



# **CAMS-84**

## **Minutes of the PM2 telecon**

Minutes compiled by  
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KNMI

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## Agenda

Agenda WebEx meeting 9 february 2016, 9:30 - 12:30 CET

1. Welcome
2. Announcements by the Service Manager (Jacques):  
reporting, subcontracts, KPIs, news from last CAMS SLB, DWD-MPG, RedMine, actions last time ...
3. NRT validation report (Vincent & all) (WP1 and WP4):  
all: prepare a few slides with highlights, developments, status new activities, mention delays if any

(coffee break)

4. Web sites (WP 2):  
progress in implementing the new template (all)  
status work S&T (Sander)
5. New e-suite (Richard)
6. Evaluation of regional models: meeting with CAMS-50 and plan (Henk)
7. Comparing regional and global models (Eleni, WP6)
8. WP 8: development plan (Henk)
9. AOB

## Participants

Hannah Clark, CNRS-LA  
Simon Chabrillat, BIRA-IASB  
Yves Christophe, BIRA-IASB  
Eleni Katragkou, AUTH  
Kaj Mantzius Hansen, AU  
Sander Niemeijer, S&T  
Anne-Marlene Blechschmidt, IUP-UB  
Natalia Sudarchikova, MPG  
Henk Eskes, KNMI  
Richard Engelen, ECMWF

Michael Schulz, MET-NO  
Sara Basart, BSC  
Bavo Langerock, BIRA-IASB  
John Kapsomenakis, AA  
Annette Wagner, MPG/DWD  
Harald Flentje, DWD  
Michel Ramonet, CEA-LSCE  
Jacques Claas, KNMI  
Vincent Huijnen, KNMI  
Christos Zerefos, AA

## Action items and deadlines

- All, 11 feb: send high-quality logo with transparent background of your institute to KNMI.
- Henk, 12 feb: send logo's to Vincent-Henri.
- All, end of February: Provide input to KNMI for the CAMS implementation plan (if any).
- All: Keep track of the number of observations available for the validation (part of the KPI on uptake of "sub-orbital" and other validation datasets).
- Henk, 9 feb: send WP5 draft plan to all.
- Henk, 14 feb: circulate WP5 draft plan to CAMS-50 and ECMWF
- Henk, 26 feb: final plan WP5 to ECMWF
- Richard: CAMS template for websites.
- Annette, next NRT report: Show longer time series.
- Eleni, end of February: Report for WP 5.

## Summary of the meeting

### Announcements by the service manager (Jacques):

#### Reporting:

- The first CAMS-84 Quarterly Report 2015/Q4 and the related deliverables have been received and approved by ECMWF.
- This also means that the invoice process will start.

#### Invoice process:

- Together with the invoice all sub-contractors must provide information as specified in Annex 2 of the sub-contract. KNMI will define a template which must be used for giving this information. This template will be send to all sub-contractors this week.
- All sub-contractors are asked to send their invoice the first time to KNMI. KNMI will check if the content of all invoices is ok and no information is missing. In case needed, based on comments from KNMI, invoices will be updated by the sub-contractors before sending them to the official address in the Hague. KNMI assumes that this is needed only for the first round of invoices.

#### Sub-contract status since previous meeting:

- The BSC-AEMET subcontract has been signed.
- New draft versions of the subcontract have been send to DWD and MPG. This is to account for the move of Annette Wagner from DWD to MPG.
- Discussions on the sub-contract with S&T are now finished. S&T has signed the contract.
- The following sub-contracts are still being worked on: IUP (reply from Anne Blechschmidt will come Tue 9 Feb), UBC, CNRS-LA and CEA-LSCE.

#### CAMS 84 – 50:

- A meeting between CAMS-84/Eskes and CAMS-50 representatives was organized on Feb 2<sup>nd</sup> in Paris (see discussion below).

#### KPI status:

- KPI 3 "User Satisfaction": discussions were held with the SLB (dedicated telecom on 01/02/2016), with the radiation project CAMS\_72 (during their kickoff meeting on 01/02/2016), and within CAMS\_94. Minutes were distributed by DLR/Thomas Popp. The goal is to identify 2-3 KPI on user satisfaction for all CAMS.
- KPI 4 "Uptime of validation websites": the monitoring of the uptime of the various validation websites has started on Feb 4<sup>th</sup> by KNMI. Monitoring results will be included in the Quarterly Reports.

