

## **Re-alignment of the IIM/SG Meteorology Project 1 activities to the 6<sup>th</sup> edition of GANP**

### **1.1. MET Project 1:**

#### **Scope**

The Project will benefit all AFI States and interested Organizations and will cover the implementation of the following MET ASBU elements.

- AMET-B0/1 Meteorological observations products
- AMET-B0/2 Meteorological forecast and warning products
- AMET-B0/3 Climatological and historical meteorological products
- AMET-B0/4 Dissemination of meteorological products
- Aeronautical meteorological personnel Competency standards

#### **Rationale**

- a) Alignment of the project's references with the groups, threads, elements of ASBU modules introduced by the 6<sup>th</sup> edition of the GANP and applicable to the AFI region in MET area.
- b) Low level of implementation of AMET-B0 module applicable elements in the region.
- c) Annex 3 to Chicago Convention requirements to comply with the aeronautical meteorological personnel competency standards

#### **Objectives**

Within the scope of the Project, the main purpose will be to:

- a) Assist States to review and conduct gap analysis between their National ASBU Plans and the Regional Air Navigation Plan.
- b) Assist States in updating their National Plans to integrate ASBU elements applicable in their area.
- c) Assist States in the implementation of State ASBU implementation action plan.
- d) Assist States in implementing the competency standards
- e) Report on the implementation of project activities.

#### **Metrics**

The progress of the Project will be monitored through the evaluation of the implementation status using the following metrics.

- Metric 1: 70% of States with AMET-B0/1 implemented by December 2024
- Metric 2: 70% of States with AMET-B0/2 implemented by December 2024
- Metric 3: 80% of States with AMET-B0/3 implemented by December 2024
- Metric 4: 70% of States with AMET-B0/4 implemented by December 2024
- Metric 5: 70% of States with Competency standards implemented

#### **Targets of the project**

The Project targets will be as follows.

Metric	Baseline (2022)	Milestone, 2023	Target, 2024	Comments
Metric 1	30%	50%	70%	
Metric 2	30%	50%	70%	
Metric 3	10%	50%	80%	
Metric 4	30%	50%	70%	
Metric 5	20%	50%	70%	

### End of Project Status

At the end of the Project, the following is expected to be achieved:

- a) AMET-B0/1, AMET-B0/2, AMET-B0/3 and AMET-B0/4 implemented in the regional level at least by 70% of States the support of flexible airspace management, improved situational awareness, collaborative decision-making, and dynamically optimized flight trajectory planning
- b) 70% of States with competency standards implemented.
- c) The reporting on the Project implementation is consistently achieved.

At the end of the Project, the following is expected to be achieved:

- a) AMET-B1/1, AMET-B1/2 implemented in the regional level by at least 60% of States to support automated decision process or aids, involving meteorological information, meteorological information translation, ATM impact conversion and ATM decision support
- b) The reporting on the Project implementation is consistently achieved.

## I. Proposal reframed MET Project 1 Tasks and deliverables

### 2.1. Format of Project Activities

- a) Activities that may not require the physical presence of the Project experts in States may be conducted virtually.
- b) Deliverables produced will be communicated by email to the participating and concerned recipients.

### 2.2. Project Team composition:

- a) The Project Coordinator (PTC)
- b) The Project Experts (PEs) (MET experts from CAAs, ANSPs and Industry)

### 2.3 Implementation Steps

2.3.1. Assessment of the status of the implementation of the ASBU elements in the scope of Project

- a) Assess the status of the implementation of the applicable ASBU elements in the scope of Project.
- b) Perform gap analysis for each State and identify actions to be implemented in terms of:

- i. Regulatory provisions to be developed/updated
- ii. Operational Procedures to be developed and implemented
- iii. Facilities and infrastructure to be established
- iv. Trainings/workshops/Seminars needs for the provision of meteorological observations products
- v. Other relevant enablers to be implemented.

#### 2.3.2. Development of a MET State Action Plan

- a) Based on the outcomes of 2.3.1, Project to assist State in developing an action plan to address deficiencies identified in the gap analysis.
- b) State to submit their Action plan to the Project Team for review and approval.

#### 2.3.3. Implementation of the MET State Action Plan

- a) Under the supervision and the coordination of the PTC and his/her Team, the State will proceed with the implementation of the MET State Action Plan approved by the Project Team.
- b) Each PE will be assigned to assist one or a group of State(s) in the implementation of the Project activities. They can request for the contributions of State TFP as resource persons under the authorization of the PTC.

