

GAIA-CLIM Second User Workshop

November 21-24, 2016

Location: Belgian Science Policy, Avenue Louise 231 Louizalaan, B-1050 Brussels, Belgium

Hosts: M. De Mazière and Nathalie Kalb

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AGENDA – v2

Note : The workshop is intended to be very interactive, so it is best that you bring a laptop with you. Also, on Wednesday, we will discuss the Virtual Observatory. There is a timeslot in the agenda during which you can present in a few minutes a use case, i.e., a case that you would like to handle through the VO interface. So please think about your interest in the VO and present that to the group.

Day 1 – Monday November 21: GAID

Note: GAID available online at <http://www.gaia-clim.eu/page/gaid> and the gaps therein are available through <http://www.gaia-clim.eu/page/gap-reference-list>.

(Remote connections 13:40 – 15:00 Stephan Bojinski)

Moderators: M. De Mazière and M. van Weele

Rapporteur: C. Voces (NUIM)

13:30 Welcome and logistics: M. De Mazière & N. Kalb

13:40 Presentation of the status of the GAIA-Clim project by P. Thorne, coordinator

14:00 Objectives of the Workshop: M. De Mazière

14:10 Tour de Table: participants are asked to identify their application (cf break-out groups)

14:30 Presentation of the Gaps Assessment and Impacts Document (GAID v3), by M. van Weele

14:45 Web tools to facilitate visualization and feedback on gaps: R. Davy

15:10 Invited talk: How does the GAIA-Clim GAID fit into the wider context of GEOSS? (J. Maso, coordinator of the ConnectinGEO project)

15:30 *Coffee/tea break*



16:00 Discussion with all participants in breakout groups per (self-identified) primary application area. All breakout groups will be facilitated by one or more GAIA-CLIM project participants in attendance ; each group shall indicate a rapporteur.

Proposed groups:

1. Climate research;
2. Climate services;
3. Satellite and model validation;

Facilitators : Peter, Heather, Richard

- Questions to be discussed:
 - Your perception of strengths and weaknesses of how GAIA-CLIM is currently identifying and documenting gaps, and of the structure of the GAID ?
 - Usefulness or otherwise of the gap assessments process to users?
 - Do you agree that all the gaps currently listed are actually gaps?
 - Would you like to see other useful X-sections of gaps?
 - Do you require additional interactive facilities on the Web to fully explore the gaps?

17:20 *Adjourn for the day*

Day 2 – Tuesday November 22: GAID: prioritization, feedback and summary

Moderators: F. Madonna and P. Thorne

Rapporteur: R. Davy (NERSC)

(Remote connections 9:00-12:30 k. Kreher; 15:30 – 17:00 Stephan Bojinski)

9:00 Feedback from breakout groups (20' per group + 10' discussion time)

10:30 Remediation of the gaps and criteria for prioritization, incl. questions: P. Thorne

10:50 *Coffee/tea break*

11:20 Continuation of breakout groups

Facilitators: Martine, Corinne Voces, Bill

- Questions to focus on :
 - Which gaps in the non-satellite observations do you encounter when 'running' your application? i.e., Identification of missing gaps we may wish to add
 - Which gaps are most harmful to your application (cf. prioritization)?
 - Can you suggest any additional work program / activity to resolve a current gap?
 - Do you have an idea of the feasibility and the cost of remedying gaps?

12:30 *Lunch break*

13:30 Feedback from breakout groups (20' per group + 10' discussion time)

15:00 *Coffee/tea break*

15:30 Feedback from ESA and EU Copernicus: Carole Peubey

16:00 Feedback from GEOSS: Joan Maso

16:20 Feedback from Advisory Panel: Stephan Bojinski (remotely)

16:40 Comments from WP1 to WP5 leaders

17:00 Wrap-up and conclusions: M. Van Weele

17:20 Introduction to the subject of Wednesday & Thursday: the Virtual Observatory: A. Meier

17:30 *Adjourn for the day*

19:30 *Social Dinner (at own cost, details to be given on site)*

Day 3 – Wednesday November 23: Virtual Observatory

Moderators: J.C. Lambert and J. Schulz

Rapporteur: G. De Leeuw (FMI)

(Remote connections 8:30 - 12:30 Tony Reale & Alessandro Fasso & K. Kreher; 9:00 – 10:45 Stephan Bojinski & Kalev Rannat; 11:20 – 12:30 Kalev Rannat; 15:45-16:30 Alessandro Fasso & Stephan Bojinski & Kalev Rannat)

8:30 Welcome and logistics: M. De Mazière & N. Kalb

8:40 Tour de Table: participants are asked to identify their application (cf break-out groups) and primary interest in the Virtual Observatory (VO).

