**CMUG Deliverable** 

Number: D6.2

Due date: 30 June 2021

Submission date: Version: 2.0



# **Climate Modelling User Group**

# **Deliverable 6.2**

# **Promotion Package Report**

Centres providing input: MOHC













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## **CMUG D6.2 Promotion Package Report**

### 1. Introduction

CMUG's mission is to place a climate perspective at the centre of ESA's Climate Change Initiative (CCI). This report documents how CMUG has promoted CCI datasets and CMUG results to the climate modelling and reanalysis community, international bodies and climate researchers. This version (v2) covers the period from the previous D6.2 Promotion Package Report v1 (October 2020) until June 2021. Material that has been prepared for promotion of CCI products have included:

- Presentations at conferences, workshops and meetings
- Website kept up to date and relevant, with results and material promoting the CCI
- Reformatting the CMUG Data Forum
- Journal papers illustrating the use of some of the CCI datasets
- Horizon scanning for outreach opportunities
- Maintain within the project plan a section on communications and outreach
- Respond to ad-hoc requests for outreach activities

# 2. Promotion Package

### 2.1 Meetings and Workshops

Between October 2020 and June 2021, CMUG has been involved in the following significant meetings and workshops. There have been three Climate Science Working Group (CSWG) meetings, two CMUG Progress Meetings and several Workshops. Furthermore, there was the PML (Plymouth Marine Laboratory) seminar on 13 May 2021, at which the Met Office gave a seminar covering work on marine biogeochemical data assimilation, including CMUG work.

Date	Meeting	Location	CMUG role		
		2020			
2020					
20 Oct	Biomass Change Workshop	Online, hosted by Aberystwyth University	Attended sessions and provided comments regarding model evaluation		
23 Oct	8 <sup>th</sup> CSWG Meeting	Online, WebEx	Focus on Sea Ice, SST, and Salinity ECVs		
27 Oct	CMUG Progress Meeting	Online, WebEx	Progress update meeting		

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2021					
18 Jan	9 <sup>th</sup> CSWG Meeting	Online, WebEx	Focus on Fire, LC, HRLC, and Biomass ECVs		
16-17 Mar	Ozone CCI Workshop	Online	ECMWF chaired a modelling session with KNMI		
25 Mar	CMUG Progress Meeting	Online, WebEx	Progress update meeting		
7 May	10 <sup>th</sup> CSWG meeting	Online, WebEx	Focus on Lakes, Snow, and Permafrost ECVs		
13 May	PML Seminar	Online	Gave seminar covering work on biogeochemical data assimilation, including CMUG work		
25 May	2 <sup>nd</sup> Snow CCI User Workshop	Online	Engage snow-climate research community and intensify collaboration between different CCI projects		
14-16 June	Water Vapour CCI User Workshop	Online	Bring together broader water vapour community to discuss most recent scientific applications and challenges in processing and using water vapour CDRs		

### 2.2 Website

The <u>new CMUG website</u>, hosted on <u>ESA's web server</u>, is now fully functional and updated with content from the old CMUG website. The website plays a key and central role to CMUG's Promotion Package. It will continue to be added to and updated to take further advantage of this key platform of promotion for CMUG.

The new CMUG website consists of:

- A Home page with a brief introduction about the project and highlights of recent news and events
- An 'About' tab with detailed information on the project, its structure, objectives, aims and main activities
- A 'News' tab with news items relevant to CMUG
- A 'Case Studies & Data' tab with links to Obs4MIPs, Obs4MIPs training material, information on ECV datasets and how they are used in climate modelling applications and reanalysis, a showcase of recent CMUG case studies, and, at the bottom, a list of partners with links to respective partner websites
- A 'Deliverables & Documents' tab which lists all CMUG deliverables and documents Phases 1-3
- A 'Team' tab showcasing partner members and individual biographies

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- A 'Publications & Presentations' tab which lists and links to all publications (e.g., newsletters, posters, scientific papers) and presentations (e.g., presentations from each CMUG Integration meeting since March 2011)
- A 'Related Links' tab with links to GCOS, WCRP and C3S webpages
- A 'Contacts & FAQ' tab with information on how to contact CMUG for further information or with any questions, as well as a comprehensive FAQ section

### 2.3 CMUG Data Forum

The CMUG Data Forum, originally a separate webpage on the old website, has now been fully implemented into the new website. The information once showcased on the old CMUG Data Forum was found to be a repeat or obsolete regarding the new website content. The website now contains this information:

- Recent CMUG Case Studies are highlighted in the 'Case Studies & Data' tab.
- Information on the project, who is involved in the project, and what goes on within the project, is presented in the 'About' tab.
- The previous CMUG Data Forum contained a specific link to the CCI Data Portal, which is now linked straight from the main ESA website menu bar.
- Contact information for users to get in touch with CMUG, as well as a range of Frequently Asked Questions (FAQ) are included within the 'Contacts & FAQ' tab.

