**WMO TD/No. 778**
**Section 5 Annex 9**

# ROLE OF NATIONAL METEOROLOGICAL SERVICES (NMSs)

1. Role of NMSs
   (a) Using and providing all available meteorological data, from the NMS network and other agencies' facilities;
   (b) Implementing and operating tools including meteorological NWP models, local dispersion models, related visualisation and geographic information systems and possibly source term models;
   (c) Review which models are being run at industries or at emergency response agencies so as to ensure proper use of models*; however, not necessarily the role of NMHSs.*
   (d) Provide meteorological expertise and advice to national, regional and local emergency response teams;
   (e) Cooperate with the national emergency response/disaster management agencies and play an active support role by participation in emergency contingency planning and simulation exercises.

2. Possible gaps in the provision of services

2.1 While it is recognized that the identified roles of the NMSs are broad in relation to requirements in supporting emergency response for chemical incidents, and that individual NMSs may prioritize certain roles as more critical to implement than others, it should be noted that due to present day operational realities, NMSs are generally not in a position today to provide specialized support to response in:
   (a) Very short time scale incidents;
   (b) The near field (i.e. near the source);
   (c) Complex source and obstacles to flow (e.g. buildings wake);
   (d) Spills where chemicals are released into a body of water.

2.2 The operational capabilities and communications for provision of NMS services at national, regional and local offices to meet emergency response operations may in some cases not be assured during emergency situations.

2.3 Issues needing to be addressed include minimum standards for dispersion models with a view to harmonization of inputs (in relation to measurement data) and outputs (in relation to parameters used in defining hazards). A methodology is needed for calculating uncertainties in the model estimates, or the sensitivities of outputs to varying input parameters.