MID) Office
Cairo
- Eastern and Southern African (ESAF) Office
Nairobi
- Asia and Pacific (APAC) Sub-office
Beijing
- Asia and Pacific (APAC) Office
Bangkok



THANK YOU