9:00 Outline of Virtual Observatory: A. Meier

9:30 3D visualization tools: Fabio Madonna

9:45 OSSSMOSE underpinning the VO: T. Verhoelst

10:15 The GRUAN processor: B. Bell & F. Carminati

10:45 *Coffee/tea break*

11:15 Organisation of the 1-on-1 hands-on sessions and the parallel discussion on errors and ways how to visualize errors: Arndt Meier

11:20 Users are invited to outline the kind of studies they would like to do with the VO (5 min each, welcome to show one or two slides): all interested users

(+ Gaia Pinardi)

Ca. 11:50/12:00 Error and error visualization discussion.

Conveners: Jean-Christopher Lambert, Tijl Verhoelst, Bavo Langerock

Plenary as a kick-off: Three examples of errors typically reported for an in-situ sonde profile (e.g. GRUAN), total column instrument (e.g. Dobson/Brewer) and ground-based remote sensing profile (e.g. LIDAR or FTIR) : Bavo Langerock & Karin Kreher (10-15 min)

For the next 2 hours, splitting into 2 groups:

A) Main room: basically everyone who is not in a one-on-one.

Rapporteur: Martine

Users interested in a one-on-one will get together in small groups for about 20 min and then return to the discussion A).

a. 30 min plenary on what errors should be exposed in the VO and how? Total error? Sums of systematic and statistical errors each? Individual error sources? To what level? Always report all potential errors ? Set non-reported errors with a flag or value to “not reported” or “Known to be irrelevant” or “known to be less than x permil”? All in same file? Auxiliary file for detailed errors? Etc

Moderators: J.-C. Lambert & Gerrit de Leeuw

b. 30 min plenary to discuss on how to visualize errors. In 3D? 2D for individual profiles (think radio sonde)? Mean over many such profiles? Zonal means? Monthly means? Running means? Visualisation of averaging kernels? Footprints (where does the signal come from)? Etc.

Moderators: T. Verhoelst & Francois Hendrick

B1) One-on-one hands on session with the VO: Arndt Meier + Jacques Descloitres (Notes)

B2) One-on-one hands on session with the VO: Hannes Keernik + Joerg Schulz (notes)

B3) One-on-one hands on session with 3D tools: Fabio Madonna + Corinne Vigouroux (notes)

12:30 to 13:30 *Lunch break*

Continuation of above sessions

15:15 – 15:45 *Coffee/tea break*

15:45 Reflection on Stat4col, led by Alessandro Fasso (remote) & Fabio Madonna

16:05 Wrap-up from the error and error visualisation sessions and from the breakout groups (Martine)

16:30 *Adjourn for the day*

Day 4 – Thursday November 24: Virtual Observatory: feedback & summary

Moderators: B. Bell and A. Meier

Rapporteur: H. Lawrence (ECMWF)

(Remote connections 9:00 -10:30-12:00 Tony Reale & Kalev Rannat – K. Kreher; 11:10 – 12:00 Kalev Rannat)

9:00 Feedback from one-on-one sessions – note-takers and users will be asked to come up front and say a few words.

9:40 Reflection on the use of OSSMOSE in the context of the VO, led by Jean Christopher Lambert & Tijn Verhoelst

10:00 The role of NWP in the VO also with respect to estimating variability and uncertainties in water vapour, led by Bill Bell

10:30 *Coffee/tea break*

11:00 Wrap-up and conclusions: A. Meier & J. Schulz

11:30 Way forward in GAIA-Clim: M. De Mazière & P. Thorne

12:00 *Adjourn the Workshop / lunch provided*