



ICAO

DOMAIN : IIM (Infrastructure & Information Management)

MET PROJECT.1: Implementation of en-route weather phenomena information (SIGMET), (QMS/MET) service, in the AFI region

Coordinator: South Africa

AFI Region	Project Description			
Programme	Title of the Project		Start	End
<p><i>Aeronautical Meteorology</i></p> <p>(Project Facilitators : ICAO Ros MET, Dakar & Nairobi)</p>	<p>Implementation of information concerning en-route weather phenomena which may affect the safety of aircraft operations (SIGMET), Quality Management System for aeronautical meteorology (QMS/MET) service, in the AFI region</p> <p>MET Project 1-1 <i>Project-Team Coordinator: South Africa</i> <i>17 Experts contributing to the Project II- Botswana, South Africa, Niger, Nigeria, Togo, Uganda, Ethiopia, Mauritania, Kenya, Ghana, IATA, ASECNA, Côte d'Ivoire, WMO, IFALPA, Senegal, Tanzania</i></p>		2021	2022
Objective	<p>Assist States in the implementation of:</p> <p>a) SIGMET and standards and recommended practices of Annex 3 and Part V – MET of the AFI Air Navigation Plan (ANP), Volumes I, II, III concerning the issuance and distribution of en-route weather phenomena including volcanic ash clouds (WV), tropical cyclones (WC) and other phenomena (WS - thunderstorms, severe turbulence, icing, mountain waves, heavy sandstorms and duststorm), likely to affect the safety of aircraft operations, and the evolution of such phenomena in time and space (SIGMET WV, WC and WS); QMS/MET and certification where applicable, in accordance with WMO-No. 1100 (<i>Guide to the Implementation of Quality Management Systems for National Meteorological and Hydrological Services and other Relevant Service Providers</i>), unless for historical context.</p> <p>b) ; Assist States in establishment and implementation of QMS in accordance with the ISO 9001 series</p> <p>c) An action plan to assist concerned States in their effort to remove air navigation deficiencies in the MET field listed in the APIRG report; and</p> <p>d) The transition plan from current aeronautical meteorological information to the future SWIM-enabled environment in the AFI region by encouraging AFI States to progressively develop capability of handling OPMET data in digital format (XML/GML) and to start using XML/GML codes in operational environment by 2021.</p>			

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Scope	<ul style="list-style-type: none"> a) The SIGMET part of the project will comprise all Meteorological Watch Offices (MWOs) listed in Table MET II-1 of the AFI ANP Volume II; b) QMS part of the project is related to all AFI aerodromes listed in the AFI ANP Table MET II-2 for the establishment and implementation of a duly organized quality system of MET service; c) The list of States having long lasting MET deficiencies, is listed in the last report of the APIRG meeting; and d) The Transition Plan part of the project is related to all AFI aerodromes listed in the AFI ANP Table MET II-2. 			
Metrics	<ul style="list-style-type: none"> a) SIGMET metric: Number of MWOs listed in AFI ANP Table MET II-1, with SIGMET procedures implemented by December 2022 b) QMS metrics: Number of MET Provider States listed in AFI ANP Table MET II-2, with QMS/MET certified or recertified by December 2022 c) Deficiency metrics: Number of identified States with MET deficiencies removed by December 2022 d) Transition Plan metrics: Number of AFI States that have implemented OPMET data in digital format (XML/GML) by December 2022 			
Strategy	<p>All tasks will be carried out by MET experts nominated by AFI States participating in the project, led by the Project-Team Coordinator and under the supervision of the Project Facilitators (ROs/MET, Dakar and Nairobi) through the “Go To Meeting” tool. Upon completion of the tasks, the results will be sent to the Project Facilitators as a final document for submission to the IIM_SG, and approval by the APIRG Projects Coordination Committee (APCC). For the purpose of collaborative decision-making, meetings will be held with the concerned entities (States, Industry, and Secretariat).</p>			

