



ICAO

DOMAIN : IIM (Infrastructure & Information Management)

MET PROJECT.3: Implementation of Annex 3 provisions relating to Space Weather requirements within 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 Annex3 provision relating to space weather requirements within the AFI Region</p> <p>MET Project 3 Project-Team Coordinator: South Africa <i>Experts contributing to the Project III-</i></p>		2021	2022
<p>Objective</p>	<p>a) Assist States in the implementation of the requirements for the provision of a space weather information service to support international air navigation as part of ICAO’s Global Air Navigation Plan (Doc 9750), ICAO Annex 3, Annex 15, PANS-ABC and PANS-ATM to include the provision of space weather information that is expected to affect the following areas :</p> <ul style="list-style-type: none"> (i) communications, (ii) (ii) navigation and surveillance system and (iii) (iii)/or pose a radiation risk to flight crew members and passengers. This information should be provided for the evolution of such phenomena in time and space in accordance with ICAO DOC 10100 (Space weather manual) and Annex 3. <p>b) Create awareness of the space weather information requirements within the aviation sector in the AFI region.</p> <p>c) support States with the requirements for the provision of space weather information for the safety of aircraft operations.</p>			

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Scope	<ul style="list-style-type: none"> a) the SIGMET trials will include all Meteorological Watch Offices (MWOs) listed in Table MET II-1 of the AFI ANP Volume II; b) User awareness, training and engagement to develop space weather capabilities within the AFI region will be conducted to continuously engage users on the specific concerns and needs to enhance our understanding and predictive capability with regards to aviation impacts from space weather events within the Region. 		
Metrics	<ul style="list-style-type: none"> a) SANSa ICAO regional SWx center to start providing the SWx information to all the AFI region offices as listed in Annex 3 by November 2022. b) Deficiency metrics : Numbers of AFI MWOs which are disseminating SWx Information within the AFI region c) training, education and awareness workshops conducted before the deadline of November 2022 with regards to understanding the impact space weather. 		
Strategy	<p>All tasks will be carried out by SWx/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 a virtual platform. 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>		

AFI Region	Project Description		
Programme	Title of the Project		Start End
Rationale	<p>a) Space weather advisory: The lack of implementation by a significant number of AFI MWO Provider States, of information concerning en-route space weather phenomena which may affect the safety of aircraft operations (SIGMET), in the Region and their repercussions on the provision of air navigation services calls for tools to allow the personnel involved in the different air navigation areas to receive, properly use, and disseminate SWx information related to such events.</p> <p>b) More accurate and timely space weather information will optimize flight path planning and prediction, thus improving ATM safety and efficiency. Continuous feedback and comment from the space weather information users and operators will help in improving SWx models and forecasts which will optimize the use of available space weather capacity and will minimize the impact on air traffic.</p> <p>c) Deficiencies: The increased training and awareness campaign for AFI States, will increase air navigation safety and efficiency in the Region.</p>		
Related projects	<p>All APIRG specifically projects related to:</p> <ul style="list-style-type: none"> ✓ 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 (MET Project 1) ✓ Implementation of Ground/Ground communication (ATS/DS, AIDC, VoIP) (COM 1) ✓ Implementation of Air/Ground communication (HF/VHF voice data, CPDLC) (COM 3) ✓ Implementation of Conventional Nav' Aids and GNSS (Core and Augmented) (NAV) ✓ Implementation of Surveillance systems (SUR) ✓ Development of Policies and Systems for protection of Aeronautical Frequency ✓ Development of Policies and Systems for protection of Aeronautical Frequency 		

Project Deliverable		Relationship with the performance - based regional plan (PFF)	Responsible Party	Status of Implementation	Date of Deliver	Comments
Implementation of the Space Weather SARPs	Current level of implementation of SWx advisory assessed through annual SIGMET trials	AMET and PFF-1	<input type="checkbox"/> Project Team Coordinator <input type="checkbox"/>	Annual SIGMET Tests	Annually	Results of annual SIGMET Tests will update the level of implementation under the updated edition of the SIGMET Guide
	An updated list of States that have awareness and capability for ingesting the SWx advisory format into their systems established.	AMET and PFF-1	<input type="checkbox"/> Project Team Coordinator		Annually	This will be decided after the survey results have been analyzed
	Detailed guidance to States not currently implementing Annex 3 with regards to space weather information;	AMET PFF-1	<input type="checkbox"/> Project Team Coordinator		Annually	
	Develop a draft AFI Concept of Operations for the dissemination of space weather information within the African continent	AMET and PFF-1	<input type="checkbox"/> Project Team Coordinator		End of 2022	
Deficiencies	Workshops and information awareness sessions to assist States to address deficiencies	AMET PFF-2	Project Facilitator <input type="checkbox"/>		Where applicable	

	An action plan to assist concerned States to understand and interpret SWx information established.	AFI AMET PFF-1	<input type="checkbox"/> AFI B0-AMET PFF Project Team Coordinator <input type="checkbox"/>		where applicable	
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