COMPETENCY 3: WARN OF HAZARDOUS MARINE METEOROLOGICAL PHENOMENA

Competency description

Warnings are issued in a timely manner when hazardous conditions are expected to reach documented threshold values and are updated, amended or cancelled, as appropriate, according to documented criteria.

Performance criteria

1. Forecast and issue warning for the following hazardous weather phenomena, variables and parameters, including spatial extent, onset and cessation, duration, intensity and its temporal variations:
   * Tropical cyclones, hurricanes and typhoons;
   * Wind hazards;
   * Thunderstorms, heavy precipitation with poor horizontal visibility, downbursts, microbursts, squalls or gust front, severe hail and tornadic and waterspout activity;
   * Ice accretion:
     + Freezing spray or precipitation and icing on vessels or structures;
     + Snowfall;
   * Restricted visibility (less than 1 nautical mile):
     + Reduced horizontal visibility caused by precipitation, fog, dust, smoke, haze, sandstorms, duststorms and blowing snow;
     + Reduced horizontal visibility caused by volcanic activity;
   * Unusual and hazardous sea-ice conditions:
     + Exceptional and rapidly changing sea-ice conditions;
     + Icebergs;
   * Storm-induced abnormal (sea) water levels:
     + Sea level and storm surge;
     + Harbour seiches;
   * Unusual and hazardous wave or current conditions;

Note: Forecasts for the occurrence of phenomena that cause obscuration to visibility (for example, volcanic eruptions with emission of ash and rock) may be the responsibility of other jurisdictions; in such cases, the Marine Meteorological Services are not required to provide forecasts.

1. Ensure that warning products are prepared and issued in accordance with thresholds for hazardous weather, as specified in the *Manual on Marine Meteorological Services* (WMONo. 558), Volumes I and II , and/or national SOPs, including formats, codes and technical regulations on content, accuracy and timeliness;
2. Ensure that warnings of hazardous weather phenomena are consistent (spatially and temporally), across boundaries of the area of responsibility as far as practicable, while maintaining meteorological integrity. This will include monitoring forecasts/warnings issued for other regions, and liaison with adjacent regions as required.

Background knowledge and skills

* Knowledge of SOPs for warnings;
* Knowledge of marine warning criteria and associated amendment criteria;
* Ability to utilize outputs of forecasting models (deterministic models and EPS);
* Knowledge of local and regional areas of responsibility and warning boundaries.