

**Competency Needs for CMO member States
Operational Aeronautical Forecasters Training
Directors' Survey for Training Needs**

The Caribbean Institute for Meteorology and Hydrology (CIMH) in collaboration with COMET® Meteorology Education and Training Archive is in the process of formulating an online Continuing Professional Development (CPD) course specifically for the CMO Member States National Weather Services. This will include work, which has already started on training modules in the following areas:

- Numerical Weather Products;
- Satellite usage in Operational Forecasting;
- Radar Meteorology.

Early in 2011, CIMH will be commencing work on the CPD with CIMH staff working exclusively on the project to have it ready for testing by September of 2011. The course will be designed to aid current operational forecasters meet the Aeronautical Meteorological Personnel (AMP) Competency Standards as specified in WMO-No. 49, Volume I, and approved by CAeM Task Team on Education and Training (CAeM) in Hong Kong in February, 2010, as required by ICAO by November 2012.

The following are list of possible training area which will satisfy the necessary competency are required by the First and Second level competencies as approved by CAeM in Hong Kong, 2010.

To aid in the process, CIMH wishes to identify any training gaps which may exist your Meteorological Service.

Please check off 'yes' or 'no' to the following needs survey and indicate if your service wishes to take part in the testing phase of the CPD course.

CMO Member State _____xxxxxxx

1. ANALYSE AND MONITOR CONTINUOUSLY THE WEATHER SITUATION	YES	NO
1. Analyse and diagnose ¹ the weather situation as required in forecast and warning preparation. .	YES	
2. Monitor weather parameters and evolving significant weather phenomena (as defined in ICAO Annex 3) and validate current forecasts and warnings based on these parameters.	YES	
3. Appraise the need for amendments to forecasts and updates of warnings against documented criteria and thresholds.	YES	

2. FORECAST AERONAUTICAL METEOROLOGICAL PHENOMENA AND PARAMETERS	YES	NO
<i>Forecasting the following weather phenomena and parameters:</i>		
temperature and humidity	YES	
wind including temporal and spatial variability (wind-shear, directional variability and gusts)	YES	
cloud (types, amounts, height of base and vertical extent)	YES	
precipitation (intensity, onset and duration, amount and types), and associated visibilities	YES	
fog or mist, including onset and duration, and associated reduced visibilities	YES	
other types of obscuration, including dust, smoke, haze,... and associated visibilities	YES	
hazardous weather phenomena listed in Performance criterion 3.1	YES	
wake vortex advection and dissipation, as required.	YES	

3. WARN OF HAZARDOUS PHENOMENA	YES	NO
1. <i>Forecast the following hazardous weather phenomena, including spatial extent, onset, duration, and intensity:</i>		
thunderstorms, particularly organized systems, including associated turbulence, in-flight icing, hail, heavy precipitation with poor visibility, electrical phenomena, down-burst/microburst or gust front, tornadic activity	YES	
turbulence (moderate or greater), including onset and duration, intensity, spatial extent, type (orographic, mechanical, convective and clear air turbulence).	YES	
moderate and severe low-level wind shear		
aircraft icing (moderate or greater), including onset and duration, intensity, accumulation rate, spatial extent, type (rime or opaque, glaze or clear, freezing rain, hoar frost, mixed ice)	YES	
hazardous phenomena affecting aerodromes such as: strong surface winds including cross-winds and squalls,, lightning, wake vortices	YES	
volcanic ash based on observations and/or advisory products	YES	
tropical cyclones.	YES	

Will take part in CPD testing phase.	YES	
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¹ "Analysis" may be defined as answering the question "what is happening?", and "diagnosis" as answering "why is it happening?"