



CCI Open Data Portal

The CCI Open Data Portal

CMUG Integration Meeting, May 2015





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CCI Open Data Portal

Project Objectives

Primary objective - develop an Open Data Portal to provide a central point of harmonised access to mature CCI ECV datasets

- This is in addition to the data access mechanisms already provided by each CCI project – intended to compliment and unify the work of the individual CCI teams
- Will act as a “shop window” for the CCI programme (explore, discover and access data, request support, share and collaborate through the on-line community...)
- Will be an iterative development with opportunities for review and evolution on an annual basis
- Key requirements: user-friendly, reliable, long-term availability
- A living dynamic environment benefiting both external users and CCI partners



Project Objectives

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Key elements:

- Start with:
 - Rapid deployment of portal FTP site offering key ECV datasets
 - Quick integration of existing programme web site within portal development contract
 - Portal baseline requirements analysis exercise
- Followed by development and operation/maintenance of:
 - Central Data Archive
 - Metadata Catalogue
 - Access to data through multiple interfaces and protocols
 - Improvements to programme web site with catalogue search interface, helpdesk function, ECV dashboard, document library, etc...
 - Support for maintenance of individual project web sites (consistent style and contents)



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Project Objectives

Datasets

- ESA have listed potential data sets, need to refine this in discussion with teams
 - Initially: Phase 1 data & early Phase 2 data
 - Later: Phase 2 data
 - “The most useful and most usable ECV data”
 - Decide with input from users, CCI project teams, ESA TOs, etc
- Free and open access – registration could offer additional benefits



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Example early access interface

cci
climate change initiative

esa

Get Data [Login](#) [Help](#)

Username: Not logged in Download multiple files [click to view](#) Depth: 1 [go](#)

Current directory: / neodc

aatsr_l1a	
aatsr_multimission	(A)ATSR multimission archive covering ATSR-1, ATSR-2 and AATSR in ENVISAT format
arc	(A)ATSR Reprocessing for Climate
arsf	NERC ARSF - Airborne Research and Survey Facility
atsrubt	ATSR-1 and -2 Ungridded Brightness Temperature (UBT) archive
avhrr-3	EPS Metop - Advanced Very High Resolution Radiometer-3 (AVHRR-3)
avhrr3_metop_b	
avhrr_fasir	AVHRR FASIR data
avhrr_gac	4km resolution AVHRR GAC Level 1B data from 1978 - 2013 from NOAA satellites 06-12, 14-19, Tiros-N, and from N
caliop	
casix	CASIX - Centre for observation of Air-Sea Interactions & fluxes
esacci_sst	ESA CCI SST data
esasar	ESA (A)SAR dataset
globalbedo_modis_spectral_priors	
gome-2	EPS Metop - Global Ozone Monitoring Experiment-2 (GOME-2)
gome2_metop_b	
iasi	EPS Metop A - Infrared Atmospheric Sounding Interferometer (IASI)
iasi_metop_b	EPS Metop B - Infrared Atmospheric Sounding Interferometer (IASI)
isac	Infrared Sea surface temperature Autonomous Radiometer (ISAD) data

ftp, http, ..



