

Minutes of the MAP D-PHASE Steering Committee meeting, 8 November, Vienna

Participants: Andrea Buzzi, Manfred Dorninger, Christoph Hegg, Andrea Montani, Ken Mylne, Roberto Ranzi, Evelyne Richard, Andrea Rossa, Mathias Rotach, Michael Staudinger, Lucio Torrisi (for Giuseppe Frustaci), Hans Volkert, Volker Wulfmeyer, and Marco Arpagaus (MD coordinator; minutes)

Excused: François Bouttier, Giuseppe Frustaci, Christoph Schär

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1 Opening, agenda, minutes

Mathias Rotach opened the meeting and welcomed all participants. – A special welcome to Andrea Rossa, the chairman of COST action 731 and new member of the Steering Committee.

The agenda was adopted unanimously.

The minutes of the last meeting (13-14 March 2006, in Zurich) have been approved with thanks to the author.

2 Information

2.1 Data archive and generation of atmospheric model products

Volker Wulfmeyer informed on the current status of the data archive and the generation of atmospheric model products. Concerning the generation of atmospheric model products, the following points are worth noting:

- COPS has agreed to provide the common GrADS scripts to be made available to every atmospheric model provider to generate the products. Responsible and contact person is Volker Wulfmeyer (task COPS-Ch 1).

- It has been agreed (WG-DI) that all variables that need to be visualised are either available on the GRIB files or easily calculable from the available variables. – Input GRIB files for the GrADS scripts do not necessarily need to be identical to the GRIB files sent to the DA, since some variables may only be of interest for plotting purposes (*Note added in proof: Except from some probabilistic products from the ensemble systems, no variables will only be needed for plotting and not written to the DA. Therefore, the GRIB files for plotting and storage will be essentially identical*).
- Atmospheric model products should be sent to the D-PHASE Visualisation Platform as well as to the COPS Operations Centre.

2.2 Visualisation platform

Next Generation Software (private company also responsible for www.meteoalarm.eu and www.meteorisk.info) is not in the position to offer the technical realisation of the D-PHASE Visualisation Platform.

Discussion (*some selected statements only, since a solution to realise the VP has in the meantime been found, see below*):

- Rotach: The visualisation of the alerts for different regions is essential for the success of D-PHASE.
- Ranzi: The colour coding of the alert visualisation should be coordinated with other warning platforms throughout Europe to avoid any confusion.
- Rotach: Thresholds can be specified by the users (the three colours yellow, orange, and red are fixed). – Consistency with meteoalarm and meteorisk colour codes will be the goal.
- Ranzi: The VP should take care of flash floods. – Add some short accumulation times (e.g. 1h) to the already defined longer ones of 12, 24, 48, and 72 hours as relevant time scales for alerts.
- Hegg: The coarser scale warning maps should be mainly based on probabilistic information, whereas for smaller scale maps should as much as possible respond to specific user needs.
- Rotach: The hydrological part of the VP (visualisation of alerts) needs to be specified as soon as possible (task WG-HEU 7).

Note added in proof (12.1.2007): *After substantial efforts by Michael Staudinger (project leader of www.meteorisk.info) and different colleagues at MeteoSwiss, Next Generation Software has reconsidered its decision and will indeed implement the D-PHASE VP. The contract with Next Generation Software is currently being finalised and should be signed in the next few days. Technical work on the VP has started in mid December 2006.*

2.3 Money from MAP NWS

The surplus money of MAP NWS (some 20 k€) may be made available to D-PHASE. If additional money is needed to finance the technical realisation of the VP, some advance-payment (which may be recovered through the upcoming Meteorisk II proposal) by MeteoSwiss may be feasible.

3 Review of critical tasks on the action list

The most critical tasks on the action list have been discussed briefly.

