

GAIA-CLIM

Gap Analysis and Impacts Document: Online catalogue

Richard Davy

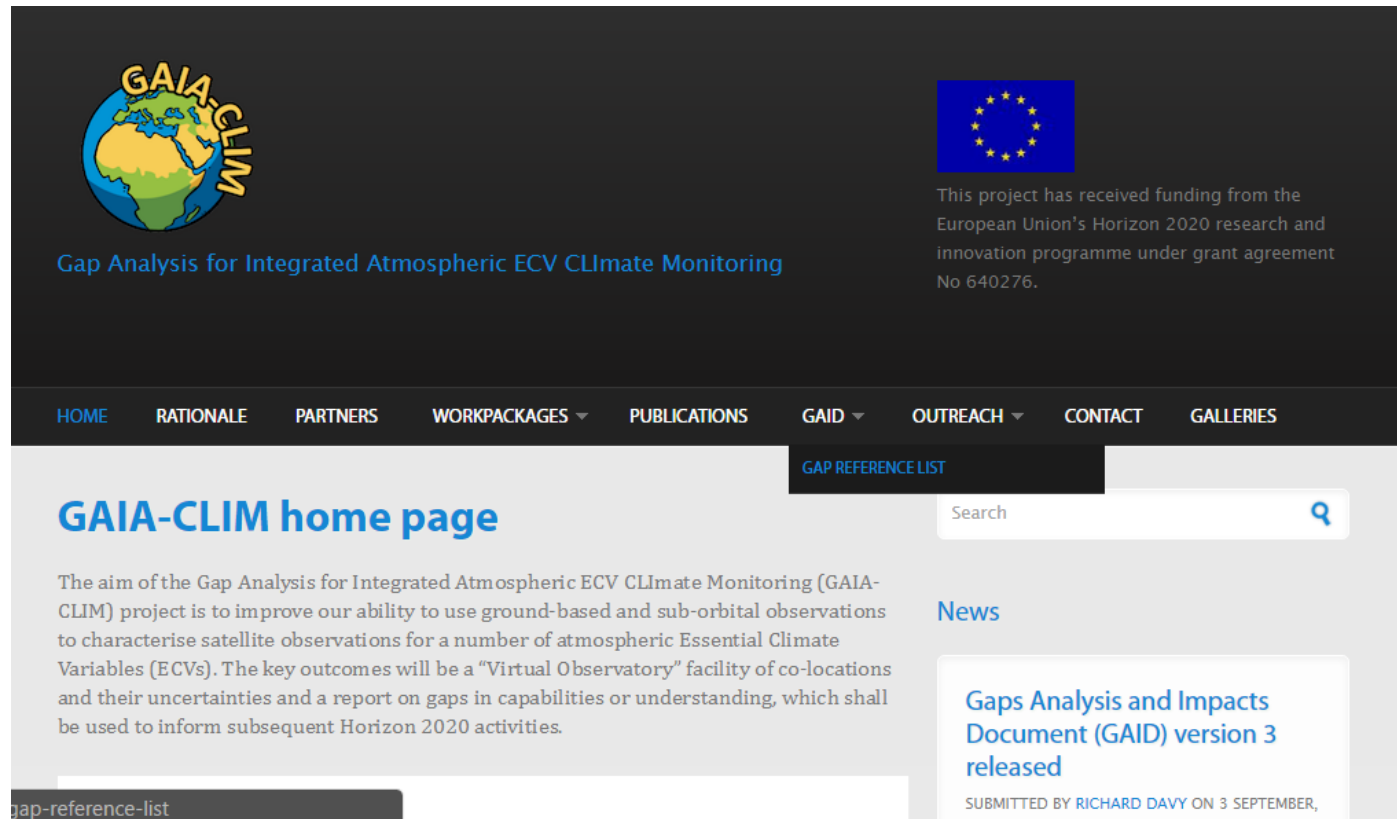


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 640276.

www.gaia-clim.eu

Online catalogue

- All gaps to date available on online catalogue:
www.gaia-clim.eu/page/gap-reference-list



