

# ERA-CLIM2 Review Meeting Welcome and Introduction

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# Welcome



Welcome .. and thank you to:

- All of you for your help and engagement, especially to the WP Leaders for their leadership role
- All for your work and progress (we will hear more about it ..)
- *M Kacik* for her support and help with the amendment (with the 12-month extension)

After the WS:

- Please let me know if you object that your slides will be made available on ECMWF ERA-CLIM2 project web site: <http://www.ecmwf.int/en/research/projects/era-clim2>

# Outline



- 1) Adoption of the Agenda
- 2) Project overview and deliverables' status
- 3) Financials
- 4) Looking ahead in reanalysis production (feeding C3S activities)
- 5) Forthcoming meetings

# 1. Adoption of the agenda

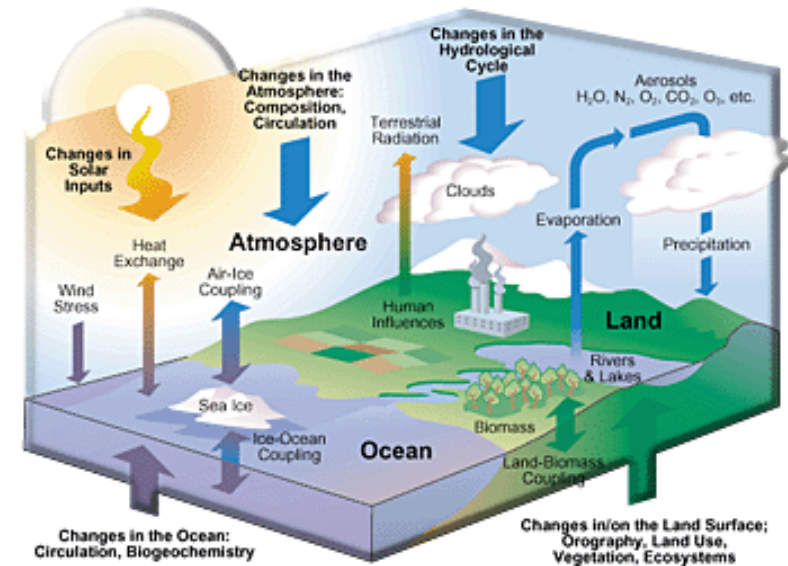


Monday 25 April		
13:00-13:10	<b>Opening</b> of the review meeting	Monika Kacik
13:10-13:20	<b>General introduction</b>	Roberto Buizza
<b>Progress and Feedback per Work Package<sup>†</sup> (see below)</b>		
13:20-13:45	<b>WP1:</b> Global 20 <sup>th</sup> century reanalysis	Magdalena Alonso-Balmaseda & Patrick Laloyaux
13:45-14:10	<b>WP2:</b> Future coupling methods	Matthew Martin
14:10-14:35	<b>WP3:</b> Earth system observations	Stefan Broennimann
14:35-15:00	<b>WP4:</b> Quantifying and reducing uncertainties	Leopold Haimberger
15:00-15:15	<i>Tea/Coffee break</i>	
15:15-15:30	<b>WP5:</b> Service Developments	Manuel Fuentes
<b>WP6-WP9:</b>		
15:30-15:45	<ul style="list-style-type: none"> <li>○ WP6 Dissemination and outreach</li> <li>○ WP7 Consortium management</li> <li>○ WP8 Scientific Coordination</li> <li>○ WP9 Overarching coordination FP7 and Copernicus Climate Change Services projects</li> </ul>	Roberto Buizza
15:45-16:45	<b>General discussion</b> , conclusions and feedback of reviewer, including discussion of actions and forthcoming deadlines	All
16:45-17:00	<b>Closure</b> and wrap-up of review meeting	Monika Kacik

## 2. The FP7 ERA-CLIM2 project (2014-2017)



**Goal: Production of a consistent 20<sup>th</sup>-century reanalysis of the coupled Earth-system: atmosphere, land surface, ocean, sea-ice, and the carbon cycle**



### Main components:

- *Production of coupled reanalyses, for 20C and the modern era (WP1)*
- *Research and development in coupled data assimilation (WP2)*
- *Earth system observations for extended climate reanalyses (WP3)*
- *Evaluation of uncertainties in observations and reanalyses (WP4)*
- *Improving access to reanalysis data and input observations (WP5)*

