

**IDENTIFICATION AND DEVELOPMENT OF  
AERONAUTICAL METEOROLOGY PROJECTS**

AFI Region	Project Description		
Programme	Title of the Project	Start	End
<p align="center"><i>Aeronautical Meteorology</i></p> <p><b>(B0-AMET PFF Project Facilitators: ICAO ROs/MET,</b></p>	<p>Implementation of Terminal Area Warnings and Forecasts, Provision of WAFS Forecasts and Optimization of OPMET data exchanges in the AFI Region</p> <p><b>B0-AMET PFF-2</b> <i>Project-Team coordinator: Senegal</i>  <i>9 Experts contributing to the B0-AMET PFF-2 South Africa, Guinea, Cameroon, Côte d'Ivoire Liberia, RFIR, Kenya, Niger, Uganda, WMO, Nigeria, ASECNA, IATA</i></p>	2015	2018
<p>Objective</p>	<p>Assist States in the implementation of :</p> <p>a) Aerodrome warnings and forecasts (AD WRNG) and wind shear warnings and alerts (WS WRNG) in accordance with ICAO Annex 3, Tables A6-2 and A6-3, concerning the preparation, issuance and distribution at the terminal area, of concise information of meteorological conditions which could adversely affect aircraft on the ground, including parked aircraft, and the aerodrome facilities and services. For aerodromes where wind shear is considered a major safety factor, wind shear warnings will give concise information on the observed or expected existence of wind shear which could adversely affect aircraft on the approach path or take-off path or during circling approach between runway level and 500 m above that level and aircraft on the runway during the landing roll or take-off run. Where local topography has been shown to produce significant wind shears at heights in excess of 500 m above runway level, then 500 m will not be considered restrictive.</p> <p>b) the world area forecast system (WAFS) in the standards and recommended practices of Annex 3 and Part V – MET of the AFI, Volumes I, II and III with regard to the use of WAFS products, by which the world area forecast centre (WAFS) in London provides aeronautical meteorological en-route forecasts in uniform standardized formats and disseminated in the AFI region through the Satellite Distribution System for information relating to air navigation (SADIS). States will be also assisted in the implementation of the International Airways Volcano Watch (IAVW) including the implementation of the operational procedures in ICAO Doc 9766 and the AFI Volcanic Ash Contingency Plan (VACP) activities;</p> <p>c) AFI OPMET data Exchange Management and OPMET databanks (RODBs) described in the AFI Meteorological Bulletin Exchange (AMBEX) Handbook in accordance with the provisions in ICAO Annexes 3 and 10 and AFI ANP Volumes I, II and III part V- Meteorology, for the preparation, issuance, distribution and monitoring of OPMET information (METAR, SPECI, SIGMET, TAF, AIREP, Volcanic Ash and tropical cyclones advisories).</p>		

Scope	<p>a) The terminal area warnings part of the project will comprise all AFI International aerodromes listed in Table MET II-2 of the AFI ANP Volume II and aerodromes affected by wind shear events;</p> <p>b) The WAFS and IAVW part of the project is related to all AFI aerodromes listed in the AFI ANP Table MET II-2 and meteorological watch offices listed in column 7 of Table MET II-1 of the AFI ANP.</p> <p>c) The AMBEX part of the project will include AFI aerodromes listed in Table MET II-2 of the AFI ANP including Dakar and Pretoria RODBS, Bulletin Compiling Centres (BCCs), National OPMET Centres (NOCs), AFI volcanic ash advisory centre (VAAC) in Toulouse, tropical cyclone advisory centre (TCAC) in La Reunion and WAFC in London.</p>
Metrics	<p>a) Terminal area warnings metric: Number of international aerodromes listed in AFI ANP Table MET II-1, with Aerodrome warnings and wind shear implemented in December 2017</p> <p>b) WAFS and IAVW metrics: Number of MET Provider States listed in AFI ANP Table MET II-2, with SADIS 2G/secure SADIS FTP implemented in December 2016 – and - Number of MET Provider States listed in AFI ANP Table MET II-1 having volcanoes, with Doc 9766 procedures implemented in December 2016.</p> <p>c) AMBEX metrics: Number of international aerodromes/MOs with AMBEX procedures implemented in December 2015</p>
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 B0-AMET PFF Project Facilitators (ROs/MET, Dakar and Nairobi) through the “GoTo Meeting” tool. Upon completion of the tasks, the results will be sent to the B0-AMET PFF Project Facilitators as a final document for submission to, and if necessary approval by the APIRG Projects Coordination Committee (APCC). For the purpose of collaborative decision-making, meetings will be held with the areas involved.</p>
Rationale	<p>a) Terminal area warnings: The lack of implementation by a number of AFI States in International aerodromes, of information concerning weather phenomena which could adversely affect aircraft on the ground, including parked aircraft, and the aerodrome facilities and services; and aircraft on the approach path or take-off path or during circling approach 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) WAFS and IAVW: The introduction of the new gridded WAFS forecasts is an improvement to the WAFS in terms of improved accuracy, timely distribution, and usefulness of forecasts to facilitate airspace optimisation. The volcanic events with ash dispersion in the AFI Region and their repercussions on the provision of air navigation services call for tools to enable the personnel involved in the different air navigation areas to receive, properly use, and disseminate quality information related to such events.</p> <p>c) AMBEX: the full implementation of the AMBEX scheme will increase the availability of quality OPMET in International aerodromes and also enable AFI States to be prepared for digital OPMET exchange in the future SWIM environment.</p>