The screenshot displays the GAIA-CLIM website. At the top left is the GAIA-CLIM logo, which features a stylized globe with the text 'GAIA-CLIM' curved around it. Below the logo is the text 'Gap Analysis for Integrated Atmospheric ECV CLimate Monitoring'. To the right of the logo is the European Union flag, followed by text stating: 'This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 640276.' Below this is a navigation bar with links: HOME, RATIONALE, PARTNERS, WORKPACKAGES, PUBLICATIONS, GAID, OUTREACH, CONTACT, and GALLERIES. The 'GAID' link is highlighted with a dropdown menu showing 'GAP REFERENCE LIST'. Below the navigation bar, the main content area is titled 'GAIA-CLIM home page'. It contains a paragraph about the project's aim: 'The aim of the Gap Analysis for Integrated Atmospheric ECV CLimate Monitoring (GAIA-CLIM) project is to improve our ability to use ground-based and sub-orbital observations to characterise satellite observations for a number of atmospheric Essential Climate Variables (ECVs). The key outcomes will be a "Virtual Observatory" facility of co-locations and their uncertainties and a report on gaps in capabilities or understanding, which shall be used to inform subsequent Horizon 2020 activities.' To the right of this text is a search bar with the placeholder text 'Search' and a magnifying glass icon. Below the search bar is a section titled 'News' with a link to 'Gaps Analysis and Impacts Document (GAID) version 3 released'. At the bottom of the page, there is a footer with the text 'SUBMITTED BY RICHARD DAVY ON 3 SEPTEMBER,'.

GAIA-CLIM

Gap Analysis for Integrated Atmospheric ECV CLimate Monitoring

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HOME RATIONALE PARTNERS WORKPACKAGES PUBLICATIONS GAID OUTREACH CONTACT GALLERIES

GAP REFERENCE LIST

GAIA-CLIM home page

The aim of the Gap Analysis for Integrated Atmospheric ECV CLimate Monitoring (GAIA-CLIM) project is to improve our ability to use ground-based and sub-orbital observations to characterise satellite observations for a number of atmospheric Essential Climate Variables (ECVs). The key outcomes will be a "Virtual Observatory" facility of co-locations and their uncertainties and a report on gaps in capabilities or understanding, which shall be used to inform subsequent Horizon 2020 activities.

Search

News

Gaps Analysis and Impacts Document (GAID) version 3 released

SUBMITTED BY RICHARD DAVY ON 3 SEPTEMBER,

gap-reference-list




Online catalogue

- Updated in real time
- Tabular list of all identified gaps
- Organized by WP from which they originated
- Unique identifiers

Gap reference list

Gap reference list

This is the full list of gaps identified in GAIA-CLIM to date, with a SMART analysis of each gap. Details of how and when such *SMART* remedies may be addressed for each gap are included in the full descriptions. The gaps each have unique gap identifier numbers of the form: X.XX, and full descriptions can be found at gaia-clim.eu/wiki/gX.XX; or by following the links in the Gap Identifiers below. We encourage user-input on the gaps, so if you can update our knowledge on existing gaps, or you would like to suggest the inclusion of additional gaps, please contact us using the "feedback" link next to the relevant gap, or the feedback button in the given gap description. We encourage you to use our template for external input which can be found [here](#).

Gap identifier	Gap name	Feedback
G1.02	Unknown suitability of measurement maturity assessment	Feedback 
G1.03	Missing evaluation criteria for assessing existing observing capabilities	Feedback 
G1.04	Lack of a comprehensive review of current non-satellite observing capabilities for the study of FGCs in atmospheric	Feedback 

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Gap description (1/3)

- Gap title
gaia-clim.eu/wiki/GW.XX
- Detailed description
- Related activities within GAIA-CLIM
- Proposed SMART Remedy/Remedies

G1.02

SUBMITTED BY RICHARD DAVY ON 8 AUGUST, 2016 – 16:01

G1.02 Unknown suitability of measurement maturity assessment

Gap detailed description

FEEDBACK

Ensure that the measurement maturity assessment prepared by GAIA-CLIM is readily applicable to all reference, baseline and comprehensive networks, and is beneficial to identify shortcomings in the practices applied by network operators. The maturity assessment involves assessing against 7 major strands such as metadata, uncertainty quantification and sustainability, as outlined in D1.3. This assessment, in the context of Task 1.2, has now been carried out for a number of target GAIA-CLIM networks and ECVs , but it should be applied more broadly to other ECVs and measurement domains if it is to extend its utility. Testing needs to be performed and may result in a subsequent need for revision of D1.3 accordingly either within or after the project.