- WG-DI 2:
The sub-tasks related to atmospheric models should be finished within the next 10 days (*Note added in proof: Almost done.*). – Not much has been done for hydrological models.
- WG-DI 7:
A draft for the visualisation is available (proposal by MeteoSwiss forecasters). Marco Arpagaus will send it to WG-DI and COPS for feedback, which should be provided as soon as possible (i.e., within the next 10 days; *Note added in proof: Still ongoing. Needs to be worked on urgently.*).
- WG-DI 10:
Nothing done so far. – Felix Ament (MeteoSwiss) will provide a draft within the next 10 days, based on the xml format used within Meteoalarm. This xml format will be common for all components (i.e., atmospheric models, hydrological models, etc; *Note added in proof: Format almost finalised.*).
- WG-DI 12:
Manfred Dorninger will provide a proposal within the next 10 days (e-mail to Andrea Montani; *Note added in proof: Nothing done so far.*).
- WG-HEU 7:
See discussion on VP above (point 2). Marco Arpagaus will organise a meeting with Hegg and possible providers (i.e., Next Generation Software, etc) for the VP as soon as possible (*Note added in proof: Meeting has taken place on 27 November.*).
- WG-HEU 10:
There is no (hydrological) interest in D-PHASE from France (!). – Evelyne Richard remains the WG-HEU focal point for France.
- WG-VER 1:
Essentially done.
- MD-Co 6:
Tasks transferred to MD-DA (Claudia Wunram). – The Coordinator (MD-Co; Marco Arpagaus) will take care of the input for the MD-IP.
- MD-Co 8:
See comments to WG-HEU 7.
- MD-Co 9:
Specification of warning criteria for alerts for meteorological forecasters from MeteoSwiss have been collected. No feedback from any other forecasting centre.
- WG-VP 6:
This task (specification of target areas) is absorbed in WG-HEU 3.

The MD coordinator will update the task list accordingly, and has received the mandate to re-formulate and re-shuffle tasks where appropriate.

Most tasks should (among other things) result in some text for the MAP D-PHASE Implementation Plan (MD-IP). Up to now, no text blocks have been submitted to the editor of the MD-IP (MD coordinator; marco.arpagaus [at] meteoswiss.ch).

The updated action list, resulting from this meeting, as well as a list of acronyms can be found in appendix 1 and 2, respectively, at the end of this document.

4 Open issues from the Working Groups

Skipped due to lack of time.

5 Information on related projects

Skipped due to lack of time.

6 Next meeting and any other business

The next meeting of the MAP D-PHASE Steering Committee will take place on 28 March 2007, in Hohenheim (3rd day of the COPS workshop).

The next D-PHASE meeting of the WG chairs will take place on 5-6 February 2007 (noon to noon) in Zurich.

What about the next scientific meeting?

- Ranzi: Should we involve the end users (and hence make a meeting in May 2007)?
- Hegg: Due to language issues, rather opt for national end user meetings.
- Volkert: Should have a motivation meeting, before or during early DOP.
- Hegg: Will organise a Swiss end-user meeting, which is nevertheless open to everybody.

Decisions:

- Organise end user meeting (information and training) in Switzerland (between dry run and DOP, preferably in May 2007), which is open to everyone. Coordinate with Italy for possible synergies with a meeting for Italian end users (*Note added in proof: Stefano Tibaldi would be interested to help organising a meeting in Parma, the location of the hydrological service of Emilia-Romagna*).
- Plan for another science meeting in late spring 2008, maybe in Italy? – Mathias Rotach will contact the Italian members of the MD-SC.

Dry run:

Due to the fact that the realisation of the VP is unclear (*is not anymore at the time of writing, see above*), a short discussion on the date for the dry run was initiated:

- Rossa: Could we make the product browser available, and keep the dry run?
- Mylne: Keep the dry run – and implicitly test whether the project can do without the VP ...
- Volkert: Don't take momentum out! – Keep the dry run.
- Montani: Dry run is still valuable to test all the rest (bilateral exchange of data and alerts, DA, etc). – Could we however extend the duration of the dry run?
- Rotach: The consensus is to keep the dry run. – The WG chairs will decide at their next meeting, whether the dry run should be extended in time and/or repeated later in spring.

Mathias Rotach closed the meeting at 17:00, sharp. – Despite the uncertainty related to the VP, this concludes three very interesting and important days for D-PHASE. Thanks again to Manfred Dorninger for organizing a very successful first MAP D-PHASE scientific meeting at the Springer Schössl in Vienna!