Information on these new webpages, which now satisfies the previous objectives of the CMUG Data Forum, will continue to be updated and maintained to the end of the project and used to promote the CMUG project.

### 2.4 Publications and Papers

CMUG publishes papers on its verification and validation work and encourages others to publish the results of their research on CCI datasets. CMUG has had four publications between October 2020 and June 2021, which are listed below as well as in Annex A1 where the number of citations from Google Scholar (as of June 2021) are included.

 Bilbao, R., Wild, S., Ortega, P., Acosta-Navarro, J., Arsouze, T., Bretonnière, P.-A., Caron, L.-P., Castrillo, M., Cruz-García, R., Cvijanovic, I., Doblas-Reyes, F. J., Donat, M., Dutra, E., Echevarría, P., Ho, A.-C., Loosveldt-Tomas, S., Moreno-Chamarro, E., Pérez-Zanon, N., Ramos, A., Ruprich-Robert, Y., Sicardi, V., Tourigny, E., and Vegas-Regidor, J.: Assessment of a full-field initialized decadal climate prediction system with the CMIP6 version of EC-Earth, Earth Syst. Dynam., 12, 173– 196, https://doi.org/10.5194/esd-12-173-2021, 2021.

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2. Bock, L., A. Lauer, M. Schlund, M. Barreiro, N. Bellouin, C. Jones, G. A. Meehl, V. Predoi, M. J. Roberts, V. Eyring: Quantifying Progress Across Different CMIP Phases With the ESMValTool, J. Geophys. Res., 125, e2019JD032321, doi: 10.1029/2019JD032321, 2020.

- Eyring, V., Bock, L., Lauer, A., Righi, M., Schlund, M., Andela, B., Arnone, E., Bellprat, O., Brötz, B., Caron, L.-P., Carvalhais, N., Cionni, I., Cortesi, N., Crezee, B., Davin, E., Davini, P., Debeire, K., de Mora, L., Deser, C., Docquier, D., Earnshaw, P., Ehbrecht, C., Gier, B. K., Gonzalez-Reviriego, N., Goodman, P., Hagemann, S., Hardiman, S., Hassler, B., Hunter, A., Kadow, C., Kindermann, S., Koirala, S., Koldunov, N., Lejeune, Q., Lembo, V., Lovato, T., Lucarini, V., Massonnet, F., Müller, B., Pandde, A., Pérez-Zanón, N., Phillips, A., Predoi, V., Russell, J., Sellar, A., Serva, F., Stacke, T., Swaminathan, R., Torralba, V., Vegas-Regidor, J., von Hardenberg, J., Weigel, K., and Zimmermann, K.: Earth System Model Evaluation Tool (ESMValTool) v2.0 an extended set of large-scale diagnostics for quasi-operational and comprehensive evaluation of Earth system models in CMIP, Geosci. Model Dev., 13, 3383-3438, doi: 10.5194/gmd-13-3383-2020, 2020.
- Peano, D., Hemming, D., Materia, S., Delire, C., Fan, Y., Joetzjer, E., Lee, H., Nabel, J.E.M.S., Park, T., Peylin, P., Warland, D., Wiltshire, A., Zaehle, S. (accepted 2021 preprint) Plant phenology evaluation of CRESCENDO land surface models Part 1: start and end of growing season. Biogeosciences Discuss. Preprint available at <a href="https://bg.copernicus.org/preprints/bg-2020-319">https://bg.copernicus.org/preprints/bg-2020-319</a>

CMUG also works to bring to the fore any research in CMUG papers that is relevant for the next IPCC assessment (AR6).

### 2.5 Other Outreach and Promotion Activities

### Newsletters

Newsletters are once again being produced at regular intervals, coincident with CSWG meetings. There have been three CSWG meetings between October 2020 and June 2021, and therefore there have been three CSWG newsletters. Each CSWG newsletter is produced and circulated to the CSWG a couple of weeks ahead of each CSWG meeting. The purpose of the newsletter is to advertise the upcoming CSWG meeting, with details and agenda outlined, as well as to highlight any relevant CMUG news, scientific or otherwise. The newsletters can be found in Annex A2 (and the associated webpage <a href="here">here</a>).