#### 5.4.1. Monitoring the and Assistance to State for the implementation of the MET State Action Plan

- a) Each PE should provide monthly reports on the progress of his/her assistance activities through an assessment of the progress using the agreed goals, indicators/metrics for this Project.
- b) The PTC and Project Team should review the monthly reports provided by the PEs and provide assistance and support as needed.
- c) Based on the monthly reports provided by the PEs, the PTC will draft the quarterly report on the progress of the Project for the PTCs' Quarterly Coordination Meeting.

### Project Objectives, Deliverables and Activities

<b>Objective 1</b>	<b>Assist States in the implementation of the ASBU Modules AMET-B0/1, AMET-B0/2, AMET-B0/3 and AMET-B0/4</b>
<b>Identified risks</b>	- <i>Lack of competent experts</i>
<b>Performance Indicators</b>	<ul style="list-style-type: none"> <li>- <i>Indicator n°1 : % of States with AMET-B0/1 implemented</i></li> <li>- <i>Indicator n°2 : % of States with AMET-B0/2 implemented</i></li> <li>- <i>Indicator n°3 : % of States with AMET-B0/3 implemented</i></li> <li>- <i>Indicator n° : % of States with AMET-B0/4 implemented</i></li> </ul>
<b>Deliverable 1.1</b>	<b>Status of implementation ASBU elements in the scope of the Project, Gap analysis and State Action Plan</b>

<i>Activity #</i>	<i>Description</i>	<i>Actors</i>
1.1.1.	Assess the status of implementation of the AMET-B0/1, AMET-B0/2, AMET-B0/3 and AMET-B0/4 by the States in the scope of the Project	<ul style="list-style-type: none"> <li>• Project Team</li> <li>• State Technical Focal Point in MET (TFP)</li> </ul>
1.2.1	Perform the gap analysis	<ul style="list-style-type: none"> <li>• Project Team</li> <li>• MET TFP</li> </ul>
1.2.2	Produce the report of the gap analysis	PTC
1.2.3	Develop MET State Action Plan to address the deficiencies identified in the gaps analysis	State PTC and PEs
1.2.4	Review and approve MET State Action Plan to guide its implementation by State	PTC
<b>Deliverable 1.3</b>	<b>Monitoring and assisting the State in the Implementation of the MET State Action Plan</b>	
<i>Activity #</i>	<i>Activity description</i>	<i>Actors</i>
1.3.1.	Task State(s) to PEs to be assisted as needed (through workshops, trainings, guidance material, etc.)	PTC
1.3.2.	Coordinate the assistance activities conducted by PEs	PTC
1.3.3.	Report to PTC on the implementation of assistance activities to States	PEs
1.3.4.	Provide quarterly and annual Report on the progress of the Project activities on ASBU implementation	PTC
<b>Deliverable 1.4</b>	<b>Assist States in the Implementation of the aeronautical meteorological competence standards</b>	
<i>Activity #</i>	<i>Activity description</i>	<i>Actors</i>
1.4.1.	Conduct a survey on an assessment of the status of the implementation of competency standards by States	PTC PEs States
1.4.2.	Assist States in conducting gap analysis	PTC PEs States
1.4.3.	Assist States in developing competency standards implementation action plan to be submitted to MET Project 1 for review	PTC PEs States

1.4.4.	Assist States in the implementation of approved action plan for implementing competency standards	PTC PEs States
1.4.5.	Provide quarterly and annual Report on the progress of implementation of competency standards	PTC
<b>Deliverable 1.5</b>	<b>Project Exit wrap up</b>	
<i>Activity #</i>	<i>Activity description</i>	<i>Actors</i>
1.5.1.	Review the Project achievements and failures	PTC
1.5.2.	Document the lessons learnt and formulate recommendations for improvement	PTC
1.5.3.	Present the termination report to the IIM/SG	PTC

## Monitoring and reporting

### 7.1. Project Monitoring

- a) The overall Project implementation will be monitored by the APIRG IIM/SG PTC Coordination Team chaired by the Chair and Vice-Chair of the Sub-group.
- b) the Chair and Vice-Chair of the SG, in relation with the PTC, monitors the work the PEs assisting States in the implementation of the Project activities.

### 7.2. Reports of the Project Experts (PEs)

- a) The PEs will prepare reports at the conclusion of each of their scheduled assistance activities to State. All such reports shall be provided to the PTC.
- b) The PTC may request PEs to provide specific report if needed.

