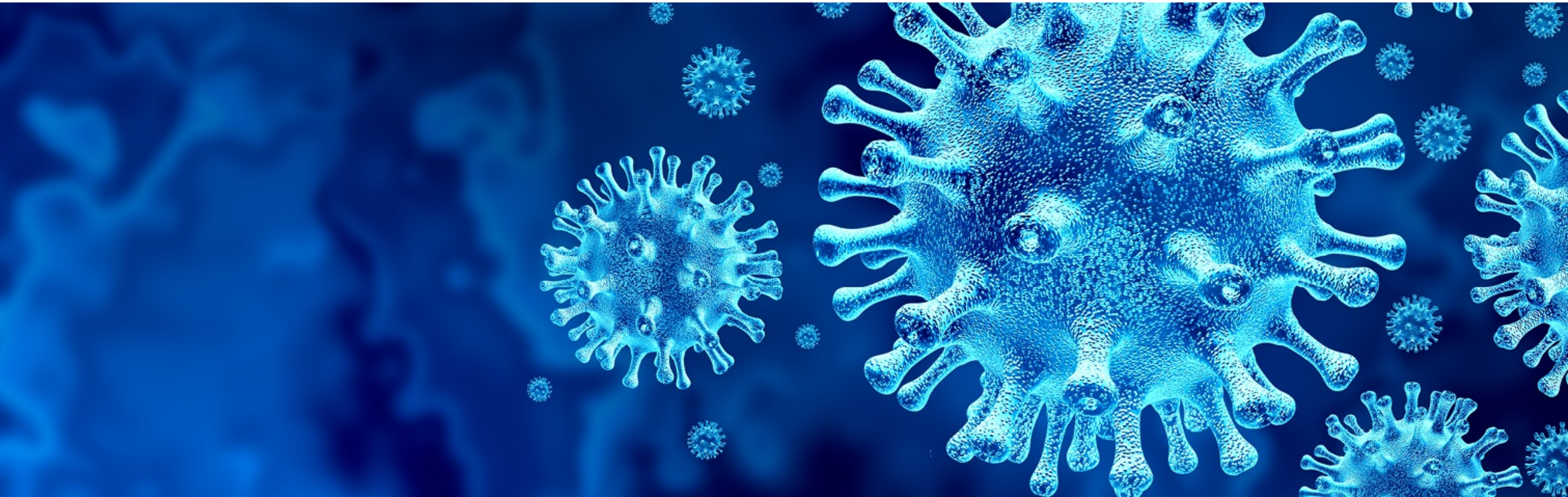
ICAO MID

NINTH MEETING OF THE METEOROLOGY SUB-GROUP (MET SG/9)

7 - 9 December 2020



MET SG/9

Agenda Item 4: MET Planning and Implementation issues – Performance Framework for MET implementation in the MID Region

Review and update of the MID Air Navigation Strategy Parts related to MET Outline

- Revised MID Air Navigation Strategy
- B0 – AMET (GANP 6th edition)
- Draft Mid Region AMET thread Block 0 and 1 Prioritization and Monitoring
- MID Potential Key Performance Indicators (KPIs)
- Action by the meeting.

Revised MID Air Navigation Strategy

- MSG7 VTC (1 - 3 September 2020) reviewed the draft of the revised Strategy.
- The strategy identified the ASBU Threads/Elements that might be classified as priority 1; along with associated proposed monitoring elements (applicability area, performance indicators/supporting metric, and timeline).
- The meeting agreed also that the MIDANPIRG Sub-Groups should conduct virtual meetings in the 4th quarter of 2020 to review the GANP 6th edition and identify ASBU priority 1 Threads/Elements and associated monitoring elements, considering the Secretariat proposal and States' and stakeholders' inputs.
- MID ASBU Webinar was held on 13 – 15 October 2020 in order to familiarize the participants with the 6th Edition of the GANP and showcase the different ASBU Threads through online demonstration using the GANP Portal, for harmonization purpose and an increased efficiency of the MIDANPIRG Sub-Groups during the discussion of the subject.
- The Webinar reviewed the initial draft of the MID Region Air Navigation Strategy. The webinar agreed on ASBU Threads and Elements prioritization **(as at Appendix 4A)** . Monitoring elements (indicators/metrics, applicability areas, targets and timelines) should be discussed during the upcoming MIDANPIRG Sub-Groups virtual meetings;
- The Webinar agreed on an initial list of Key Performance Indicators to be used for performance monitoring at National and Regional levels. Further discussion/ refinement by the MIDANPIRG Sub-Groups.