External SharePoint Site

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CMUG has moved to one centralised SharePoint location for document storage and file sharing. This has replaced the previous system which used both SharePoint for internal use within the Met Office and Google Docs for all other use. The new system is much more optimised and has greatly improved efficiency. The new SharePoint site was set up in November 2020. All information previously stored on the Google Docs has been transferred over to the new SharePoint site, meaning the transfer has been completely lossless.

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# **Annex A**

### **Contents**

- A1 CMUG publications with citations October 2020 June 2021
- A2 CSWG newsletters October 2020 June 2021

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## A1 CMUG publications with citations October 2020 – June 2021

Annex A1 is a table listing CMUG peer-reviewed publications between October 2020 and June 2021. References are given for the four new publications within this time period, as well as the number of citations, as sourced from Google Scholar (as of June 2021).

Paper	Citations*
Bilbao, R., Wild, S., Ortega, P., Acosta-Navarro, J., Arsouze, T., Bretonnière, PA., Caron, LP., Castrillo, M., Cruz-García, R., Cvijanovic, I., Doblas-Reyes, F. J., Donat, M., Dutra, E., Echevarría, P., Ho, AC., Loosveldt-Tomas, S., Moreno-Chamarro, E., Pérez-Zanon, N., Ramos, A., Ruprich-Robert, Y., Sicardi, V., Tourigny, E., and Vegas-Regidor, J.: Assessment of a full-field initialized decadal climate prediction system with the CMIP6 version of EC-Earth, Earth Syst. Dynam., 12, 173–196, https://doi.org/10.5194/esd-12-173-2021, 2021.	1
Bock, L., <b>A. Lauer</b> , M. Schlund, M. Barreiro, N. Bellouin, C. Jones, G. A. Meehl, V. Predoi, M. J. Roberts, V. Eyring: Quantifying Progress Across Different CMIP Phases With the ESMValTool, J. Geophys. Res., 125, e2019JD032321, doi: 10.1029/2019JD032321, 2020.	3
Eyring, V., Bock, L., Lauer, A., Righi, M., Schlund, M., Andela, B., Arnone, E., Bellprat, O., Brötz, B., Caron, LP., Carvalhais, N., Cionni, I., Cortesi, N., Crezee, B., Davin, E., Davini, P., Debeire, K., de Mora, L., Deser, C., Docquier, D., Earnshaw, P., Ehbrecht, C., Gier, B. K., Gonzalez-Reviriego, N., Goodman, P., Hagemann, S., Hardiman, S., Hassler, B., Hunter, A., Kadow, C., Kindermann, S., Koirala, S., Koldunov, N., Lejeune, Q., Lembo, V., Lovato, T., Lucarini, V., Massonnet, F., Müller, B., Pandde, A., Pérez-Zanón, N., Phillips, A., Predoi, V., Russell, J., Sellar, A., Serva, F., Stacke, T., Swaminathan, R., Torralba, V., Vegas-Regidor, J., von Hardenberg, J., Weigel, K., and Zimmermann, K.: Earth System Model Evaluation Tool (ESMValTool) v2.0 - an extended set of large-scale diagnostics for quasi-operational and comprehensive evaluation of Earth system models in CMIP, Geosci. Model Dev., 13, 3383-3438, doi: 10.5194/gmd-13-3383-2020, 2020.	9
Peano, D., <b>Hemming, D.,</b> Materia, S., Delire, C., Fan, Y., Joetzjer, E., Lee, H., Nabel, J.E.M.S., Park, T., Peylin, P., Warland, D., Wiltshire, A., Zaehle, S. (accepted 2021 preprint) Plant phenology evaluation of CRESCENDO land surface models – Part 1: start and end of growing season. Biogeosciences Discuss. Preprint available at <a href="https://bg.copernicus.org/preprints/bg-2020-319">https://bg.copernicus.org/preprints/bg-2020-319</a>	-

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### A2 CSWG Newsletters October 2020 – June 2021

Annex A2 showcases the three CSWG newsletters between October 2020 and June 2021. All newsletters can also be found on the CMUG's website page <a href="here">here</a>.