Appendix 1: Updated action list¹

Updated action list (status as of MAP D-PHASE Steering Committee meeting, 8 November 2006)

Identifier	Action	Responsible	Due date	Remarks
WG-DI 2	Work out detailed specification of information flow for and common format of output data. Define variables and lead times needed as input for the hydrological models. – Concerning the data format for the atmospheric models, WG-DI will provide a GRIB table with the standard WMO GRIB coding parameters for all the variables, with a suggestion for the parameters used for the variables not covered by the WMO standard. <i>Still missing:</i> - information flow (frequency, timing; MD-IP n.1.2) - final specification for GRIB format (MD-IP 3.1.3) - definition of output format for hydrological models (MD-IP 4.1.3)	WG-DI	asap	See MD-IP sections 3.1.2, 3.1.3, 4.1.2, 4.1.3, 5.1.2, 5.1.3, 6.1.2, and 6.1.3. – Coordinate with WG-VER 1.
WG-DI 4	Work out detailed specification of warning criteria for alerts by limited area EPSs and the high-resolution EPS for ensemble hydrological models. <i>There may be no ensemble hydrological model that requests specific alerts. – Check ...</i>	WG-DI	asap	See MD-IP section 3.2.2.
WG-DI 6	Work out detailed specification of information flow for feedback. <i>Still missing:</i> - feedback strategy for forecasters (MD-IP 7.3.2; coordinate with WG-VER) - feedback strategy for end users (MD-IP 8.3.2; coordinate with WG-HEU and WG-VER)	WG-DI	02.2007	See MD-IP sections 7.3.2 and 8.3.2. – Coordinate with WG-VER 2.
WG-DI 7	Work out detailed specification of atmospheric model / hydrological model / nowcasting products to be visualised. <i>Still missing:</i> - final specification for visualisation of atmospheric data (MD-IP 3.1.4) - definition of products from hydrological models (MD-IP 4.1.4)	WG-DI	asap	See MD-IP sections 3.1.4, 4.1.4, and 5.1.4.
WG-DI 8	Work out detailed specification of warning criteria for alerts by limited-area EPSs for atmospheric models. <i>There may be no request for such an alert. – Check ...</i>	WG-DI	asap	See MD-IP section 3.2.2.
WG-DI 9	Work out detailed specification of information flow for alerts.	WG-DI	asap	See MD-IP sections 3.2.3, 4.2.3, 5.2.3, 6.2.3, and 7.2.3.
WG-DI 10	Work out detailed specification of common format of alerts.	WG-DI	asap	See MD-IP sections 3.2.4,

¹ For acronyms, check appendix 2.

Updated action list (status as of MAP D-PHASE Steering Committee meeting, 8 November 2006)

Identifier	Action	Responsible	Due date	Remarks
				4.2.4, 5.2.4, 6.2.4, and 7.2.4.
WG-DI 11	Work out detailed specification of common format for feedback. <i>Still missing:</i> - format for feedback by forecasters (MD-IP 7.3.3; feedback will presumably be in an electronic form, cf. WG-DI 6) - format for feedback by end users (MD-IP 8.3.3; feedback will presumably be in a non-electronic form, e.g., by interview or paper questionnaires)	WG-DI	asap	See MD-IP sections 7.3.3 and 8.3.3.
WG-DI 12	Work out detailed specification of online monitoring products to be visualised.	WG-DI	asap	See MD-IP section 9.1.4.
WG-HEU 3	Work out detailed specification of target and impact areas.	WG-HEU	asap	See MD-IP section 2.4.
WG-HEU 4	Work out detailed specification of warning criteria for alerts produced for (deterministic) hydrological models. <i>There may be no (deterministic) hydrological model that requests specific alerts. – Check ...</i>	WG-HEU	asap	See MD-IP sections 3.2.2, 5.2.2, and 6.2.2.
WG-HEU 6	Search for specific sites where cost/loss analysis can be carried out.	WG-HEU	03.2007	
WG-HEU 7	Work out detailed specification of visualisation of alerts. <i>Still missing:</i> - visualisation of hydrological alerts (MD-IP 4.2.5)	WG-HEU	asap	See MD-IP sections 3.2.5, 4.2.5, 5.2.5, 6.2.5, and 7.2.5.
WG-HEU 8	Work out detailed specification of warning criteria for alerts produced for hydrological forecasters.	WG-HEU	asap	See MD-IP sections 3.2.2, 4.2.2, 5.2.2, 6.2.2, and 7.2.2.
WG-HEU 9	Collect and document end user specifications concerning alerts (warning criteria).	WG-HEU	asap	See MD-IP section 7.2.2.
WG-HEU 11	Organise end user meeting in Switzerland, mainly for training/educational purposes. – Input: results / information of end user questionnaire.	Hegg	05.2007	Open to everyone; coordinate with Italy (Ranzi, Tibaldi, etc).
WG-VER 1	Define variables and lead times to be verified. <i>Still missing:</i> - final specification for GRIB format (MD-IP 3.1.3, see MD-DI 2) - definition of variables and lead times for hydrological models (MD-IP 4.1.3)	WG-VER	asap	See MD-IP sections 3.1.3, 4.1.3, 5.1.3, and 6.1.3. – Coordinate with WG-DI 2.
WG-VER 2	Work out detailed specification of evaluation protocol for feedback. <i>Still missing:</i> - final specification of evaluation protocol for forecasters (MD-IP 7.3.1) - specification of evaluation protocol for end users (MD-IP 8.3.1)	WG-VER	02.2007	See MD-IP sections 7.3.1 and 8.3.1. – Coordinate with WG-HEU.