#### CAMS-SLB:

- The CAMS-SLB#3 webex meeting was held on Feb 5<sup>th</sup>. ECMWF is preparing an updated set of templates for presentations, documents, and websites.
- There will be a page on the CAMS website which lists all contributing partner institutes. Logo's from partners is needed.

- The next CAMS implementation plan was discussed. Deadline for input is the end of March. IP will be reviewed by the member states and feedback can be provided over Summer. October final version.
- First CAMS assembly in Athens, Greece, 13-17 June, was confirmed. Tue-Wed-Thu main event, side events Mon-Fri.
- ECMWF still working on the VAT exemption form.
- Web site changes are planned: More advanced maps (interactive, user-friendly) and new catalogue coupled to the CAMS data store (distributed).

#### Redmine:

- A short manual for the use of the Document Archiving System Redmine is in preparation by the Service Manager. Once this manual is available, sub-contractors are encouraged to start actively using the Redmine system since it contains valuable CAMS-84 information on documents, action items, schedule information etc.

#### Project board:

The table below lists the project board members

<i>Partner</i>	<i>Member of the CAMS-84 Project Board</i>
AA	Christos Zerefos
AU	Jørgen Brandt
AUTH	Eleni Katragkou
BIRA-IASB	Simon Chabrilat
BSC/AEMET	Sara Basart
CEA/LSCE	Leonard Rivier
CNRS-LA	Valerie Thouret
DWD	Werner Thomas
IUP-UB	Andreas Richter
MET-NO	Michael Schulz
MPG	Guy Brasseur
S&T	Sander Niemeijer
UBC	Justus Notholt
KNMI	Henk Eskes (PI) Jacques Claas (Service Manager)

## Action items from last meeting

All actions in grey have been completed

- All, 1 Dec: inform Henk who will be the Project Board member.
- **All: Monitor progress concerning the subcontracts.**  
(Half of subcontracts signed. Work ongoing on others. Action closed.)
- Anne, Valerie, John, Natalia, 3 Dec: Provide few sentences to describe tropospheric chemistry model performance for executive summary. All to provide feedback.
- Harald, Guy, Henk, 4 Dec: Discuss possibility to hire Annette.
- Richard: To provide a complete list of outputs available to users
- Richard: Check with Stijn if a delivery date of 1 February 2016 for the updated websites is acceptable.
- **Richard: Check website templates.**  
(Several feedbacks / iterations occurred. Work ongoing. Keep action.)
- Sara, 3 Dec: Add a description of SDS-WAS to the model description section in the NRT report.
- Henk, 1 Dec: Announce Project Board
- Henk, 2 Dec: Contact CAMS-50 on evaluation of the regional models
- **Henk, 4 Dec: Provide guideline for monitoring the KPI on the number of available observations.**  
(General request has been made by Henk to all partners to monitor the number of measurements available. Point will be discussed again when development document for WP2 will become available. )
- Henk, 4 Dec: Post the work plans for the "new" activities, which will provide input to the second NRT report and regional validation report.
- Henk, 9 Dec: "Version 0" of the Observations characterisation document, WP 8. Initiate discussion on the content.
- Henk, 9 Dec: "Version 0" of the Validation scoring methods document, WP 8. Initiate discussion of the content.

(The status of the KNMI actions may be monitored on Redmine)

## Discussion with Richard

### *e-suite:*

There is an e-suite started in the forecast department. Start of run: 1st nov 2015, catching up with real time. It will be announced soon by Richard. Update of o-suite planned in April. Horizontal resolution doubled (4x increase in volume).

### *GHG model runs:*

Main product to be validated are the high-res forecasts (expid "gcbt"). Delayed mode analyses are not operational. ECMWF is preparing a system with analyses-forecasts combined, but this may take some time (e.g. end of the year). Now: assimilation GOSAT, aim to bring the assimilation closer to real-time. OCO in development.

### *Forecasts:*

It is essential that forecasts are also evaluated. The approach to evaluate the forecasts is up to now not very systematic. Also: it would be good to look at the analyses as well. This harmonization will also be a subject of the plan written by S&T (Sander). Richard mentioned it is good to have a more homogeneous approach to forecast evaluation.

### *Source of model data:*

Bavo asked the question where to obtain the model data: there are small differences between MARS and official CAMS dissemination. Richard: We should evaluate the data as made available to the users. Info how to obtain the data is on the website?