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CCI Data Catalogues

cci
climate change initiative

ESA Search Cloud CMUG Fire GHG Glaciers Ice Sheets Land Cover

Hosted Catalogue
CCI Network

ESA CCI > HOME

5th CCI Collocation Meeting



cci
Climate Change Information

esa

Free text Search

Select Climate Variable

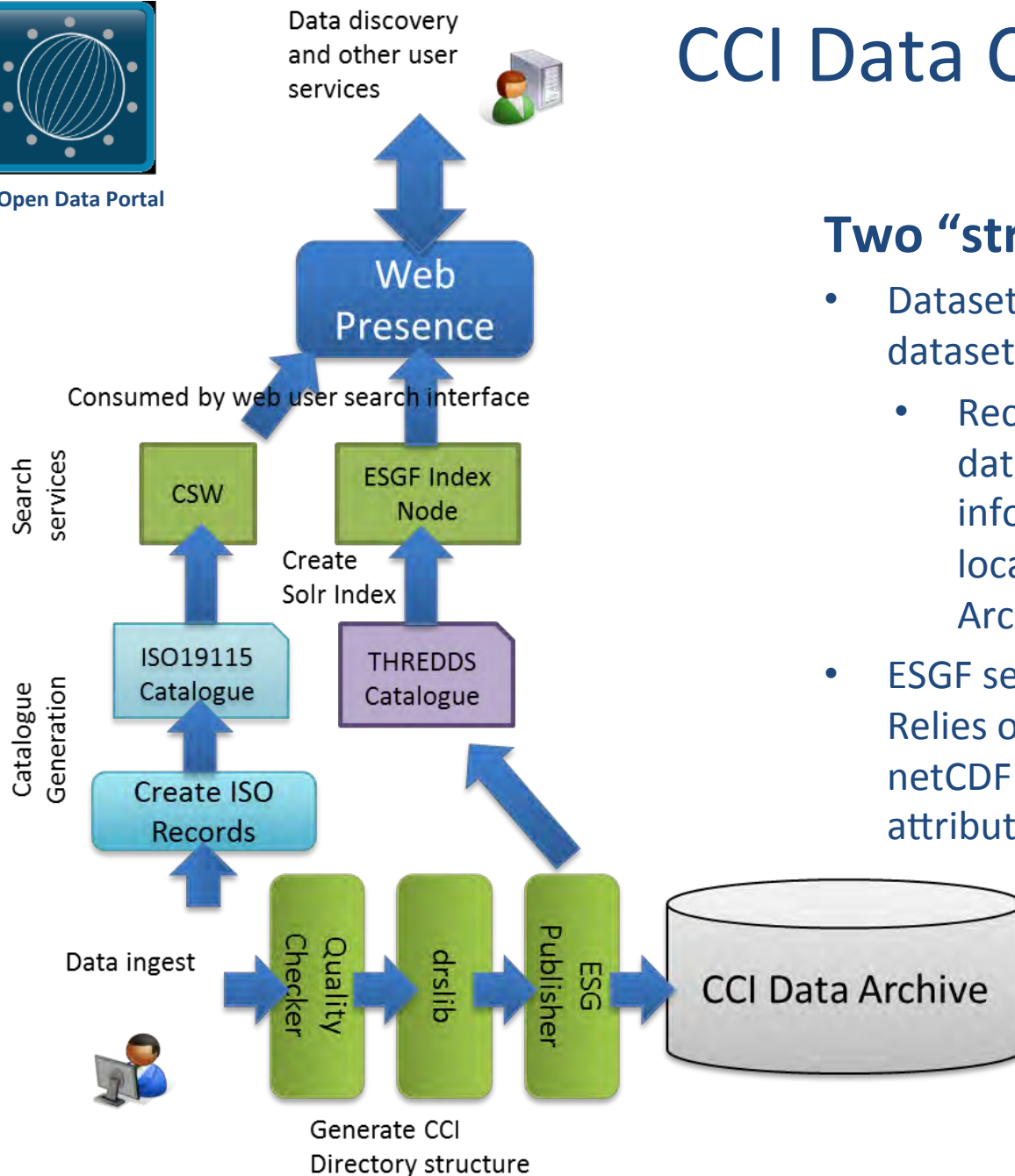
Title
project=CMIP5_model=INM-CM3, Centre of Global Change and Earth System Science, Geqing Normal
Dataset 2





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CCI Data Catalogues



Two “strands”

- Dataset catalogue : one record per dataset, ISO19115 compliant records
 - Records can be created for any dataset, just need descriptive information and link to data location (in CCI Open Data Portal Archive, or elsewhere)
- ESGF services, faceted search etc. Relies on standards-compliant, netCDF with agreed metadata attributes for search facets



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ESGF interface to CCI data (example)

The screenshot displays the CCI Open Data Portal interface. At the top, there is a blue header with the 'cci climate change initiative' logo on the left and the 'esa' logo on the right. Below the header is a navigation bar with various data categories: ESA, Search, Cloud, CMUG, Fire, GHG, Glaciers, Ice Sheets, Land Cover, Ocean Colour, Ozone, Sea Ice, Sea Level, SST, and Soil Moisture. A secondary navigation bar includes 'Home', 'Search', 'Tools', 'Login', and 'Help'.

