

ERA-CLIM2 Review Meeting Project Management (WP6-WP7-WP8-WP9)

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Outline



- 1) Overview of meetings
- 2) Project management: 12m extension
- 3) General Assembly #2:
 - Comments from Advisory Board
 - Action point
- 4) Comments from the Technical Review Report (Nov 2015)
- 5) Links with other FP7 projects on similar topics

1. Overview of meetings

- 1) **Kick-off meeting, ECMWF, Feb 2014**
- 2) Workshop on QC of in-situ upper-air observations, Bern, Aug 2014
- 3) Workshop “Closing the GRIB-NetCDF gap,” ECMWF, Sep 2014
- 4) **General Assembly #1 (GA1) and Technical Project Review, ECMWF, Nov 2014**
- 5) Workshop on future coupling methods, Exeter, May 2015
- 6) Copernicus Workshop on Climate Observation Requirements, June 2015
- 7) **General Assembly #2 (GA2), EUMETSAT, Dec 2015**
- 8) Tele-conf on coordination with other related projects, Mar 2016
- 9) Review meeting (with external reviewers) and progress meeting, Apr 2016

- 10) WS on historical data (WP3/WP4), Jun 2016
- 11) WS on scientific methods (WP2/WP1), Q2/Q3-2016
- 12) **General Assembly #3 (GA3), Wien, Jan 2017**
- 13) WS on Coupled data assimilation, 2017
- 14) **General Assembly #4 (GA4), ECMWF, Q4-2017**

2. Project management: 12m extension



- A 12-month extension has been negotiated and granted: thank you very much for this
- Deliverables have been adjusted accordingly
- The Project Management Board thinks that the Amended work plan is feasible
- There is still the need to correct some errors that were inserted in ‘Annex I – Part A’ of the Description of Work when translating the new deliverables reported in the ‘Original Request for Amendment’ letter

		Correct date (as in the ‘Original Request’ letter)	Wrong Date (as in ‘Annex I’)
D1.5	Status report for WP1	8 (delivered)	30
D3.10	AVHRR polar winds	36	30
D5.1	MARS support for NetCDF	30	36
D5.2	CERA data server	48	36
D5.3	User requirements	48	24
D6.6	WS report 2	31	48
D6.7	Policy Brief 3	36	48

3. GA2: comments from the Advisory board



Advisory board is (SU and DB attended GA2):

- Sakari Uppala, ex-ECMWF, also on ERA-CLIM advisory board
- Steven Zebiak, IRI Columbia, Director of Climate Services Partnership
- Dave Bromwich, Ohio State Univ., PI of Arctic System Reanalysis

During GA2 (see GA2 report, available from the web), they reported:

... The understanding of climate change is highly dependent of the available global satellite and conventional observational data. The other component in the understanding of climate is the development of atmospheric and ocean models and the assimilation of observational data using these models. ... Valuable expertise has been developed within the program and during the work new observation sources have been identified in the archives. ... That is why this critical work on observations can by no means seen as finished. Rather it needs to be seen as an ongoing iterative activity in support of Copernicus Climate Change Service and needs to a secure funding for a considerable time into the future. ...

3. GA2: action point

Action point from GA2 (see GA2 Report):

As mentioned above, it was clear from the GA2's discussions that there is a gap between the end of ERA-CLIM2 and the operational activities in coupled reanalysis foreseen within Copernicus Climate Change Services. During the plenary discussion, it was decided to prepare a short document to summarize this view and highlight the potential value of having a follow-on project that could fill the gap and bridge between ERA-CLIM2 and the future operational coupled reanalysis of the pre-satellite and satellite eras. The project Coordinator will prepare a first draft of this document by the end of February 2016 with the help from the work-package leaders.

As a result, a document was prepared with input from few key expert, including the WP Leaders, and was sent to Dr M Kacik on 24 Feb 2016:

This communication summarizes where we are in the science and development of coupled reanalysis systems and in the operational production as well as the preparation of observational data for it, and presents the potential value of having a follow-on 4-year project starting on 1 January 2018, as part of the European Commission Horizon 2020 calls.

3. GA2: action point



To: Dr M Kacik
From: R Buizza (ERA-CLIM2 project Coordinator)
Date: 24 February 2016

Dear Monika,

At the ERA-CLIM2 2nd General Assembly (EUMETSAT, December 2015), we discussed whether the whole community, from the scientist to the users, and the Copernicus-funded operational reanalysis activities would benefit from a follow-on research project, to be funded under the Horizon-2020 programme.

