## Competency Requirements for a Disaster

## Prevention and Mitigation Weather Advisor

These competency requirements are for weather advisors who work in the area of Disaster Prevention and Mitigation (DPM) and engagement with the Emergency Management (EM) community. They build upon, and should be read in conjunction with, the fundamental WMO competency requirements for a PWS forecaster, although it is recognized that some people engaged in liaison and outreach in EM on behalf of NMHSs may not come from a forecasting background. In such cases, the DPM Advisor needs to work closely with the PWS forecaster to develop the products and services indicated in the following sections. A DPM Advisor, taking into consideration the conditions (a) to (c) below:

1. The nationally-defined PWS areas of responsibility;
2. meteorological and hydrological impacts on society; and
3. meteorological and hydrological societal requirements, local procedures and priorities,

should be able to perform the work (in close association with the PWS forecaster if needs be) indicated in the five top level competencies below:

* 1. Communicate warnings and associated information, including uncertainties and confidence levels, to users;
	2. Develop products, procedures and services to meet user needs;
	3. Develop and manage DPM stakeholder relationships;
	4. Promote and implement impact assessments and community outreach; and
	5. Ensure the quality of information, services and procedures.

Each of these top-level competencies is expanded below into second-level competencies that are expressed and structured in such a manner as to facilitate the clear application of an assessment procedure. Each is also associated with a range of background knowledge and skills which may not be particular to meteorology and/or hydrology, but are nonetheless essential for the discharge of the weather advisor’s duties.

1. **Communicate warnings and associated information, including uncertainties and confidence levels, to users**
2. *Demonstrates the capability to present information during severe weather events through all relevant media;*
3. *Is capable of tailoring weather warning products for communication to disaster management decision-makers and other partners;*
4. *Can effectively communicate appropriate levels of confidence and uncertainty to support effective decision-making;*
5. *Demonstrates an ability to communicate information to users, including disaster management decision-makers, on the expected impacts of severe weather.*
6. **Develop products, procedures and services to meet user needs**
7. *Demonstrates a knowledge of the meteorological and hydrological information requirements of the disaster management and civil protection community;*
8. *Is capable of ensuring that the design and dissemination schedule of warnings meets the decision-making needs of the disaster management community in safeguarding life and property;*
9. *Can contribute to the development of very short-range forecasting and nowcasting methods and products tailored for the disaster management community;*
10. *Can contribute to the development of DPM user-focussed probabilistic forecast products based on Ensemble Prediction System (EPS);*
11. *Can contribute to the development of impact-based forecast products designed to assist emergency management agencies with their decision-making processes;*
12. *Can contribute to the improved dissemination of warning information through effective utilization of current and emerging communication technologies; and*
13. *Is capable of applying new technology and scientific research in Multi-Hazard Early Warning Systems (MHEWS).*
14. **Develop and manage DPM stakeholder relationships**
15. *Demonstrates a capability to establish and maintain working relationships at operational and technical levels with the emergency management community;*
16. *Can build and maintain relationships with the media to enable optimal communication of warnings and information prior to, during and after high impact weather events;*
17. *Is able to facilitate coordination between the NMHS and relevant agencies to improve emergency planning, preparedness, and response to weather threats, with particular emphasis on the specific needs of megacities where appropriate;*
18. *Can assist in the design of effective warning signal systems for coordinated emergency response to meteorological and hydrological hazards;*
19. *In close coordination with the emergency management authorities, can contribute to the development of response advice and call-to-action statements based on the potential impact of hazards; and*
20. *Is able to manage an appropriate level of expectation in NMHS capacity among DPM stakeholders.*
21. **Promote and implement impact assessments and community outreach**
22. *Can participate in the assessment of the socio-economic impact of meteorological and hydrological events, in collaboration with relevant experts;*
23. *Is able to foster coordination with socio-economic experts in order to evaluate the benefits of meteorological and hydrological early warning systems; and*
24. *Demonstrates an ability to promote community awareness and preparedness for high impact meteorological and hydrological events through public education and outreach.*
25. **Ensure the quality of information, services and procedures**
26. *Can facilitate sustainable and formalised feedback mechanisms, including user-based service assessment and product verification, for evaluating and improving warnings;*
27. *Has the ability to work with disaster management authorities to strengthen the role of NMHSs as the “Single Official Voice” for warnings of high impact weather events;*
28. *Can contribute to the development of a communication strategy to ensure credibility of, and effective response to, warnings of high impact weather events;*
29. *Can coordinate standard operating procedures relating to multi-agency and multi-hazard risk management and emergency planning;*
30. *Is able to contribute to the development of documentation and archiving systems for meteorological and hydrological hazard and impact data, including quality assurance and data management;*
31. *Can engage effectively with international projects including the World Weather Information Service (WWIS), the Severe Weather Information Centre (SWIC), METEOALARM, the Severe Weather Forecasting Demonstration Project (SWFDP) and other WMO initiatives as appropriate.*

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