The main content area features a search bar with the query 'chlorophyll' and a 'Search' button. To the right of the search bar are links for 'Temporal Search', 'Clear search constraints and datacart', 'Search Help', 'Search Controlled', and 'Vocabulary'. Below the search bar, there are examples of search terms and instructions on how to download data.

On the left side, there are two panels: 'Current Selections' showing '(x) query:chlorophyll' and 'Search Categories' with a list of filters including Project, Institute, Model, SubModel, Instrument, Experiment Family, Experiment, SubExperiment, Time Frequency, and Product.

The search results section shows a list of checkboxes for 'Search All Sites', 'Show All Replicas', and 'Show All Versions'. It indicates that 1178 search results are displayed, with the current view showing results 1 to 10. There are buttons to 'Add All Displayed to Datacart' and 'Remove All Displayed from Datacart'.

The 'Results' tab is active, showing a detailed view of a specific dataset:

- project=CMIP5, model=NASA Goddard Institute for Space Studies, GISS-E2-H-CC, experiment=historical, time_frequency=mon, modeling_realm=ocnBgchem, ensemble=r1i1p1, version=20120723
- Data Node: esgdata1.nccs.nasa.gov
- Version: 20120723
- Description: GISS-E2-H-CC model output prepared for CMIP5 historical
- Further options: [Add To Cart](#) [Visualize and Analyze](#) [Model Documentation](#)



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Project Objectives

Supporting activities

- Provide support to ECV teams for submitting CCI data sets to the CMIP/Obs4MIPs database
 - Co-ordination and planning - roll-out plan
 - Training and assistance with data preparation
 - Submission via Portal ESGF node
- TEP Requirements Analysis
 - Looking beyond the CCI Portal
 - What is required to support the wider exploitation of EO-based data for climate?
 - One of many contributing activities



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Beyond the CCI Open Data Portal

What does the community need most? Three angles...

“Euro-CEMS”

A platform for processing alongside big data, accessible to European researchers and service developers

“Climate Facebook”

A platform for climate science collaboration, exploiting social media tools

“CDR cookbook”