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Rationale	<p>a) SIGMET: The lack of implementation by many/ a significant number of AFI MWO Provider States, of information concerning en-route weather phenomena which may affect the safety of aircraft operations (SIGMET), in the region and their repercussions on the provision of air navigation services call for tools to allow the personnel involved in the different air navigation areas to receive, properly use, and disseminate quality information related to such events.</p> <p>b) QMS: More accurate and timely meteorological information will optimize flight path planning and prediction, thus improving ATM safety and efficiency. Improved aerodrome reports and forecasts will optimise the use of available aerodrome capacity and meteorological information will minimize the environmental impact of air traffic. Performance management will be an important part of meteorological information quality assurance.</p> <p>c) Deficiencies: The decrease or removal of MET deficiencies listed in the APIRG meetings, will increase air navigation safety and efficiency in the region.</p> <p>d) Digital OPMET: progressive implementation of digital OPMET (SIGMET, METAR, SPECI and TAF) in the AFI region, will enable integration of OPMET data into SWIM.</p>		
Related projects	<p>All APIRG specifically projects related to:</p> <ul style="list-style-type: none"> ✓ Implementation of Improved Airport Operations through Airport-CDM (B0/1-ACDM) ✓ Implementation of Optimization of Approach Procedures including Vertical Guidance (B0/1-APTA) ✓ Implementation of Improved Operations through Enhanced En-Route Trajectories (B0/1-FRTO) ✓ Implementation of Improved Flexibility and Efficiency in Descent Profiles (CDO) (B0/1-CDO) ✓ Implementation of Improved Flexibility and Efficiency in Departure Profiles —Continuous Climb Operations (CCO) (B0/1-CCO) 		

Project Deliverable		Relationship with the performance - based regional plan (PFF)	Responsible Party	Status of Implementation	Date of Deliver	Comments
SIGMET	Updated AFI regional SIGMET Guide distributed and placed on ICAO website	AMET and PFF-1	✓ Project Team Coordinator	New edition drafted	Where applicable	Guide updated based on the regional SIGMET Guide Template
	Current level of implementation of SIGMET assessed through annual SIGMET trials	AMET and PFF-1	✓ Project Team Coordinator ✓	Annual SIGMET Tests	Annually	Results of SIGMET Tests in annually will update the level of implementation under the updated edition of the SIGMET Guide
	An updated list of States not compliant with SIGMET format, established	AMET and PFF-1	✓ Project Team Coordinator		Annually	
	Details guidance to States not issuing SIGMET, distributed	AMET PFF-1	✓ Project Team Coordinator		Annually	
QMS						

	An updated list of States not implementing or partially implementing QMS established.	PFF-2	<ul style="list-style-type: none"> ✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-1 Project Team Leader 		Annually	
	Training of MET personnel in States that have not implemented QMS, performed, and training workshop report distributed	PFF-2	<ul style="list-style-type: none"> ✓ PFF Project Facilitators in collaboration with WMO 		where applicable	
	Training on cost recovery mechanism for MET performed; training workshop report encouraging Sates to institute cost recovery	AMET PFF-2	<ul style="list-style-type: none"> ✓ PFF Project Facilitator 		where applicable	
Deficiencies	Current air navigation deficiencies in the MET field, assessed and confirmed	AMET PFF-1	<ul style="list-style-type: none"> ✓ Project Facilitator ✓ Project Team Coordinator ✓ Project Team Members 	MET deficiencies established by APIRG meetings	Annually	Updated MET deficiencies to be established by APIRG meetings

	workshops to assist States concerned to address deficiencies related to the implementation of the AMBEX scheme and for the provision of further advice and awareness, issued and distributed	AMET PFF-2	✓ Project Facilitator ✓		Where applicable	
	An action plan to assist concerned States to remove long lasting MET deficiencies, established	AFI AMET PFF-1	✓ AFI B0-AMET PFF Project Team Coordinator ✓		where applicable	
Digital OPMET	AFI States implemented digital OPMET in BCC and NOCs in accordance with Amendment 79 to ICAO Annex 3	AMET	✓ AFI B0-AMET PFF Project Team Coordinator		Where applicable	In accordance with the AFI digital OPMET transition plan and APIRG Conclusion....