Updated action list (status as of MAP D-PHASE Steering Committee meeting, 8 November 2006)

Identifier	Action	Responsible	Due date	Remarks
WG-VER 3	Work out detailed specification of offline verification.	WG-VER	03.2007	See MD-IP section 9.2.
WG-VER 4	Make offline verification.	WG-VER		See MD-IP section 9.2.
WG-VER 5	Work out detailed specification of feedback assessment.	WG-VER	03.2007	See MD-IP section 9.3.
WG-VER 6	Make feedback assessment.	WG-VER		See MD-IP section 9.3.
WG-VER 7	Provide a list of all observations (variables) that are needed from the Met Services, and that should be stored on the data archive.	WG-VER	asap	Input for WG-DP 1.
WG-DP 1	Ensure that all necessary observational data will be provided (Met Services should be the main data providers).	WG-DP	asap	Observational data should be available n month (to be defined by WG-VER) after measurement time. – Coordinate with COPS.
WG-DP 2	Investigate possibility to obtain non-GTS data from COSMO.	WG-DP	asap	E.g., precipitation data. – Possibility exists; formalisation pending.
WG-DP 3	Work out detailed specification of coordination required to initiate extra observations. <i>Really needed (no request for extra observations received so far)?</i>	WG-DP	03.2007	See MD-IP section 2.3.
WG-DP 4	Contact Meteorisk / Michael Staudinger to check whether precipitation and radar data available to Meteorisk could be made available to D-PHASE, too.	WG-DP	03.2007	
MD-Ch 2	Clarify status of additional observations by EUCOS.	Rotach	asap	Coordinate with MEDEX efforts.
MD-Ch 3	Prepare WWRP FDP and/or MAP D-PHASE letter of recommendation for possible proposals to national funding bodies.	Rotach	on request	
MD-Ch 4	Contact Italian members of the MD-SC for a possible D-PHASE scientific meeting in Italy in late spring 2008.	Rotach	03.2007	
MD-Co 8	Work out detailed specification of the technical realisation of common visualisation platform.	Arpagaus	asap	In collaboration with MD-VP. – See MD-IP section 10.2.
MD-Co 10	Provide software that generates atmospheric model alerts.	Ament	asap	See MD-IP section 3.2.2.
MD-Co 11	Collect input for and edit MD-IP.	Arpagaus	ongoing	

Updated action list (status as of MAP D-PHASE Steering Committee meeting, 8 November 2006)

Identifier	Action	Responsible	Due date	Remarks
MD-DA 1	Implement the technical realisation of storage and retrieval of data, alerts, and feedback.	Wunram	asap	See MD-IP sections 10.1.1 – 10.1.3.
MD-DA 3	Work out detailed specification of the technical realisation of information flow.	Wunram	03.2007	In collaboration with MD-VP. – See MD-IP section 10.3.
MD-DA 4	Implement the technical realisation of information flow.	Wunram	05.2007	In collaboration with MD-VP. – See MD-IP section 10.3.
MD-DA 7	Work out detailed specification of the technical realisation of storage and retrieval of data, alerts, and feedback.	Wunram	asap	In collaboration with MD-Co and COPS-Co. – See MD-IP sections 10.1.1 – 10.1.3.
MD-VP 1	Implement the technical realisation of common visualisation platform.	Kittel	02.2007	See MD-IP section 10.2.
MD-VP 2	Implement visualisation of alerts.	Kittel	02.2007	See MD-IP sections 3.2.5, 4.2.5, 5.2.5, 6.2.5, and 7.2.5.
MD-VP 3	Implement evaluation protocol for feedback.	Kittel	03.2007	See MD-IP sections 7.3.1 and 8.3.1 (?).
MD-VP 4	Implement information flow for feedback.	Kittel	03.2007	See MD-IP sections 7.3.2 and 8.3.2 (?).
MD-VP 5	Implement common format for feedback.	Kittel	03.2007	See MD-IP sections 7.3.3 and 8.3.3 (?).
MD-VP 7				
COPS-Ch 1	Provide software that generates atmospheric model products.	Wulfmeyer	asap	See MD-IP section 3.1.4.