Activities within GAIA-CLIM related to this gap

Task 1.2 has undertaken an assessment of the measurement maturity matrix for in excess of 50 measurement networks of relevance to GAIA-CLIM. These analyses are in the process of being analysed by Task 1.2 participants and shall be the subject of a deliverable due in M18 of the project.

Gap remedy(s)

Remedy

Specific remedy proposed

Application of the measurement maturity matrix exercise to a number of networks and domains to assess suitability for purpose and gain broader buy-in to the concept and its scientific value.

Gap description (2/3)

- Proposed SMART Remedy/Remedies

-**Specific** remedy

-**Measureable** outcome

-**Achievability** (cost and tech/ organizational viability)

- **Relevance**

- **Timeframe**

Gap remedy(s)

Remedy

Specific remedy proposed

Application of the measurement maturity matrix exercise to a number of networks and domains to assess suitability for purpose and gain broader buy-in to the concept and its scientific value.

Measurable outcome of success

Feedback received from assessors leading to one or more of:

- - Revised versions of guidance to address perceived shortcomings
- - Demonstrated usage of the approach yielding improved observations usage / improved observations capabilities based upon lessons learnt
- - Citation of approach in the literature

Achievable outcomes

Technological / organizational viability: High

Indicative cost estimate: low (<1 million)

Relevance

The adoption of the tiered approach and assessment of maturity within that framework would help to ensure better use of observations across application areas as detailed in D1.3. A number of case studies shall help gain broader buy-in.

Timebound

Gap description (3/3)

- Risks to non-resolution
 - Likelihood and Impact



Gap risks to non-resolution

Identified future risk / impact	Probability of occurrence if gap not remedied	Downstream impacts on ability to deliver high quality services to science / industry / society
The guidance and assessment criteria are not fit for purpose and not adopted	Medium	Benefits of taking a tiered network of networks approach not fully realised

Giving your input (1/2)

- Feedback options available throughout:

using the “feedback” link next to the relevant gap, or the feedback button in the given gap description. We encourage you to use our template for external input which can be found [here](#).

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SUBMITTED BY [RICHARD DAVY](#) ON 8 AUGUST, 2016 – 16:01

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FEEDBACK

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
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Gap		
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▼ To: gaid@gaia-clim.eu

Subject: Feedback on Gap 1.02

Body Text ▼ Variable Width ▼  A A A | A A A | ☰

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Giving your input (2/2)

- Structured input:

Gap reference list

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-clim.eu/system/files/workpkg_files/gap_identification_template_external %28version 1%29.docx		Feedback 

Giving your input (2/2)

- Structured input:

GAIA-CLIM: Gap Identification Template (External Input)

September 2015

Guidance

For gap reporting please adhere to this template and keep the input concise. Provide any longer explanatory remarks not in the table but in a separate document with reference to the Gap Identifier (G6.<gap provider>.<gap number>)

Example: G6.yyyy.xx is a hypothetical gap which serves as an example. All gaps externally provided to GAOA-CLIM start with 'G6.'. For a gap reported by the institute KNMI, the gap identifiers would read G6.knmi.01, G6.knmi.02, etc]

Gap Identifier G6.<no>	Gap Type ¹⁾	Keywords ²⁾ [Up to 10 (max)]	ECV(s) ³⁾	Gap Description (<100 characters)	Trace ⁴⁾ (papers, project reports, etc)	Gap Impacts (Bulleated summary)	Envisaged Remedy (including timescale and cost estimate if possible)
G6.yyyy.xx	Coverage (spatial)	In-situ, GAW; TCCON; <u>Representativity</u>	CO ₂ , CH ₄ and other long-lived GHGs	Missing regional Asian network of GAW stations measuring greenhouse gases	https://www.wmo.int/pages/prog/qcos/apocXVII/7.1_GAW.pdf	<ul style="list-style-type: none"> No observational verification of present-day regional GHG inventories in Asia Insufficiently constrained regional GHG emission inversions 	Remedy: Through the WMO/GAW SAG-GHG Timescale: ? Cost estimate: ?