Revised MID Air Navigation Strategy

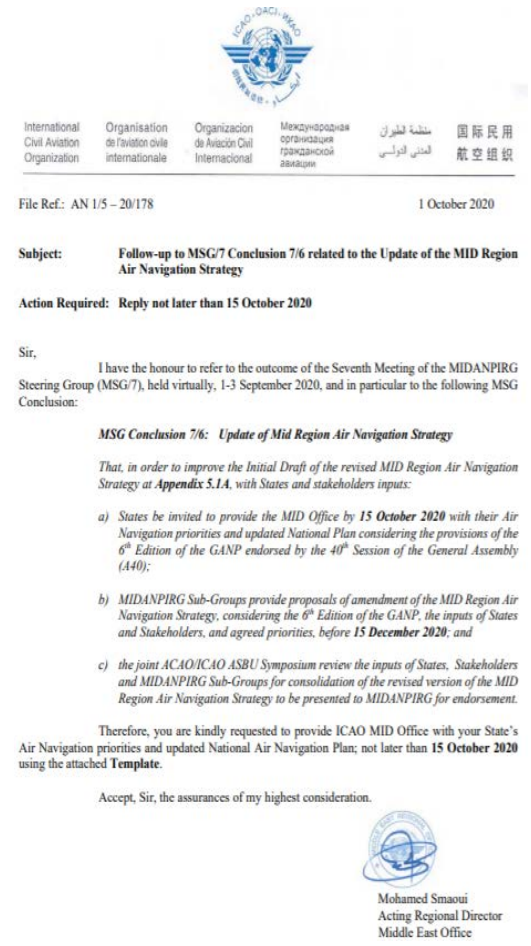
- SL: AN 1/5 – 20/178 issued 1 October 2020 on Follow-up to MSG/7 Conclusion 7/6 related to the Update of the MID Region Air Navigation Strategy.

- MSG7 concluded (Conclusion 7/6) that, in order to improve the Initial Draft of the revised MID Region Air Navigation Strategy :

  a) States be invited to provide the MID Office by 15 October 2020 with their Air Navigation priorities and updated National Plan considering the provisions of the 6th Edition of the GANP endorsed by the 40th Session of the General Assembly (A40);

  b) MIDANPIRG Sub-Groups provide proposals of amendment of the MID Region Air Navigation Strategy, considering the 6th Edition of the GANP, the inputs of States and Stakeholders, and agreed priorities, before 15 December 2020; and

  c) the joint ACAO/ICAO ASBU Symposium review the inputs of States, Stakeholders and MIDANPIRG Sub-Groups for consolidation of the revised version of the MID Region Air Navigation Strategy to be presented to MIDANPIRG for endorsement.



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File Ref.: AN 1/5 – 20/178 1 October 2020

Subject: **Follow-up to MSG/7 Conclusion 7/6 related to the Update of the MID Region Air Navigation Strategy**

Action Required: **Reply not later than 15 October 2020**

Sir,

I have the honour to refer to the outcome of the Seventh Meeting of the MIDANPIRG Steering Group (MSG/7), held virtually, 1-3 September 2020, and in particular to the following MSG Conclusion:

MSG Conclusion 7/6: Update of Mid Region Air Navigation Strategy

*That, in order to improve the Initial Draft of the revised MID Region Air Navigation Strategy at **Appendix 5.1A**, with States and stakeholders inputs:*

*a) States be invited to provide the MID Office by **15 October 2020** with their Air Navigation priorities and updated National Plan considering the provisions of the 6th Edition of the GANP endorsed by the 40th Session of the General Assembly (A40);*

*b) MIDANPIRG Sub-Groups provide proposals of amendment of the MID Region Air Navigation Strategy, considering the 6th Edition of the GANP, the inputs of States and Stakeholders, and agreed priorities, before **15 December 2020**; and*

c) the joint ACAO/ICAO ASBU Symposium review the inputs of States, Stakeholders and MIDANPIRG Sub-Groups for consolidation of the revised version of the MID Region Air Navigation Strategy to be presented to MIDANPIRG for endorsement.

Therefore, you are kindly requested to provide ICAO MID Office with your State's Air Navigation priorities and updated National Air Navigation Plan; not later than **15 October 2020** using the attached **Template**.

Accept, Sir, the assurances of my highest consideration.

Mohamed Smaoui
Acting Regional Director
Middle East Office

B0 - AMET (GANP 6th edition)

Thread & Element Code	Title
AMET B0/1	Meteorological observations products
AMET B0/2	Meteorological forecasts and warning products
AMET B0/3	Climatological and historical meteorological products
AMET B0/4	Dissemination of meteorological products

Draft Mid Region AMET threads Block 0 Prioritization and Monitoring

AMET		Priority	Applicability	Performance Indicator
AMET B0/1	Meteorological observations products	1	All States	Supporting Metrics: Number of States that provides the following Meteorological observations products, as required: 1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT/SPECIAL) 3. Aerodrome reports (METAR/SPECI) 4. Lightning Information 5. Ground-based weather radar information 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, AMDAR etc.) 8. Vertical wind and temperature profiles 9. Volcano Observatory Notice for Aviation (VONA) 10. Wind shear alerts