## 2. Deliverables dates after the 12m extension



While preparing the documents for this review meeting, I noticed that there are few (7/66) mismatches between the dates in the *'Original Request for Amendment'* letter and the ones inserted in *'Annex I – Part A'* of the Description of Work (DoW). Probably when I updated the files during the amendment process, since each date had to be modified individually and saved, I forgot to save them and did not realized when I check that they were not modified. Apologies for this. When assessing the project status, I used the dates as in the *'Original Request'* letter.

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

## 2. Project status: deliverables WP1



Deliverable	Description (Lead beneficiary)	Delivery month		Comment
		Original	Amended	
D1.1	CERA-20C	24	36	Extension allows scientific assessment and dissemination
D1.2	CERA-20C/Carbon	36	48	Extension allows carbon reanalyses to use atmospheric forcings from ERA20C.
D1.3	CERA-SAT	36	48 (partially)	Extension allows to establish the CERA-SAT system, and run it for a a subperiod (number of years to be confirmed once system is up and running) between 1979 and 2016 depending of HPC resources and production speed
D1.4	CERA-SAT/Land	36	48 (partially)	Extension allows CERA-SAT/Land system to be implemented and run over a subperiod between 1979 and 2016 depending of HPC resources and production speed.
D1.5	Status report WP1	8	8	<b>Delivered</b>

Status: **Delivered** **Delayed**

## 2. Project status: deliverables WP2



D2.1	SST assimilation code (METO)	27	39	Extension allows more time for testing of developments
D2.2	Sea-ice assimilation code (MERC0)	27	39	Extension allows testing to be done in more recent version of system
D2.3	Ensemble B NEMOVAR code (CERFACS)	34	46	Extension allows higher quality deliverable
D2.4	Report on ensemble covariances in coupled DA (CMCC)	24	36	Extension allows higher quality deliverable
D2.5	Report on 4D-Var tests (INRIA)	27	39	Extension allows higher quality deliverable
D2.6	Report on land carbon model optimisation (UVSQ)	34	46	Delay of the production of the climate reanalysis in WP1 puts some constraint on the C cycle reanalysis
D2.7	Report on ocean biogeochemical coupling methods (MERC0)	34	46	Extension allows higher quality deliverable
D2.8	Report on strengths/weaknesses of coupled DA (UREAD)	18	18	<b>Delivered</b>
D2.9	Report on coupled error covariances (METO)	18	18	<b>Delivered</b>
D2.10	Report on coupled model drift and bias correction (UREAD)	34	46	Extension makes it possible to deliver a high quality report
D2.11	Report on fully coupled DA (INRIA)	34	46	Extension allows higher quality deliverable
D2.12	Status report (METO)	8	8	<b>Delivered</b>

Status: **Delivered** **Delayed**



## 2. Project status: deliverables WP3

D3.1	Data catalogue (UBERN)	6	6	<b>delivered</b>
D3.2	Priorities for data rescue (UBERN)	6	6	<b>delivered</b>
D3.3	Meta-database update (UBERN)	36	48	continuous
D3.4	In-situ data for reanalysis (UBERN)	24	36	Spanish Ebro and North African upper air not in time
D3.5	In-situ data (other) (UBERN)	30	42	Chile data not in time
D3.6	Quality-controlled version of D3.4 (UBERN)	36	48	Shift in deadlines allows more data from French overseas, International days
D3.7	Quality-controlled version of D3.5 (UBERN)	33	48	Shift in deadlines allows more data from French overseas, International days
D3.8	RTTOV updates (METO)	36	36	No change in deadline required
D3.9	Early satellite data (METO)	36	36	No change in deadline required
D3.10	AVHRR polar winds (EUMST)	24	36	Slower due to dependence on other EUMST activities
D3.11	SSM/T2 and AMSU-B/MHS radiance data (EUMST)	24	24	<b>No change in deadline required</b>
D3.12	Geostationary radiance data (EUMST)	36	36	No change in deadline required
D3.13	AMV from MFG (EUMST)	36	42	Slower due to small resources
D3.14	Radio occultation data (EUMST)	36	36	No change in deadline required
D3.15	HadISST2 update (METO)	18	18	<b>delivered</b>
D3.16	Ice thickness data (METO)	12	12	<b>delivered</b>
D3.17	Ocean database update (METO)	24	30	In progress
D3.18	Snow data product (FMI)	24	36	No change in deadline required
D3.19	Quality controlled version of snow data base (in situ) (FMI)	36	48	Extension allows higher quality deliverable
D3.20	HadISD update (METO)	12	12	<b>delivered</b>