### 7.3. Project Progress Reports

- a) The PTC will submit quarterly progress report to the APIRG IIM/SG PTCs Coordination Team and to the APIRG IIM/SG PTC Coordination Meeting.
- b) The Chair and/or Vice Chair of the APIRG IIM/SG PTCs Coordination Team may request specific report on the progress of the Project if needed

### 7.4. Project Termination Report.

- c) The PTC will produce a termination report of the activities at the end of the Project. This report should document the achievements, the failures, the lessons learnt and actions for improvement.
- d) The termination report will be presented to the APIRG IIM/SG PTCs Coordination Meeting for approval and submission to the next IIM/SG Meeting.

*Appendix B – AMET Modules Applicable Elements*

**Risks, Mitigation measures and prerequisites**

**8.1. Risks, Risks levels and mitigation measures.**

<b>Risks</b>		<b>- Assessment</b>				<b>Response</b>		
<b>Risk</b>	<b>Possible Causes</b>	<b>Consequence</b>	<b>Prob. 1-5</b>	<b>Sever. 1-5</b>	<b>Estimated level (1-25)</b>	<b>Response Type</b>	<b>Action</b>	<b>Owner</b>
Lack of commitment by States	States do not understand the contribution of the Project to the improvement of their system	Project objectives are not achieved as planned	2	3	6	Remove	Awareness seminars	Project Team
Lack of competent MET experts in the Region	State nominees are not subject matter experts	Difficulties and delay in the achievement of Project objectives	2	3	6	Remove	Provide clear criteria for selection of Project Technical Experts	Project Team

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**Project work Plan**

<b>Activity #</b>	<b>Activity Name</b>	<b>Actors</b>	<b>Duration (in days)</b>	<b>Start</b>	<b>Finish</b>
	<b>Implementation of MET Project 1</b>		<b>670</b>	<b>2-Jan. -23</b>	<b>31-Dec. -24</b>
<b>1.1</b>	<i>Overall Coordination of the Project</i>				
1.1.0	IIM/SG Quarterly PTCs’ Coordination Meeting and quarterly report on the implementation of Project activities	Chair and Vice-Chair PTCs	TBD	Q1 2023	Q4 2024
<b>1.2</b>	<i>Status of implementation ASBU elements in the scope of the Project, Gaps analysis and State Action Plan</i>		<i>136</i>	1-Apr.-23	15-Aug-23
1.2.1	Assess the status of implementation of the AMET-B0/1, AMET-B0/2, AMET-B0/3 and AMET-0/4 by the States in the scope of the Project	<ul style="list-style-type: none"> <li>Project Team</li> <li>State Technical Focal Point in MET (TFP)</li> </ul>	29	1-Apr.-23	30-Apr.-23
1.2.2	Perform the gaps analysis	<ul style="list-style-type: none"> <li>Project Team</li> <li>MET TFP</li> </ul>	30	1-May-23	31-May-23
1.2.3	Produce the report of the gaps analysis	PTC	14	1-June-23	15-June-23
1.2.4	Develop State Action Plan to address the deficiencies identified in the gaps analysis	State PTC	30	15-June-23	15-Jul.-23

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1.2.5	Review and approve State Action Plan to guide its implementation by State	PTC	30	16-Jul.-23	15-Aug-23
<b>1.3</b>	<b><i>Monitoring the and assist State in the Implementation of the MET State Action Plan</i></b>		504	15-Aug-23	31-Dec.-24
1.3.1	Task State(s) to PEs to be assisted as needed (through workshops, trainings, guidance material, etc.)	PTC	16	15-Aug-23	31-Aug-23
1.3.2	Coordinate the assistance activities conducted by PEs	PTC	487	1-Sep.-23	31-Dec.-24
	Report to PTC on the implementation of the activities of assistance to States	PEs	487	1-Sep.-23	31-Dec.-24
1.3.3	Provide quarterly and annual Report on the progress of the Project activities	PTC	487	30-March. -23	31-Dec.-24
<b>1.4</b>	<b><i>Assist States in the Implementation of the aeronautical meteorological competence standards</i></b>		487	1-Apr.-23	31-Dec.-24
1.4.1	Conduct a survey on/an assessment of the status of the implementation of competency standards by States	PTC	61	1-Apr.-23	30-June-23
1.4.2	Assist States in conducting gaps analysis	PEs (in coordination by PTC)	61	01-Juil-23	30-Sep.-23
1.4.3	Assist States in developing competency standards implementation action plan to be submitted to MET Project 1 for review	PEs (in coordination by PTC)	61	01-Oct.-23	3-Dec.-23
1.4.4	Assist States in the implementation of approved action plan for implementing competency standards	PEs (in coordination by PTC)	334	01-Jan.-24	30-Nov.-24