Related projects	<p>All APIRG specifically projects related to:</p> <ul style="list-style-type: none"><li>✓ Implementation of Improved Airport Operations through Airport-CDM (B0-ACDM)</li><li>✓ Implementation of Optimization of Approach Procedures including Vertical Guidance (B0-APTA)</li><li>✓ Implementation of Improved Operations through Enhanced En-Route Trajectories (B0-FRTO)</li><li>✓ Implementation of Improved Flexibility and Efficiency in Descent Profiles (CDO) (B0-CDO)</li><li>✓ Implementation of Improved Flexibility and Efficiency in Departure Profiles —Continuous Climb Operations (CCO) (B0-CCO)</li></ul>
------------------	--

Project Deliverable		Relationship with the performance - based regional plan (PFF)	Responsible Party	Status of Implementation	Date of Deliver	Comments
Terminal Area Warnings (AD WRNG & WS WRNG)	Current level of implementation of facilities at aerodromes for monitoring hazardous meteorological conditions, assessed	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinators		December 2016	
	Report on Mission to States not compliant with terminal area warning facilities stipulated in Annex 3 and the AFI ANP, distributed	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader		December 2017	
	Detailed guidance provided to States not issuing terminal area warnings and forecasts	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project	✓	December 2015	✓
	List of States implemented aerodrome warnings, wind shear warnings/alerts and water thickness measurement on the runway to support runway safety plans, distributed	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader	✓	December 2018	✓
WAFS and IAVW	Training seminars in French and English on new WAFS gridded forecasts, conducted and related report placed on ICAO website	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader	✓	December 2015	✓
	a) An updated list of States not receiving WAFS products and areas of constraints in implementing SADIS VSAT and FTP service, established; and	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader	✓	a) 2015/Annually b) December 2017	✓

WAFS and IAVW	b) Remedial action plans developed by concerned States					
	a) An updated list of States with active volcanos not implementing IAVW (volcano observatories and VONA), established and b) Remedial action plans developed by the concerned States	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader	✓	c) 2015/Annually d) December 2016	✓
	Report of AFI volcanic ash contingency plan (AFI VACP) exercises distributed and placed on the ICAO website	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader		December 2015	✓
AMBEX	a) A report on annual assessment of the availability and quality of OPMET data in the region, issued, distributed and placed on ICAO website and b) Remedial action plans developed by the concerned States	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader	✓	e) 2015/Annually f) December 2018	✓
	Two seminars in French and English on the implementation of AMBEX procedures including RODBs, conducted and the report distributed	<b>AFI B0-AMET PFF-2</b>	✓ AFI B0-AMET PFF Project Coordinator ✓ AFI B0-AMET-2 Project Team Leader	✓	December 2016	✓

- ✓ Funds to conduct the meetings, missions and to translate reports, regional guides and manuals. Likewise, participants must be given facilities to participate in Go To Meetings.
- ✓ Funds for meetings with project Team Members in order to assess the results and propose corrective actions. States could use their human resources to conduct the foreseen OPMET tests and monitoring, and, if necessary, cover the financial costs, since the experience gained will result in an improvement of their own systems. Likewise, participants must be given facilities to participate in GoToMeetings.