Future plans: X-sections

- Several cross-sections listed in GAIDv3:
 - *Gap type*
 - *Instrument technique*
 - *ECV*

3.2 Gaps per Gap Type

Each of the identified gaps is being associated with provide another means of providing cross section or are currently being distinguished by the GAID proc

- *Spatiotemporal Coverage*: gaps in geograph measurements
- *Vertical Domain and Vertical Resolution*: e resolving the vertical column sufficiently
- *Measurement Uncertainty*: incomplete unce spectroscopic uncertainties, i.e. all uncertain
- *Comparator Uncertainty*: uncertainties relat related to comparisons between measuremer
- *Technical*: user needs related to data dissem
- *Parameter*: missing parameter knowledge, n measurement of an ECV
- *Governance*: user needs related to network g

-

Future plans: X-sections

- Several cross-sections listed in GAIDv3:
 - *Gap type*
 - *Instrument technique*
 - *ECV*
- Gap descriptions have other classifiers
- *Timeframe*
- *Cost*
- *Viability*

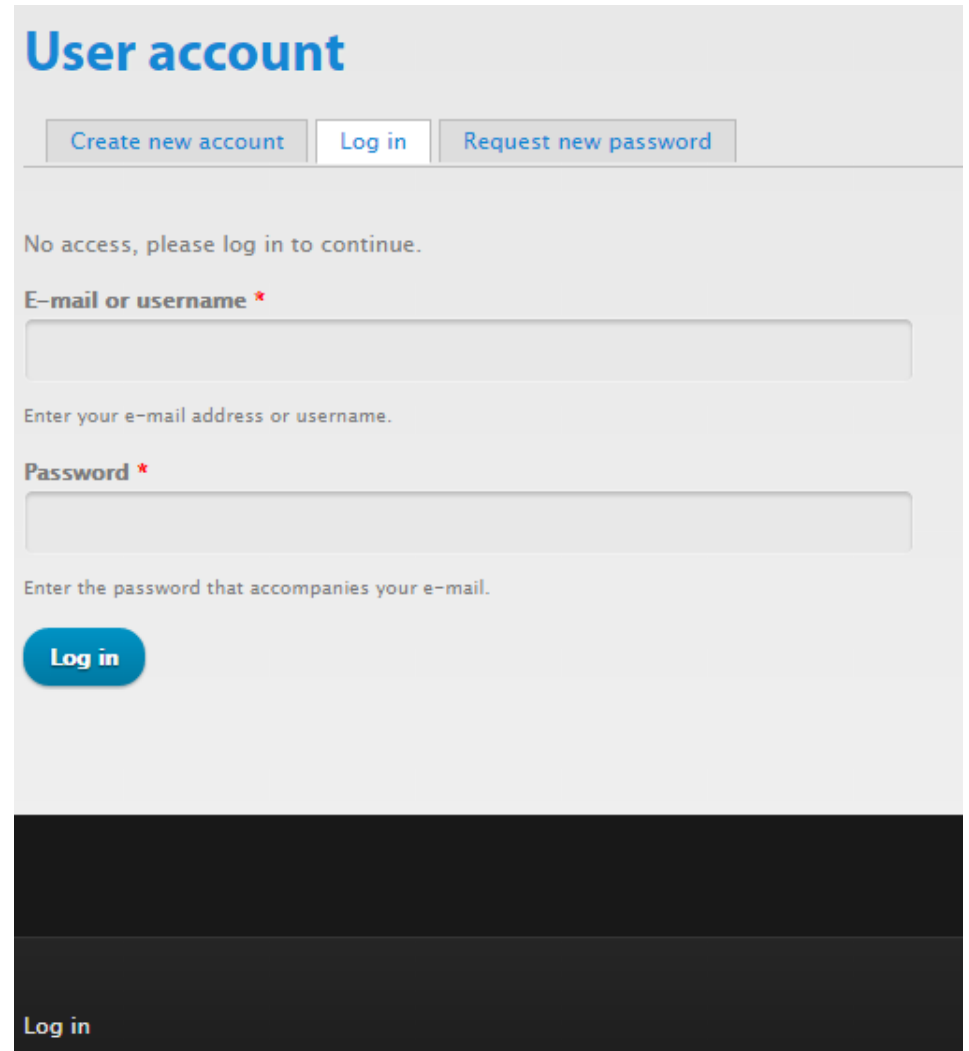
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Future plans: Open Wiki

- Gap pages are Wiki structure - editable by registered users.
- Will be opened for public editing
- Managed Wiki – changes approved by GAID group



The image shows a user account login interface. At the top, the title "User account" is displayed in blue. Below it, there are three buttons: "Create new account", "Log in", and "Request new password". A message states "No access, please log in to continue." The form includes two input fields: "E-mail or username" and "Password", both marked with a red asterisk. Below the "E-mail or username" field, there is a prompt "Enter your e-mail address or username." Below the "Password" field, there is a prompt "Enter the password that accompanies your e-mail." A blue "Log in" button is positioned below the password field. At the bottom of the form, there is a dark grey bar with a "Log in" link.

