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| WORLD METEOROLOGICAL ORGANIZATIONCOMMISSION FOR BASIC SYSTEMSOPAG on DPFSEXPERT TEAM ON EMERGENCY RESPONSE ACTIVITIES (ET-ERA)VIENNA, AUSTRIA, 1-5 OCTOBER 2018 |  | CBS-DPFS/ET-ERA/Doc. 5.2(3)(I.X.2018)\_\_\_\_\_\_\_Agenda item : 5.2ENGLISH ONLY |

**Application of RSMC Toulouse to become a RSMC for Non-Nuclear Emergency Response: present capabilities and planned activities**

*(Submitted by François Lalaurette)*

##### Summary and purpose of document

This document provides background information on the application of RSMC Toulouse to become a RSMC for Non-Nuclear Environmental Emergency Response.

##### Action Proposed

The meeting is invited to review the summary for their information.

# 1. Introduction

Toulouse is already a Regional Meteorological Specialized Centre for nuclear response for WMO RA I and VI (joint responsabilty with RSMC Exeter).

It provides meteorological support in case of national non-nuclear emergency activity, especially in case of chemical accidents:

* 24H/7D support with a crisis operation centre with an operational system completly integrated.
* A large number of routine exercices both for nuclear and non-nuclear support for French authorities (on « SEVESO » sites for example)

Different in-house operational Atmospheric Transport Dispersion Model (ATDM) are maintained in operational conditions:

* A global ATDM MOCAGE (large scale) can be coupled with global atmospheric model ARPEGE or IFS (see WMO-TD 778)
* A local ATDM PERLE (small scale) can be coupled with ARPEGE, IFS or AROME (not used for RSMC purposes at the moment)
* ATDM-EPS based MOCAGE/PEARP could also be considered in the future



# 2. Planned RSMC activities for non nuclear events

* Responsability for non-nuclear activities for WMO RA I and VI as for nuclear activities
* Same 24H/7D operational organisation that is used for nuclear activities
* Proposed activities : all of defined in Appendix A.II.2.29 of the manual on GDPFS
	+ Smoke from industrial fire
	+ Chemical releases not involving fire
	+ Smoke from forest, grass or peat fires (one point-source only at the moment, surface treatment to come later)
* The current mirror website for nuclear activities cannot be used
	+ As a first step, products would be disseminated to users by email
	+ Requests should include contacts outside the NHMS if any
	+ Other procedures would be mirrored on nuclear activities
* Proposal : a first exercise should be conducted by the end of 2018/ early 2019

**3. Operational features for non-nuclear activities**

* Alert reception by email from an authorized person with filled form for non-nuclear request as defined by ERA group (Appendix A.II.2.2.9e of the manual on GDPFS)
* Situation analysis
* Use agreed default emission source parameters for essential parameters when actual source information is not available (defined in Appendix A.II.2.30)
* Run of the well-appropriated ATDM system
* Within 2 hours from the request reception, make available a range of products to the NMHS operational contact point by e-mail or retrieval from the RSMC password protected designated website (list given in Appendix A.II.2.29).
* Make available on a website up-to-date information on the characteristics of its atmospheric transport and dispersion modelling (ATDM) system

**4. Model developpements**

* Graphical outputs will be available for 0-200m layer "snapshot concentration charts" (instead of 0-500m for nuclear CMRS "cumulated concentration charts")
* 3 hourly outputs will be added to all models
* RSMC will take benefit in the future from :
	+ the use of a regional ATDM model : PERLE system (based on FLEXPART dispersion module) to get a better resolution
	+ studies conducted in the frame of COPERNICUS (CAMS)