Draft Mid Region AMET threads Block 0 Prioritization and Monitoring

AMET		Priority	Applicability	Performance Indicator
AMET B0/2	Meteorological forecasts and warning products	1	All States	Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required: 1. World Area Forecast System (WAFS) gridded products 2. Significant Weather (SIGWX) 3. Low-level Area Forecast (GAMET) 4. Aerodrome Forecast (TAF) 5. Trend Forecast (TREND) 6. Take-off Forecast 7. Tropical Cyclone Advisory (TCA) 8. Volcanic Ash Advisory (VAA) 9. AIRMET 10. SIGMET 11. Aerodrome Warning 12. Wind Shear Warning

AMET		Priority	Applicability	Performance Indicator
AMET B0/3	Climatological and historical meteorological products	1	All States	Supporting Metric: 1. Number of States that provide Climatological and historical meteorological products, as required
AMET B0/4	Dissemination of meteorological products	1	All States	Supporting Metric: 1. Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)

Draft revised AMET based on GANP/ASBU 2019

Appendix 4B : MID REGION AIR NAVIGATION STRATEGY AMET THREAD Monitoring Table (Block 0 Element)

MID Potential Key Performance Indicators (KPIs)

- A set of performance indicators is used that allows for monitoring of current operations, as at **Appendix 4C**.
- ICAO recommends that States utilize a focused set of Key Performance Indicators (KPIs) that provide the means of identifying shortfalls and prioritizing investments.
- This approach will allow all stakeholders to analyze the current and future performance of the air navigation system and to take actions, if needed, to fill the gap between the current performance and the expected one.
- It is proposed to work on a set of KPIs, according to needs and capabilities.
- To start with a simple set of indicators (Core KPIs) matching States needs, and to complete them later with more complex ones (Additional KPIs).
- This would be further reviewed/discussed by the ASBU Symposium before presentation to MIDANPIRG/18 for final decision.

Action by the meeting

The meeting is invited to:

- Review and update the AMET Thread indicators, metrics, targets, timelines, etc.; and
- Note the list of KPIs to be selected for performance monitoring and provide inputs/comments, as appropriate.

ICAO

THANK YOU

DRAFT MID REGION AMET THREAD BLOCK 0 AND 1 PRIORITIZATION

AMET	**B0/1**	Meteorological observations products	1	2014	MET SG		
	B0/2	Meteorological forecast and warning products	1	2014	MET SG		
	B0/3	Climatological and historical meteorological products	1	2014	MET SG		
	B0/4	Dissemination of meteorological products	1	2014	MET SG	CNS SG	
	B1/1	Meteorological observations information	2				
	B1/2	Meteorological forecast and warning information	2				
	B1/3	Climatological and historical meteorological information	2				
	B1/4	Dissemination of meteorological information	2				

MID REGION AIR NAVIGATION STRATEGY

AMET THREAD Monitoring Table (Block 0 Element)

Element code	Title	Priority	Applicability	Performance Indicators/Supporting Metrics	Targets	Timelines
B0/1	Meteorological observations products	1	All States	Indicator: TBD Supporting Metrics: Number of States that provides the following Meteorological observations products, as required: 1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT/SPECIAL) 3. Aerodrome reports (METAR/SPECI) 4. Lightning Information 5. Ground-based weather radar information 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, AMDAR etc.) 8. Vertical wind and temperature profiles 9. Volcano Observatory Notice for Aviation (VONA) 10. Wind shear alerts		
B0/2	Meteorological forecasts and warning products	1	All States	Indicator: TBD Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required: 1. World Area Forecast System (WAFS) gridded products 2. Significant Weather (SIGWX) 3. Low-level Area Forecast (GAMET) 4. Aerodrome Forecast (TAF) 5. Trend Forecast (TREND) 6. Take-off Forecast 7. Tropical Cyclone Advisory (TCA) 8. Volcanic Ash Advisory (VAA) 9. AIRMET		

				10. SIGMET 11. Aerodrome Warning 12. Wind Shear Warning		
B0/3	Climatological and historical meteorological products	1	All States	Indicator: % of States that provide Climatological and historical meteorological products, as required. Supporting Metric: Number of States that provide Climatological and historical meteorological products, as required		
B0/4	Dissemination of meteorological products	1	All States	Indicator: % of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM) Supporting Metric: Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)		