Status: **Delivered** **Delayed**

## 2. Project status: deliverables WP4



D4.1	RS bias adjustments (UNIVIE)	12	20	<b>delivered</b>
D4.2	Updated RS bias adjustments (UNIVIE)	36	48	ERA5 and a ERA-preSAT rerun are expected to be much better reference than previous reanalyses but are not available in month 36. Value of deliverable would be significantly degraded
D4.3	QC for obs from FFCUL (FFCUL)	36	48	FFCUL had difficulties in personnel recruitment and works hard on digitization of Chilean and other data. This has priority for now. QC aspect would improve a lot if 12 months more are available
D4.4	Visualization tool for QC (FFCUL)	12	12	<b>delivered</b>
D4.5	QC for upper-air, surface, and snow obs. (RIHMI)	36	36	no impact expected
D4.6	Methodology for quantifying obs error (UBERN)	36	36	no impact expected
D4.7	Verification of precipitation against GPCP (DWD)	36	48	Data set will be ready but validation of ERA5, CERA-20C would not be possible
D4.8	Global energy, water, carbon cycles (ECMWF, UNIVIE, UVSQ)	36	48	Evaluations without ERA5, CERA-20C would be much less innovative
D4.9	Upper air data qc (UBERN, RIHMI)	24	24	<b>delivered</b>
D4.10	Comparison with other reanalyses (UNIVIE; ECMWF)	36	48	Comparisons without ERA5, CERA-20C would be much less innovative
D4.11	Low frequency variability and trends (ALL)	36	48	Without completed ERA5, CERA-20C many evaluations would have to be based on data not created in ERA-CLIM2
D4.12	Uncertainty of input parameters for carbon budget (UVSQ)	12	20	<b>delivered</b>
D4.13	Confidence intervals on carbon fluxes (UVSQ)	36	48	Those would have to be based on existing ERA-20C, not new CERA-20C
D4.14	Comparison of CTESEL, ORCHIDEE flux estimates (ECMWF, UVSQ, UNIVIE)	36	48	This could be done partly with unfinished CERA-20C but much value would be added if complete CERA-20C set were available

Status: **Delivered** **Delayed**

## 2. Project status: deliverables WP5-WP6-WP9



D5.1	NetCDF in MARS	12	30	Design and specifications complete; final implementation delayed by at least 18 months
D5.2	CERA data services	24	48	Atmosphere and land-surface complete; ocean component to be further developed based on D5.1
D5.3	Report on data services	24	48	Delayed
D6.1	Project web site	10	10	<b>delivered</b>
D6.2	Project brief 1	12	12	<b>delivered</b>
D6.3	Workshop report 1	19	19	<b>delivered</b>
D6.4	Project brochure	22	36	
D6.5	Policy brief 2	24	36	
D6.6	Workshop report 2	31	31	
D6.7	Policy brief 3	36	36	
D6.8	Dissemination plan	4	4	<b>delivered</b>
D6.9	Policy brief 4	n/a	48	
D9.1	Coordination plan	36	48	
D9.2	Common web page	6	6	<b>delivered</b>
D9.3	Common lessons learned	24	24	<b>delivered</b>
D9.4	Meeting minutes	36	48	

Status: **Delivered** **Delayed**

# Financials



With the extension of the project the payments are as following:

