

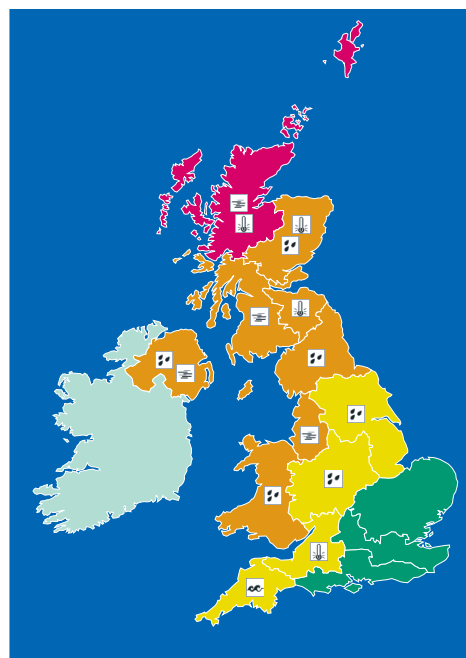
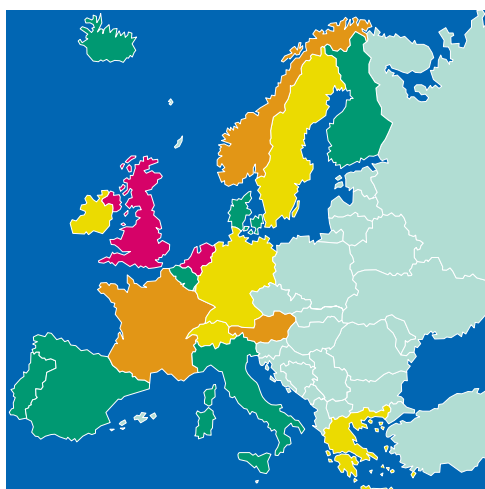
EUMETNET project EMMA

EMMMA is the acronym for "European Multiservice Meteorological Awareness system". It will provide a graphical presentation system on the World Wide Web, the Internet. The system is primarily about weather awareness and indirectly about weather warnings.

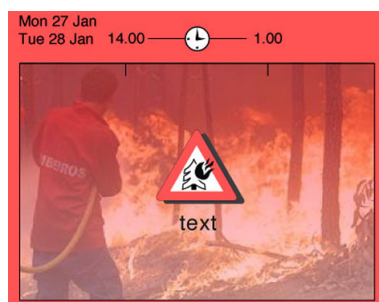
Awareness presentation

The graphical presentation will consist of a geographical map of Europe and sub maps from countries and their national territories. Each country is divided into predefined regions. Each region will be coloured with an awareness level colour. The awareness level is assigned for a forecast period of 24 hours from the latest update sent in to the EMMA-server by each participating National Meteorological Service (NMS). Continuously updated awareness information by each NMS is allowed within EMMA. The highest awareness level for a region within the 24-hour period defines the awareness colour of this country on the European map. Ten weather phenomena have been defined for which awareness information will be triggered within EMMA: Wind, Rain, Snow and/or Ice, Thunderstorms, Fog, Temperature extremes (hot or cold spells), Coastal events (storm surge), Forest fires and Avalanches. For each phenomenon a pictogram has been developed. Starting from a certain level of awareness (yellow or orange) a pictogram is added within the coloured country region. This pictogram clearly defines the weather phenomenon that is at stake. By "clicking" on a coloured region the user will obtain more detailed information on the situation for that region. This information is displayed on a

European map, country colours, represent the level of awareness that is valid. Colour of each country is defined by the highest awareness level in the country regions National map gives all details for each region of the country. Additional maps might be available for overseas territories A maximum of two pictograms can be presented within one region.



background picture showing the possible impact of the phenomenon together with the assigned colour level and a graphical presentation on the expected intensities and timeframes. A link to the national Internet site of each NMS will provide the text messages of the latest warnings that are issued relating the awareness situation. A clear explanation of the strategy for each NMS in assigning awareness level colours, as well as on warning criteria, will be provided by linking the EMMA system to the NMS Internet servers. All of this information will be very easily accessible.



Clicking on the picto within a region generates more detailed information. Such as:

- Background picture giving you a better feeling for the event at stake. Possible risks, without being to extreme or panicking.
- The intensity of the phenomenon that is expected.
- The time axis on which the phenomenon is expected.