### CSWG 23 Oct 2020



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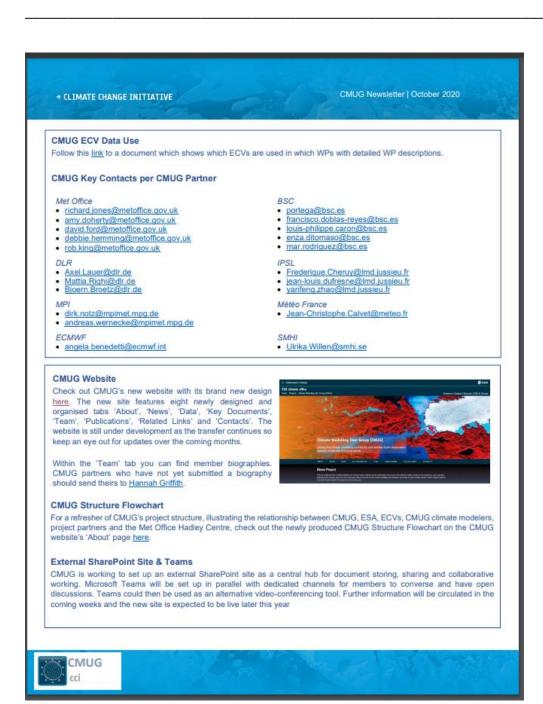
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### **CMUG Deliverable**

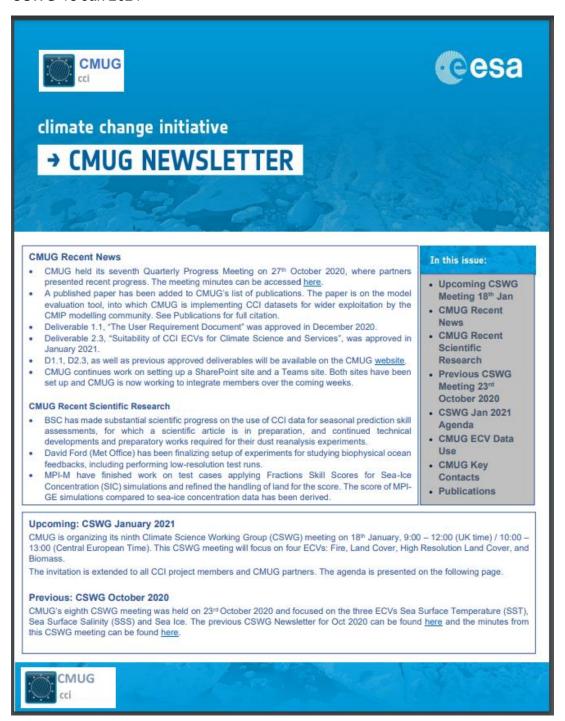
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### CSWG 18 Jan 2021



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#### → CLIMATE CHANGE INITIATIVE

CMUG Newsletter | January 2021

#### CSWG January 2021, Focus on Fire, Land Cover (LC) and Biomass

Monday 18th January, 9-12 UK Time / 10-13 Central European Time (9-12 UTC).

#### Agenda:

- Introduction Amy Doherty (Met Office) 10 mins (9:05-9:15)
   Meteo France use of LC and Biomass Jean-Christophe Calvet 15 mins (9:15-9:30)
- 3. BSC use of Fire, LC, HRLC and Biomass Etienne Tourigny 15 mins (9:30-9:45)
- Discussion of CMUG work and plans 10 mins (9:45-9:55)
- Coffee break join our wonder me discussion room on Firefox browser 30 mins (9:55-10:25)
- Fire\_cci presentation, including input from CRG Emilio Chuvieco / Lucrecia Pettinari 20 mins (10:25-10:45)
  Land cover\_cci presentation, including input from CRG Celine Lamarche 20 mins (10:45-11:05)
- 8. High Resolution Land Cover, including input from CRG Lorenzo Bruzzone 20 mins (11:05-11:25)
- 9. Biomass\_cci presentation, including input from CRG Richard Lucas 20 mins (11:25-11:45)
- 10. Final discussions including plans for the next meeting 15 mins (11:45-12:00)

Follow this link to a document which shows which ECVs are used in which WPs with detailed WP descriptions.

### CMUG Key Contacts per CMUG Partner

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The below publication has been added to CMUG's list of publications as some authors are members of CMUG. The article was published in July 2020, with CMUG acknowledged. There have been no CMUG publications since October 2020.