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1.4.5	Provide quarterly and annual Report on the progress of implementation of competency standards	PTC (based on PEs reports)	487	1-Apr.-23	31-Nov.-24
<b>1.5</b>	<b><i>Project Exit Wrap up</i></b>		<i>30</i>	<i>1-Dec.-24</i>	<i>31-Dec.-24</i>
1.5.1	Review the Project achievements and failures	PTC	30	1-Dec.-24	31-Dec.-24
1.5.2	Document the lessons learnt and formulate recommendations for improvement	PTC	30	1-Dec.-24	31-Dec.-24
1.5.3	Present the termination report to the IIM/SG	PTC	30	1-Dec.-24	31-Dec.-24

**Appendix B – AMET Modules Applicable Elements**

**AFI REGION ASBU Threads & Elements for AMET Module Monitoring**

*Table 1 AFI REGION ASBU Threads & Elements for AMET Module Monitoring Table*

(\*) = **Priority 1:** Elements that have the highest contribution to the improvement of air navigation safety, capacity and/or efficiency in the AFI Region. These elements should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting.

(\*\*) **Priority 2:** Elements recommended for implementation based on identified operational needs and benefits.

<b>Element</b>	<b>Title</b>	<b>Applicability</b>	<b>Performance Indicators - Meteorological products /information to be provided</b>	<b>Performance Indicators/</b>	<b>Performance Indicators/</b>
AMET B0/1*	Meteorological observations products	All states	<p><b>Indicator:</b> Regional average implementation status of B0/1 (Meteorological observations products).</p> <p><b>Supporting Metrics:</b> Number of States that provide the following Meteorological observations products, as required:</p> <ol style="list-style-type: none"> <li>1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data)</li> <li>2. Local reports (MET REPORT/SPECIAL)</li> <li>3. Aerodrome reports (METAR/SPECI)</li> <li>4. Lightning Information</li> <li>5. Ground-based weather radar information</li> <li>6. Meteorological satellite imagery</li> <li>7. Aircraft meteorological report (ie. ADS-B, AIREP, etc.)</li> <li>8. Volcano Observatory Notice for Aviation (VONA)</li> <li>9. Vertical wind and temperature profiles</li> <li>10. Wind shear alerts</li> </ol>	70%	Dec 2024
AMET B0/2*	Meteorological forecast and warning products	All states	<p><b>Indicator:</b> Regional average implementation status of B0/2 (Meteorological forecasts and warning products)</p> <p><b>Supporting Metrics:</b></p> <p>Number of States that provides the following Meteorological forecast and warning products, as required:</p> <ol style="list-style-type: none"> <li>1. World Area Forecast System (WAFS) gridded products</li> <li>2. Significant Weather (SIGWX)</li> <li>3. Aerodrome Forecast (TAF)</li> <li>4. Trend Forecast (TREND)</li> <li>5. Take-off Forecast</li> </ol>	70%	Dec 2024

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			6. SIGMET 7. Aerodrome Warning 8. Wind Shear Warning		
AMET B0/3**	Climatological and historical meteorological products	All states	<b>Indicator:</b> % of States that provide Aerodrome climatological tables, Aerodrome climatological summaries and historical meteorological products, as required.  <b>Supporting Metric:</b> Number of States that provide Climatological and historical meteorological products, as required	80%	Dec 2024
AMET B0/4*			<b>Indicator:</b> % of States that exchange meteorological information as required.  <b>Supporting Metric:</b> Number of States that developed capability to start exchanging meteorological information in various formats (TAC, Gridded, Graphic, BUFR Code, IWXXM(XML/GML)	50%	Dec 2024

**2. MET Project 1 Dependencies**

*Table 2 MET Project 1 Dependencies*

APIRG IIM MET Project 1	Dependencies	Complementary Comments
	COMI-B0/7 - ATS Message Handling System (AMHS)	Required technology activities to achieve the implementation of the element

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**3. Templates for reporting on the implementation of Project activities**

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