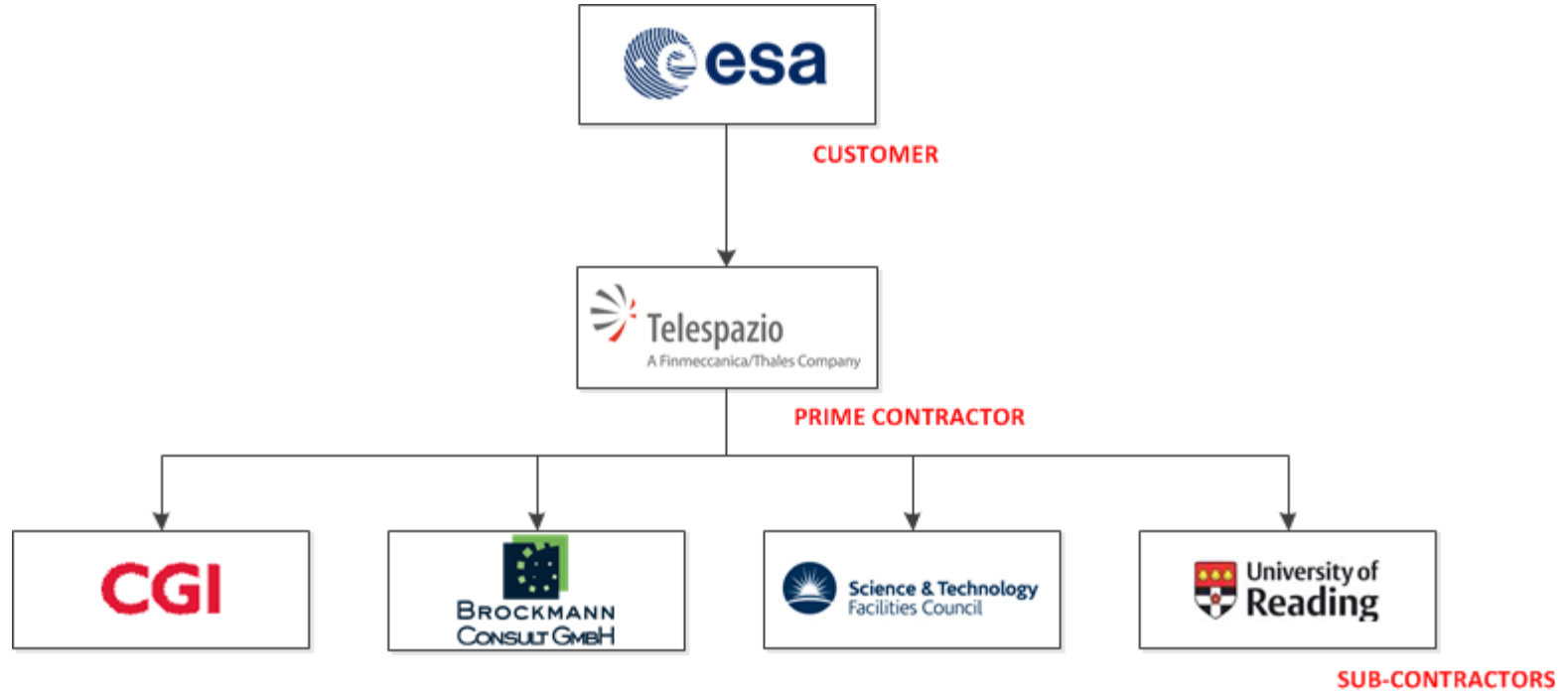
“CDR cookbook”

Access to ingredients and recipes for climate data record production



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Project Partners





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Portal/CCI Team Engagement

Key Personnel:

User Requirements Analysis

- Kevin Halsall (TVUK) - Portal Requirements
- Debbie Clifford (University of Reading) - TEP Requirements

CCI project web sites

- Robin Moss (CGI)

Provision of CCI ECV datasets

- Victoria Bennett, Anne Chadwick (CEDA/STFC)

Obs4MIPs support

- Indranil Mustafee (CGI)



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Portal/CCI Team Engagement

Direct contact from named personnel on specific issues, e.g.

- Timescale for providing relevant ECV datasets
- Data formatting/metadata queries
- Proposed changes to project web sites
- Status of/problems with submissions for Obs4MIPs

Requirements surveys

Participation at CCI programme meetings

- CMUG Integration
- CCI Co-location

Other EO and climate-related events

- C3S workshop, ESA conferences, etc



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Portal Requirements Analysis

Objective – to gather information from:

- Potential new users within the climate community
- Existing users of CCI ECV data
- CCI teams
- CCI documentation

Status – at a very early stage

- Early survey prepared to take advantage of opportunity presented by CMUG meeting
- Individual engagement with specific “external” users and each ECV team to follow shortly
- An iterative development with opportunities for review & evolution on an annual basis

Survey

- Can be found at: <https://www.surveymonkey.com/r/3NJFG76>
- A link to the survey will also be included on the CCI homepage: cci.esa.int

To discuss further please talk to me (VB), or after this meeting, contact Kevin Halsall at TVUK (kevin.halsall@telespazio.com)



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QUESTIONS....?

