

CCI DSWG & SEWG Session

CCI 6th Colocation, 28th September 2015

Summary Report
Carsten Brockmann

Participants	
Aerosol CCI	Julian Meyer-Arneke (DLR)
Cloud CCI	Cornelia Schlundt (DWD) Caroline Poulsen (STFC)
Fire CCI	Thomas Storm (BC) Lucrecia Pettinari (UAlcaca)
GHG CCI	Guenter Lichtenberg (DLR)
Glaciers CCI	Tazio Strozzi (Gamma-RS)
Ice Sheets Greenland CCI	Dag Evensberget (S&T)
Ice Sheets Antarctica CCI	
Ocean Colour CCI	Mike Grant (PML) John Swinton (TVUK)
SST CCI	Martin Boettcher (BC) Carsten Brockmann (BC)
Land Cover CCI	
Soil Moisture CCI	Martin Ertl (AWST)
CCI Open Data Portal	Alison Waterfall (STFC) Victoria Bennett (STFC)
CCI Toolbox	Carsten Brockmann (BC)

Ed Pechorro (ESA) - Chair
 Americo Ambrozio (ESA)
 Jerome Benveniste (ESA)

Themes

- 1. Obs4MIPs**
- 2. DOIs**
3. Operationalisation
4. Sentinels & Big Data
- 5. Uncertainties**
- 6. Outreach**
7. Engineering Challenges
8. Development Tools
9. Catalogues
- 10. Data Conventions**
- 11. Masks**
12. Best Practice
13. CCI DSWG & SEWG

**Input to all themes were collected before the meeting
and are available for further work**

Status:

- Early stage of cooperation
- OC CCI test-run

Challenge / Need / Issue:

- Benefit: meeting CMIP6 timeline and requirements
- Interaction with Obs4MIPS team unclear
- Dataset compliancy required

Potential Solution(s) / Action(s) :

- Support through the CCI Open Data Portal
- DSWG recommendations/instructions on datasets compliancy
 - note: DSWG more advanced than Obs4MIPS

Status:

- CCI Open Data Portal project begins service for DOI provision to archive
- J. Beneviste reported on best practice in ESA Exploitation Department
- Some CCIs use DOIs following organisational rule (e.g. DLR, CEDA)

Challenge / Need / Issue:

- No agreement on CCI wide guiding principles for constructing DOIs (naming rules, syntax)
- Diverse knowledge & interest about DOIs within CCI teams
- CCI wide harmonisation and support required

Potential Solution(s) / Action(s) :

- The discussion yesterday helped teams to better understand DOIs
- CCI Portal offers support to all CCI teams: they will issue DOIs
- This is an offer by the CCI Portal; CCI teams are free to go their own way

Status:

- Land and Ocean CCIs are really concerned by very large data volumes already now
- All CCIs are ready to / progressing towards repeatedly processing large data volumes in short time

Challenge / Need / Issue:

- Data volumes will increase by an order of magnitude through Sentinels. Most CCIs are going to use Sentinel data within Phase 2 (atmospheric CCIs need S5).
- Fast access to large data volume is an issue. CCI is not part of the inner Copernicus network, although it shall contribute the Copernicus Climate Change Service

Potential Solution(s) / Action(s) :

- Improve provision of information
 - Best way to getting Sentinel data
 - Central repository for CCI System Engineering docs
 - Synthesis information
- Support from ESA for CCI wide data access
 - Broadcasting like ENVISAT DDS or EUMETCAST
 - Centralised common repository of required Sentinel data
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- Support from national data Hubs or Collaborative ground segments
 - still in preparation phase: this is a drawback and opportunity at the same time
 - ensure proper funding
- Intensify exchange of knowledge / lessons learned with SEWG
 - adapt best practices
 - develop mitigation strategies

Status:

- All CCIs generating uncertainty products; different methodologies,
- No well-agreed way to represent them and their variety
- Cloud – Aerosol – SST common activity to harmonize

Challenge / Need / Issue:

- Harmonisation of methodology and representation required
- Improvement of communication to data users

Potential Solution(s) / Action(s) :

- paper from cross CCI WG under preparation
 - SEWG to review and comment from technical point of view
- mini-working group, action C. Poulsen
 - compile overview on uncertainty representation of all CCIs
- work closely with science leaders and EO teams

Status:

- CCI overarching communication through ESA and CMUG
- Communication mainly individually undertaken per CCI
- Common CCI Portal points to individual CCI pages which contain specific information and data
- CCI Portal project: interface to public users, not (yet) for CCI internal communication

Challenge / Need / Issue:

- Common appearance of CCI needs improvement to improve outreach to scientific communities and international bodies needs improvement
- Improvement / ease access to CCI data to users (experienced and new users): catalogue, data access

Potential Solution(s) / Action(s) :

- Increase visibility in social media
- Use YouTube to advertise and train data usage
- Work on meta data, cataloguing etc → CCI data access portal

Status:

- DSWG standard available and implemented by CCIs
- All CCIs comply with CF convention where they exist

Challenge / Need / Issue:

- DSWG standard good for CCI “corporate identity” and to ease work for groups working across CCIs. Not ideal for each individual purpose
- CF convention does not address L2 data well; several variables are missing (CF addresses L3 and higher)
- Minimum set of meta data required, becoming more important for catalogue of the portal

Potential Solution(s) / Action(s) :

- SEWG (E. Pechorro) will collect requirements to extend CF convention and provide to V. Bennett (CF convention)
- Work of CCI Data Portal and CCI Toolbox will intensify dialogue with CCI teams on data formats and meta data.

Status:

- Masks = maps with static background information used during processing; most CCIs make use of such masks: land-water, snow, BRDF ...
 - MODIS derived datasets are widely used
- Science leaders agreed that the LC CCI derived land-water mask shall be used by all CCIs
 - Sentinel 3 ground segment masks for land-water, marine/inland water, coastline and intertidal derived from LC WB mask

Challenge / Need / Issue:

- Further harmonisation of masks desirable towards improved intercomparability of ECVs
- Ease access to masks
- Align with Sentinel processing if possible

Potential Solution(s) / Action(s) :

- use Sentinel 3 masks for land-water, marine/inland water, coastline & intertidal
 - will be updated to higher resolution after availability of updated LC CCI WB mask
- collect other masks used by CCIs and make them available to all CCI projects through the CCI Data Access Portal
- support usage of masks in CCI Toolbox
- decision on mandatory use of masks to be taken by science leaders

System Engineering Working Group SEWG

- including Data Standard Working Group DWSG
- addressing large variety of themes; technical issues often connected with scientific, managerial and “political” questions
- active participation from all CCI projects

Challenges and Actions

- Be the police for standards
 - but be a supportive police
 - data standards, conventions, meta data, DOIs
- Support across ECV data usage and processing
 - access to Sentinel data, data formats, meta data, masks ...
- Support the improvement of outreach activities
 - Obs4MIPS, Portal, ...
- Integrate new technical projects
 - CCI Open Data Access Portal and Toolbox