## Second WP1 report: short presentations of all contributions

Vincent Huijnen discussed the second report.

### *Timeline 2nd WP1 report:*

- 15 feb 2016: release of draft version for review by the modellers and ECMWF
- 26 feb 2016: deadline feedback from modellers
- 29 feb: public release of the report

### *General remarks:*

- All contributions are in place!
- Please use the previous NRT report (including use of styles etc) as starting point for the new report. Otherwise editing by KNMI will be tedious.

### *Michael (MET-NO):*

Showed benefit of using high-quality Aeronet v2 data (will become available in NRT sometime in near future). Remarkably good model performance in terms of correlation was found during the last four months, while the composition showed a shift towards a larger contribution to sulphate, and a stronger positive bias over the US.

### *Sara (BSC-AEMET):*

Number of stations increased. First results shown for the Mediterranean. Question on which AirBase stations to use for the Mediterranean theme. Dust episodes are captured. Analysis seems to update all species, even if only dust is involved. An evaluation of PM at AirBase stations showed a remarkable spike in the model forecasts that was not found in the observations. Richard mentioned there may be issues with PM10 as provided by the global model at the surface. Michal mentioned that Seasalt contribution should also be checked. Sara investigated dust event over the Atlantic. The control-experiment showed positive biases in dust, which were corrected with data assimilation in the o-suite

### *Christos & John (AA):*

Showed analysis for surface ozone in the Mediterranean area. AA is working on selection criteria (warning flags) for surface data from AirBase: For certain stations jumps are observed moving from high to low correlations, low to high bias when including more data in the time series, suggesting issues with the measurements. Distance from coast and altitude do not appear good predictors. The selection of representative stations for Mediterranean theme should be aligned with BSC-AEMET.

### *Harald (DWD):*

Harald showed first ceilometer profile results. He will extend the analysis with more data from German ceilometer network. Proposal to focus on correlations rather than absolute biases. Boundary layer height results were presented, showing a seasonal cycle in the bias.

### *Arnoud (KNMI):*

Wrote a plan for lidar-ceilometer validation. He will progressively evaluate vertical distribution, optical properties, events, routine near-real-time observations.

### *Annette (DWD-MPG):*



Annette is back on the team! Presented O<sub>3</sub> and CO validation with GAW and sonde. Request Vincent: to show longer time evolution of model performance (biases, correlation) inspired by what is presented by Michael for aerosol.

*Hannah (CNRS-LA):*

Discussed performance indicators for available data. Hannah discussed a case with high-CO in boundary layer related to cold pool over Europe, where she suggested that enhanced emissions were trapped.

*Natalia (MPG):*

Satellite CO evaluation and fire case study over Indonesia. Would be good to add aerosol evaluation as well, maybe next report.

*Anne (IUP-UB):*

NO<sub>2</sub> shows issues observed before: Boreal fires, Red Sea. South Africa shows high NO<sub>2</sub> at end of the year. HCHO overestimate over Northern Australia. Elements associated with performance of GFAS emissions were addressed, which are hopefully picked up by the CAMS fire subproject in the near future. IUP has thought about the KPIs. Henk proposed to discuss KPIs together with the WP2 plan by S&T.

*Kaj (AU):*

Station Nord ozone data as new dataset. Kaj mentioned troubles with the CAMS data retrieval, which need to be sorted out in future. Ozone depletion related to halogens not captured by model. Anne B. proposed to look at the BrO tropospheric observations from satellite. Kaj will provide input the summary chapter. Also he will contact the IASOA network to acquire more observational data.

*Bavo (BIRA):*

Bavo presented new NDACC-CO data at Mexico city. MAX-DOAS comparisons, e.g. underestimate HCHO in China (likely associated to missing hydrocarbon emissions like benzene). GHG forecast evaluation with TCCON will come in next NRT report.

*Michel (LSCE):*

Detailed evaluation of the delayed-mode analyses runs by ECMWF. Representativity of stations (horizontal grid box, vertical level) was discussed. Summarising plots in preparation (correlation). Michel is in close contact with Sebastien Massart (ECMWF). Evaluation of forecasts will follow in next report. Michel noted issues with model data download (slow process).

*Simon (BIRA):*

Overview of stratospheric validation, The evaluation with OMPS shows a marked positive bias in the o-suite around 30-70hPa, especially in tropics. In next report the Arctic stratosphere 2015-16 will be reviewed as case study.