User account

Create new account Log in Request new password

No access, please log in to continue.

E-mail or username *

Enter your e-mail address or username.

Password *

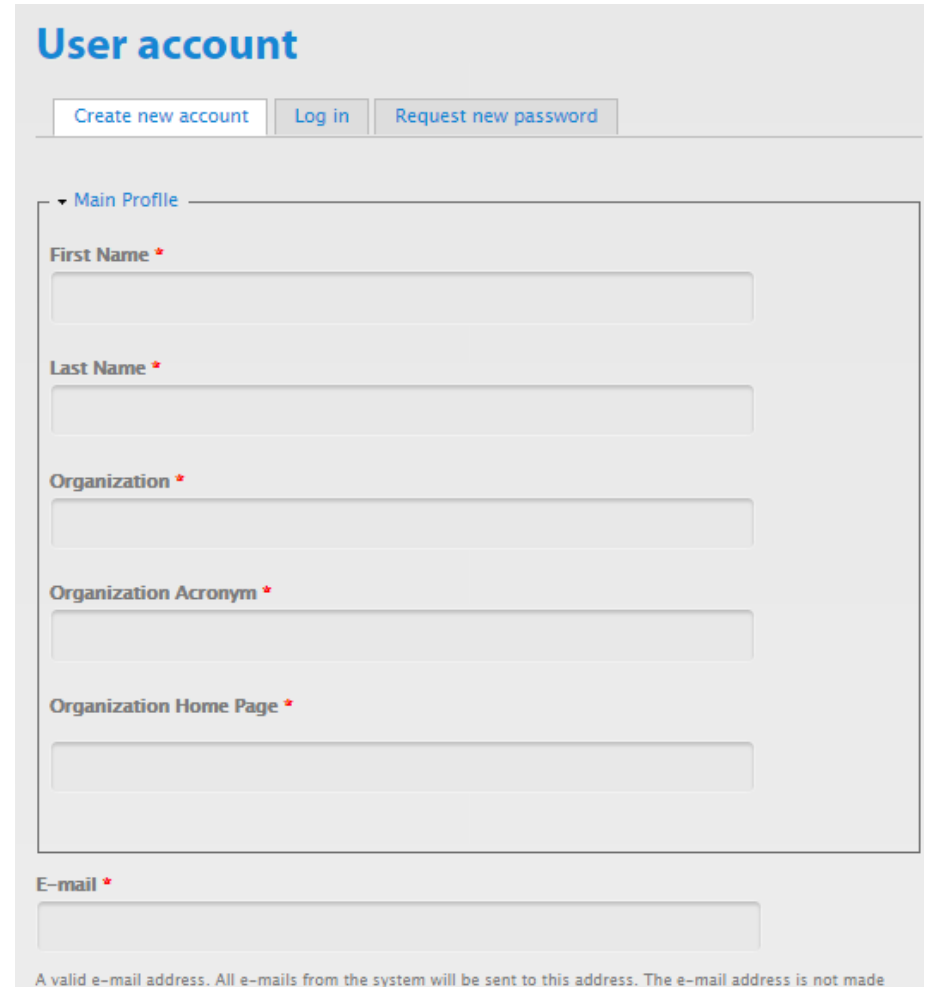
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Log in

Log in

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The image shows a 'User account' registration form. At the top, there are three buttons: 'Create new account', 'Log in', and 'Request new password'. Below these is a section titled 'Main Profile' with a dropdown arrow. Inside this section, there are five text input fields, each with a red asterisk indicating it is required: 'First Name', 'Last Name', 'Organization', 'Organization Acronym', and 'Organization Home Page'. Below the 'Main Profile' section is an 'E-mail' field, also with a red asterisk. At the bottom of the form, there is a small line of text: 'A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made'.

User account

[Create new account](#) [Log in](#) [Request new password](#)

▼ Main Profile

First Name *

Last Name *

Organization *

Organization Acronym *

Organization Home Page *

E-mail *

A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made

Future plans

- Is the current format useful/easy to navigate?
- What do you want to see for interactivity in the gap catalogue?
- Further features?

Richard.Davy@nersc.no