All the 10 pictograms of weather phenomena covered within EMMA



EMMA for the general public

This graphical presentation is primarily meant for the European citizen to give them a detailed view on potential danger due to the weather situation all over Europe. The level of potential danger is defined by 4 awareness levels. The assignment of awareness colours is to be decided by each NMS responsible for delivering EMMA information. Awareness colour assignment has to be organised in a very consistent way on the national level. Colour assignment is not harmonized between European countries but is fully compliant with NMS weather warning strategies. EMMA should give the general public awareness about dangerous weather and its impact. The awareness levels should help them to anticipate potentially dangerous situations due to the weather:

- **Green:** In general no significant awareness
- **Yellow:** Awareness and danger for certain meteorological dependant activities
- **Orange:** High awareness and danger
- **Red:** Extreme awareness and danger

EMMA for weather forecasters at the NMS's

The EMMA system allows meteorologists at the different NMS's to monitor all official severe weather warnings that are in operation within Europe in a very easy way. All the national warnings relating to each European country will be incorporated into EMMA by clicking on a "link" next to the background picture. This link will bring the user to the NMS-server where the text information on actual warnings can be read and background information on warning strategies and criteria can be found. In this way meteorologists will also have a greater opportunity to liase with colleagues when severe weather situations are developing whilst interaction with Civil Security authorities will be improved as well.

The EMMA-system will compliment national warning systems by offering the extra possibility to import national warnings into a European Graphical Presentation system on the Internet without changing national procedures or criteria.

About the EMMA project and its progress

The idea of a European graphical presentation on exchange of warning information was initiated by the Working Group on Cooperation between European Forecasters (WGCEF). It resulted in the EMMA project that was proposed and accepted by EUMETNET. The project has been conducted by a project consortium involving **Météo-France (MF)**, **Deutsche Wetterdienst (DWD)**, **the Met Office (UKMO)** and **the Koninklijk Nederlands Meteorologisch Instituut (KNMI)**. Météo-France is the general lead of the project.

An expert group with representatives from all participating NMS's will review all the ideas generated within the project work packages. This expert group will frequently meet to have discussions and propose revisions. A lot of the work that should be done within the

The kick-off for the project was given October 2002. The project will take about 18 months before operational implementation, expected mid 2004.

There will eventually be 18 participating NMS's within EMMA:
Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Testing the EMMA-system

At the time of writing, the project was moving ahead rapidly and a testing period is expected sometime in February 2004. Testing will be performed on the technical aspects of the system and on the contents of its information. This will be done in a real operational mode with around five NMS's taking part initially. The information will be available to all of the other participating NMS's on a special EMMA-extranet site accessible by a user code and password. Information on how to access the prototype EMMA-system will be given in due course.

Frank **Kroonenberg**
KNMI

EMMA is EUMETNET-project

- Météo-France (in lead)
- KNMI (WP2 Definition of Vigilance Presentation)
- Météo-France (WP3 Organisation of production)
- UK Metoffice (WP4 Implementation)
- DWD (WP5 Demonstration and test)
- Expert Group from NMS's (Reviews)

Try out January 2004

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EMMA Vigilance Presentation

- EMMA on Internet (General public and Forecasters)
- Awareness and warning Information at one glance (graphical symbols)
- Several review meetings by Expertgroup, 25 nov 2002 and 12 May 2003, next 25/26 Nov 2003

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The power-point presentation that was given on EMMA during the last WgCEF meeting in Rome

Questions (to be) solved

- Graphical presentation of the warning contents (class table)
- Colour codes (green/yellow/orange/red)
- Pictograms also understandable for the general public (new picto's dedicated for EMMA)
- Update frequency recommendations: Flash warnings (continuously)
- Time horizon EMMA: Early Warnings (24 hours, moving time horizon)
- Archiving (yes, for the moment only printable pdf colour maps)
- International meaning Colour Codes (no harmonisation)
- Keeping warnings up to date (responsability NMS, check EMMA-system on expire)
- Defining minimum update obligations (once each 24 hours)
- Colour blindness (B/W shaded)

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Weather parameters

- wind
- rain
- snow/ice
- thunderstorms
- fog
- temperature extremes
- coastal events
- forest fire
- avalanches

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<http://www.metoffice.com/emma/>

User: emma
Password: warning

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