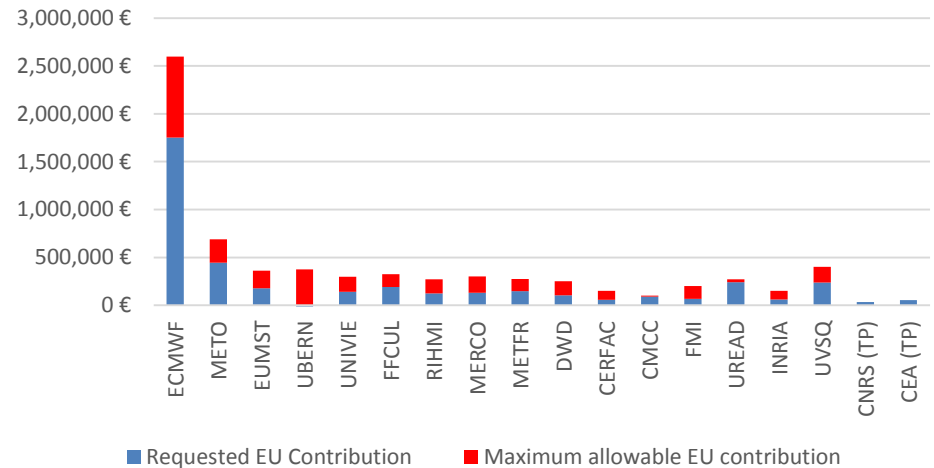
1. Pre-financing (60% with retention of 5% guarantee fund) – Q1-2014
2. First interim after month 18 (up to 90% of the budget) – To be paid in the coming days/weeks
3. Final payment after month 48 (remaining balance)

So at the end of reporting period 1 the EU paid up to 90% of the grant. 10% of the funding is retained for the final payment.

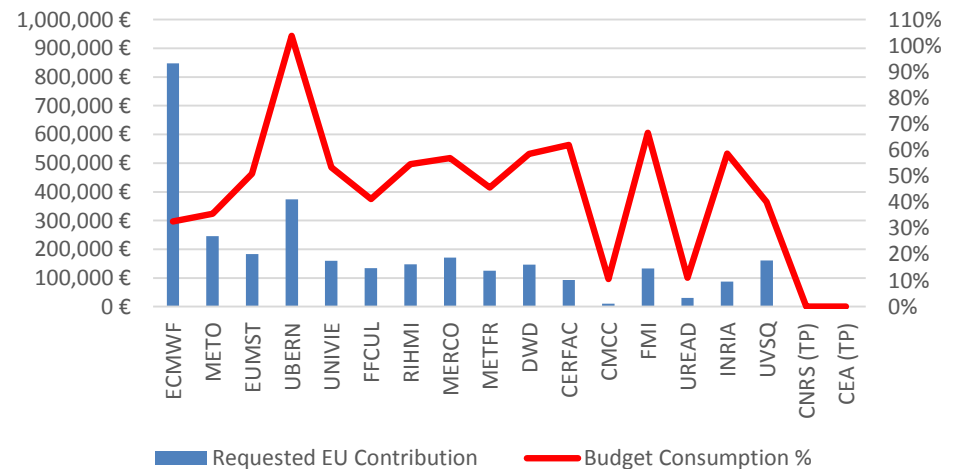
The following graphs illustrates the budget consumption at 30/06/2015, when partners reported to Coordinator.

The next reporting update is expected in Feb 2017, with consumptions up to 31/12/2016.