INITIAL LIST OF MID REGION Air Navigation KPIs

KPI	Title	Definition	Measurement Units	Variants	Parameters	Objects Characterized	Data Requirement	Formula / Algorithm	Timeframe	Data Feed Providers
01	Departure punctuality	Percentage of flights departing from the gate on-time (compared to schedule).	% of scheduled flights	**Variant 2A** – % of departures within ± 15 minutes of scheduled time of departure	On-time threshold (maximum positive or negative deviation from scheduled departure time) which defines whether a flight is counted as on-time or not.	The KPI is typically computed for traffic flows, individual airports, or clusters of airports (selection/grouping based on size and/or geography).	For each departing scheduled flight: - Scheduled time of departure (STD) or Scheduled off-block time (SOBT) - Actual off-block time (AOBT)	***At the level of individual flights:*** 1. Exclude non-scheduled departures 2. Categorize each scheduled departure as on-time or not ***At aggregated level:*** 3. Compute the KPI: number of on-time departures divided by total number of scheduled departures	1 month	Schedule database(s), airports, airlines and/or ANSPs

KPI	Title	Definition	Measurement Units	Variants	Parameters	Objects Characterized	Data Requirement	Formula / Algorithm	Timeframe	Data Feed Providers
02	Taxi-out additional time	Actual taxi-out time compared to an unimpeded/reference taxi-out time.	Minutes/flight	**Variant 1** – basic (computed without departure gate and runway data)	Unimpeded/reference taxi-out time: ***Recommended approach for the basic variant of the KPI***: a single value at airport level, e.g. the 20th percentile of actual taxi times recorded at an airport, sorted from the shortest to the longest. ***Recommended approach for the advanced variant of the KPI:*** a separate value for each gate/runway combination, e.g. the average actual taxi-out time recorded during periods of non-congestion (needs to be periodically reassessed).	The KPI is typically computed for individual airports, or clusters of airports (selection/grouping based on size and/or geography).	For each departing flight: - Actual off-block time (AOBT) - Actual take-off time (ATOT) In addition, for the advanced KPI variant: - Departure gate ID - Take-off runway ID	***At the level of individual flights:*** 1. Select departing flights, exclude helicopters 2. Compute actual taxi-out duration: ATOT minus AOBT 3. Compute additional taxi-out time: actual taxi-out duration minus unimpeded taxi-out time ***At aggregated level:*** 4. Compute the KPI: sum of additional taxi-out times divided by number of IFR departures	1 month	Airports (airport operations, A-CDM), airlines (OOOI data), ADS-B data providers and/or ANSPs

KPI	Title	Definition	Measurement Units	Variants	Parameters	Objects Characterized	Data Requirement	Formula / Algorithm	Timeframe	Data Feed Providers
13	Taxi-in additional time	Actual taxi-in time compared to an unimpeded/reference taxi-in time	Minutes/flight	**Variant 1** – basic (computed without landing runway and arrival gate data)	Unimpeded/reference taxi-in time: ***Recommended approach for the basic variant of the KPI:*** a single value at airport level, e.g. the 20th percentile of actual taxi times recorded at an airport, sorted from the shortest to the longest ***Recommended approach for the advanced variant of the KPI:*** a separate value for each runway/gate combination, e.g. the average actual taxi-in time recorded during periods of non-congestion (needs to be periodically reassessed)	The KPI is typically computed for individual airports, or clusters of airports (selection/grouping based on size and/or geography).	For each arriving flight: Actual landing time (ALDT) Actual in-block time (AIBT) In addition, for the advanced KPI variant: Landing runway ID Arrival gate ID	***At the level of individual flights:*** 1. Select arriving flights, exclude helicopters 2. Compute actual taxi-in duration: AIBT minus ALDT 3. Compute additional taxi-in time: actual taxi-in duration minus unimpeded taxi-in time ***At aggregated level:*** 4. Compute the KPI: sum of additional taxi-in times divided by number of IFR arrivals	1 month	Airports (airport operations), airlines (OOOI data), ADS-B data providers and/or ANSPs

KPI	Title	Definition	Measurement Units	Variants	Parameters	Objects Characterized	Data Requirement	Formula / Algorithm	Timeframe	Data Feed Providers
14	Arrival punctuality	Percentage of flights arriving at the gate on-time (compared to schedule)	% of scheduled flights	**Variant 2A** – % of arrivals within ± 15 minutes of scheduled time of arrival	On-time threshold (maximum positive or negative deviation from scheduled arrival time) which defines whether a flight is counted as on-time or not.	The KPI is typically computed for traffic flows, individual airports, or clusters of airports (selection/grouping based on size and/or geography).	For each arriving scheduled flight: - Scheduled time of arrival (STA) or Scheduled in-block time (SIBT) - Actual in-block time (AIBT)	***At the level of individual flights:*** 1. Exclude non-scheduled arrivals 2. Categorize each scheduled arrival as on-time or not ***At aggregated level:*** 3. Compute the KPI: number of on-time arrivals divided by total number of scheduled arrivals	1 month	Schedule database(s), airports, airlines and/or ANSPs

- END -