This communication summarizes where we are in the science and development of coupled reanalysis systems and in the operational production as well as the preparation of observational data for it, and presents the potential value of having a follow-on 4-year project starting on 1 January 2018, as part of the European Commission Horizon 2020 calls.

ERA-CLIM, ERA-CLIM2 AND COPERNICUS CLIMATE CHANGE SERVICE (C3S) REANALYSIS' ACTIVITIES

In long-term climate change assessments, early conventional observations are required together with more recent satellite observations. The early pre-satellite period is a challenge for the data assimilation system, and a set of observations as complete as possible is required to produce a climate quality

4. Comments from the ‘Technical Review Report’



Four points were raised in the Technical Review Report (dated 6/11/15):

R1 – Manage expectations of users about the quality and usefulness of products. The project is a R&D activity, and the products should be very well documented and assessed (clarifying what they can and cannot do, strengths and weaknesses). Develop a web-based guidance tool to help users navigate the plethora of reanalysed products and find the ones suitable for their applications

Reply:

- a) All WPs plan to publish ERA-CLIM2 funded work in the peer-reviewed literature. For CERA-20C, there is a plan to submit a paper when public is given access to the data; the paper will target the description of the CERA-20C reanalysis and the limitations; an article could also be published in the ECMWF newsletter describing CERA-20C data;
- b) Information about CERA-20C is reported on the ECMWF web site:
 - <http://www.ecmwf.int/en/research/projects/era-clim2> (ECMWF web page ref. the ERA-CLIM2 project)
- c) After the ‘data consolidation phase’, we will update information on two other web sites:
 - <http://reanalyses.org/> (reanalyses.org aims to facilitate comparison between reanalysis and observational datasets using a collaborative Wiki framework).
 - <https://climatedataguide.ucar.edu/> (A data portal that combines data discovery, metadata, figures and world-class expertise on the strengths, limitations and applications of climate data)

4. Comments from the 'Technical Review Report'



R2 – Develop a strategy for promoting, documenting, testing and verifying the reanalysis capability *as a system* (including its components, and coupled version) in order to pave the way towards an operational production within C3S.

R3 – Develop a roadmap to address the integration of R&D capabilities of reanalysis into the C3S service in order to accelerate the uptake of new science into operational services

Reply:

- d) For observations (WP4), discussions have started to assess how to include perhaps a maturity level concept for observation input, especially conventional observations that are new and have not been assimilated yet;
- e) Links with C3S are very good. Following the amendment, the plan is to produce CERA-SAT over a few-year period that overlaps with ERA-5. This will allow us to assess whether the CERA system used to produce CERA-SAT produces positive results: if so, C3S could decide to adopt it for ERA-6.
- f) Discussions have started to assess how to include the calculation of some specialized diagnostic output such as horizontal fluxes and divergences in the ocean to maximise utility of reanalyses for CMIP6 (COST EOS may already foster this).

4. Comments from the 'Technical Review Report'



R4 – Develop a recovery plan to address delays in the project. An extension is in principle accepted due to the technical and human capital issues

Reply:

- g) In Q3-Q4 2016, we (ERA-CLIM2 Coordinator and WP Leaders) have developed and submitted a recovery plan, which included a 12-month extension and a revision of the dates of some of the deliverables that have been affected by the delays accumulated during the first 18 months of the project;
- h) Some of the deliverables have also been revised (e.g. for CERA-SAT, we plan to develop a system and test it only for a sub-period of the satellite era (say few years)
- i) We believe that the amended plan is achievable

5. Links with other FP7 projects

On the 1st of March 2016, the Project Coordinator participated to a tele-conf organized by Peter Siegmund (KNMI)

Participants: Monika Kacik (EC), Jean-Noel Thepaut (ECMWF; C3S), Dick Dee (ECMWF; C3S), Roberto Buizza (ECMWF; ERA-CLIM2), Per Uden (SMHI; UERRA), Folkert Boersma (KNMI; Q4ECV), Martin Jukes (STFC; CLIPC), Peter Stott (Met Office; EUCLEIA), Albert Klein Tank (KNMI, Chair), Gé Verver (KNMI), Peter Siegmund (KNMI).

An action point after the tele-conf was to exchange the '*Common Lessons Learned*' deliverable, common to all projects:

- Deliverable D9.3, which is one of the ERA-CLIM2 deliverables relevant for the other projects, has just been completed and submitted; it has been circulated to the people who attended the tele-conf;
- I have received similar reports from P Uden (UERRA) and P Stott (EUCLEIA)

5. Links with other FP7 projects



Common lessons learned relevant for the development of the Copernicus Climate Change Service

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