1. Eyring, V., Bock, L., Lauer, A., Righi, M., Schlund, M., Andela, B., Arnone, E., Bellprat, O., Brötz, B., Caron, L.-P., Carvalhais, N., Cionni, I., Cortesi, N., Crezee, B., Davin, E., Davini, P., Debeire, K., de Mora, L., Deser, C., Docquier, D., Earnshaw, P., Ehbrecht, C., Gier, B. K., Gonzalez-Reviriego, N., Goodman, P., Hagemann, S., Hardiman, S., Hassler, B., Hunter, A., Kadow, C., Kindermann, S., Koirala, S., Koldunov, N., Lejeune, Q., Lembo, V., Lovato, T., Lucarini, V., Massonnet, F., Müller, B., Pandde, A., Pérez-Zanón, N., Phillips, A., Predoi, V., Russell, J., Sellar, A., Serva, F., Stacke, T., Swaminathan, R., Torralba, V., Vegas-Regidor, J., von Hardenberg, J., Weigel, K., and Zimmermann, K.: Earth System Model Evaluation Tool (ESMValTool) v2.0 - an extended set of large-scale diagnostics for quasi-operational and comprehensive evaluation of Earth system models in CMIP, Geosci. Model Dev., 13, 3383-3438, doi: 10.5194/gmd-13-3383-2020, 2020.



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### CSWG 7 May 2021



- dataset is close to completion.
- Implementation of the Water Vapour, GHG (XCH4), Sea Surface Salinity, Land Surface Temperature and Ocean Colour ECVs into the ESMVarTool are completed and will now go through a technical and scientific review. The new diagnostics will be combined into a single recipe to be used for evaluation of CMIP6 models.
- The ESMValTool work completed has been submitted in deliverable report D5.3 v1.
- . CMUG ECV Data Use
- CMUG Key Contacts
- New CMUG **Publications**

### Upcoming: CSWG May 2021

CMUG is organizing its tenth Climate Science Working Group (CSWG) meeting on 7th May, 13:00 - 16:00 (UK time) / 14:00 -17:00 (Central European Time). This CSWG meeting will focus on three ECVs: Lakes, Snow, and Permafrost

The invitation is extended to all CCI project members and CMUG partners. The agenda is presented on the following page and can also be accessed directly here.

### Previous: CSWG January 2021

CMUG's ninth CSWG meeting was held on 18th January 2021 and focused on the four ECVs Fire, Land Cover, High Resolution Land Cover, and Biomass. The previous CSWG Newsletter for January 2021 can be found here and the minutes from this CSWG meeting can be found here.



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#### → CLIMATE CHANGE INITIATIVE

CMUG Newsletter | January 2021

### CSWG May 2021, Focus on Lakes, Snow and Permafrost ECVs

Friday 7th May, 13-16 UK Time / 14-17 Central European Time

#### Agenda:

- Introduction Amy Doherty (MO) 10 mins (13:05-13:15)
- CMUG work on Lakes Grace Redmond (MO) 15 mins (13:15-13:30)
- CCI Lakes presentation, including input from CRG Jean-Francois Crétaux 20 mins (13:30-13:50)
- 4. Coffee break 20 mins (13:50-14:10)
- 5. Use of Snow and Permafrost ECVs Jean-Christophe Calvet (MF) 15 mins (14:10-14:25)
- CMUG work on Snow Frederique Cheruy (TBC) 15 mins (14:25-14:40)
   CCI Snow presentation, including input from CRG Thomas Nagler / Chris Derksen 20 mins (14:40-15:00)
- 8. CCI Permafrost presentation including input from CRG Annett Bartsch / Heidrun Matthes 20 mins (15:00-15:20)
- 9. Coffee break 20 mins (15:20-15:40)
- 10. Final discussions including plans for the next meeting 20 mins (15:40-16:00)

#### CMUG ECV Data Use

Follow this link to a document which shows which ECVs are used in which WPs with detailed WP descriptions.

#### CMUG Key Contacts per CMUG Partner

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### **Publications**

The below publications have been added to CMUG's list of publications as some authors are members of CMUG.

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- 2. Peano, D., Hemming, D., Materia, S., Delire, C., Fan, Y., Joetzjer, E., Lee, H., Nabel, J.E.M.S., Park, T., Peylin, P., Warland, D., Wiltshire, A., Zaehle, S. (accepted 2021 preprint) Plant phenology evaluation of CRESCENDO land surface models Part 1: start and end of growing season. Biogeosciences Discuss. Preprint available at https://bg.copernicus.org/preprints/bg-2020-319/.