## Web sites (WP 2)

Henk has made a short document listing all sites. Below we list the status of all sites to adopt the new CAMS website template, and e.g. replace references to macc by cams.

1. GAW surface ozone and carbon monoxide (ECMWF, DWD-MPG):  
Embedded in new template. Some recent data is missing. The future of this site will be discussed with Annette.
2. IAGOS tropospheric ozone and carbon monoxide (CNRS-LA):  
Template is done, next step is the link to the new site.
3. Surface ozone from EMEP and NOAA-ESRL (AA):  
Figures have been updated, website works now with new template.
4. Tropospheric nitrogen dioxide and formaldehyde columns against satellite (IUP):  
IUP applied new template. Feedback on template provided to ECMWF by Andreas. Website up-to-date.
5. Tropospheric CO columns against satellite retrievals (MPG):  
New template applied, but needs one more iteration (to integrate the menu inside the template. There is inconsistency with the website template provided by MPI). Finished by end of February.
6. Stratospheric composition (BIRA-IASB):  
New test site: test.gmes-stratosphere.eu. KNMI will provide feedback.
7. NDACC evaluation in stratosphere and troposphere (the NORS server, BIRA):  
S&T (Sander) offered to update the NORS server.
8. Evaluation against Aeronet stations (ECMWF):  
Embedded in the CAMS template, but data available only until 22 October. Future of the site to be discussed with e.g. MET-NO.
9. AeroCom evaluation (MET-NO):  
New template has been implemented.
10. WMO Sand and Dust Storm Warning Advisory and Assessment System (SDS-WAS) model intercomparison and evaluation (BSC):  
Model renamed into CAMS, evaluation is part of the SDS-WAS multi-model evaluation and template cannot be applied. Displaying data as part of CAMS-84 will be discussed in March.
11. Monitoring of satellite data usage in the Reanalysis and Near-Real-Time production (ECMWF):  
In place and working well.

### Status work S&T (Sander)

S&T work was on-hold for 1 month due to contract delays. Draft is now planned to become available around 20 february. Discussions planned for March and final document text to become available before the end of March.

### Evaluation of regional models: meeting with CAMS-50 and plan

(Henk)

A meeting with CAMS-50 took place in Paris on Tuesday 2 February. In preparation we had a CAMS-84 telecon to discuss contributions from partners involved, attended by Eleni, Anne, Francois (Hendrick), Hannah, Harald, Sara, Michael, Natalia, Sara, Christos and John. The outcome of the meeting was summarised by Henk and was presented in Paris.

The Paris meeting was a productive meeting, clarifying when the products of CAMS-50 will become available, the scope of the CAMS-84 activity, interaction with CAMS-50, and the timing of the work. KNMI is working on a validation plan for WP 5 (and WP 6) based on all inputs. This is now discussed with the CAMS-84 partners, and will be send to ECMWF and CAMS-50 on Feb 12. This plan also serves as minutes for the Paris meeting. Final version plan: 26 February.

The draft will be circulated to the entire team (e.g. it is also relevant for Sander).

### Comparing regional and global models (WP 6)

Eleni showed the first results for January, demonstrating that two regional models are not consistent with the global boundary conditions. Eleni will produce a WP-6 report on this.

### WP 8: development plan

(Henk)

In response to a request from Richard, we have updated the two documents for WP 8.1 and 8.2 at the end of January. The two new docs are on Redmine.

There are two aims for WP 8, tasks 1, 2 and 3:

1. Prepare a version of the task 1&2 docs in February-March which are sufficiently advanced and complete to publish on the CAMS site. This serves as a reference for the validation reports concerning observations, validation methods and scoring.
2. Come with a development plan for 2016, to arrive at a major update of the three documents by the end of the year.

In order to arrive at this, it is our proposal to conduct a review of both documents by all of us at the end of the month (after inputs for the WP 1 report have been completed).



### Proposal for a timeline:

- Initiate review: third week February
- Deadlines for the review: first week March.
- Deadline for inputs to achieve the first aim: third week of March.
- Publish in last week of March

### AOB

- Simon: climatology info needed. Vincent: interim reanalysis could serve as climatology.
- Henk: It is nice to have a document collecting all the case studies performed, including MACC.
- Henk: All please think about the CAMS implementation plan: proposals for workplan changes? One suggestion: provide links between CAMS-84 and the global/regional research subprojects ?