Appendix 2: List of acronyms

APAT	Agenzia della Protezione dell'Ambiente e per i Servizi Tecnici (Agency for Environmental Protection and Technical Services), Italy
ARPA-SIM	Agenzia Regionale per la Prevenzione e l'Ambiente dell'Emilia-Romagna – Servizio IdroMeteo, Italy
ARPAL-CFMI-PC	Agenzia Regionale per la Protezione dell'Ambiente Ligure – Centro Funzionale Meteo Idrologico di Protezione Civile, Italy
CIMA	Centro di Ricerca Interuniversitario in Monitoraggio Ambientale, Italy
COPS	Convective and Orographically-induced Precipitation Study; Intensive Observation Period of the Priority Program 1167 "Quantitative Precipitation Forecast" of the German Research Foundation, June – August 2007, south-western Germany and north-eastern France; http://www.uni-hohenheim.de/spp-iop
COPS-Co	COPS Coordinator (Andreas Behrendt; behrendt [at] uni-hohenheim.de)
COPS-Ch	Chairman of the COPS ISSC (Volker Wulfmeyer; wulfmeyer [at] uni-hohenheim.de)
D-PHASE	D emonstration of P robabilistic H ydrological and A tmospheric S imulation of flood E vents in the Alpine region; a WWRP Forecast Demonstration Project in the framework of MAP (and hence also referred to as MAP D-PHASE)
DA	Data Archive
DFG	Deutsche Forschungsgemeinschaft
DLR	Deutsches Zentrum für Luft- und Raumfahrt, Germany
DWD	Deutscher Wetterdienst, Germany
FZK IMK-IFU	Forschungszentrum Karlsruhe, Institute for Meteorology and Climate Research, Germany
INM	Instituto Nacional de Meteorología, Spain
IP	Implementation Plan
ISAC-CNR	Institute of Atmospheric Sciences and Climate - National Research Council, Italy
MAP	Mesoscale Alpine Programme; a WWRP Research and Development Project
MAP D-PHASE	WWRP Forecast Demonstration Project in the framework of MAP; see also 'D-PHASE'
MD	MAP D-PHASE; only for internal use
MD-	MD, (optional) prefix for MD specific acronyms
MD-Ch	Chairman of the MD-SC (Mathias Rotach; mathias.rotach [at] meteoswiss.ch)
MD-Co	MD Coordinator (Marco Arpagaus; marco.arpagaus [at] meteoswiss.ch)
MD-DA	Person responsible for the MD Data Archive (Claudia Wunram, claudia.wunram [at] zmaw.de)
MD-SC	MD Steering Committee
MD-VP	Person responsible for the MD Visualisation Platform (Gerhard Kittel; gerhard.kittel [at] ng-software.at)
Meteoalarm	Warning platform established within the EUMETNET framework (formerly known as EMMA); http://www.meteoalarm.eu
Meteorisk	EU (INTERREG IIIB Alpine Space) funded project; http://www.meteorisk.info
MeteoSwiss	Federal Office of Meteorology and Climatology MeteoSwiss, Switzerland
MPI	Max Planck Institute for Meteorology, Germany
QBOLAM	Quadrics BOlogna Limited Area Model
SRNWP	Short Range Numerical Weather Prediction, EUMETNET Programme
VP	Visualisation Platform

WMO	World Meteorological Organization; http://www.wmo.int
WG	Working Group
WG-DI	WG Data Interface
WG-DP	WG Data Policy
WG-HEU	WG Hydrology and End Users
WG-VER	WG Verification
WWRP	World Weather Research Programme; http://www.wmo.int/web/arep/wwrp