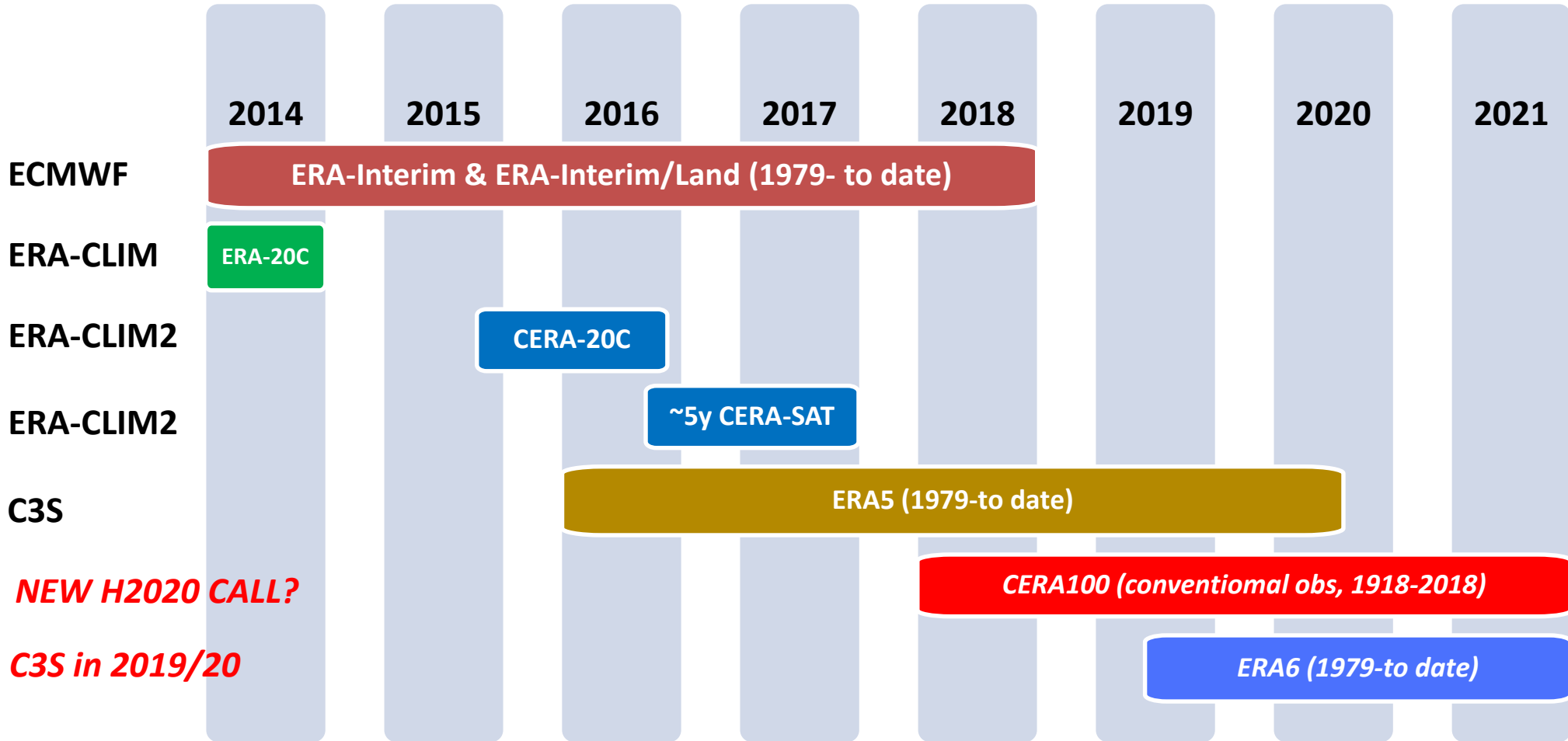
Partners' total and consumed budget (30/6/15)



Partners' consumption - 30/06/2015



# 4. Looking ahead in reanalysis production



## 5. Forthcoming ERA-CLIM2 meetings



### ERA-CLIM2 WSs and GAs:

- 25 April 2016: ERA-CLIM2 Review Meeting – At ECMWF, attended by the Project Coordinator, WP Leaders, the EU Representative and the project reviewers;
- 26 April 2016: Progress meeting (1 or 2 day meeting) – At ECMWF, attended by the WP Leaders and whoever is interested;
- 22 June 2016: Conference on historical data for reanalysis (project's deliverable D5.5, due by M30) – Organized by L Haimberger and S Broennimann, jointly with ACRE Meeting (Maynooth, Ireland)
- Q2/Q3-2016: WP2 Progress Meeting – Planning in progress
- 2016 or 2017: WS on Coupled Data-Assimilation (one of the project's deliverables) – Could be joint WS with WMO/DAOS in 2016, or joint with ECMWF WS in 2017 (TDB)
- 16-20 or 23-27 Jan 2017: ERA-CLIM2 3<sup>rd</sup> General Assembly (one of the project's deliverables, to be held by M36) – To be organized by L Haimberger in Wien (TBC)
- Q4-2017 - ERA-CLIM2 4<sup>th</sup> General Assembly (2017 – M48) – (close to the WCRP/WWRP 5th International Reanalysis Conference)? At ECMWF