



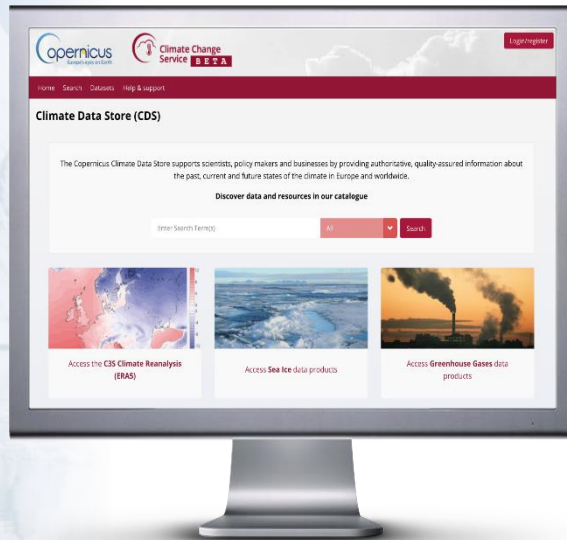
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# Climate Data Store



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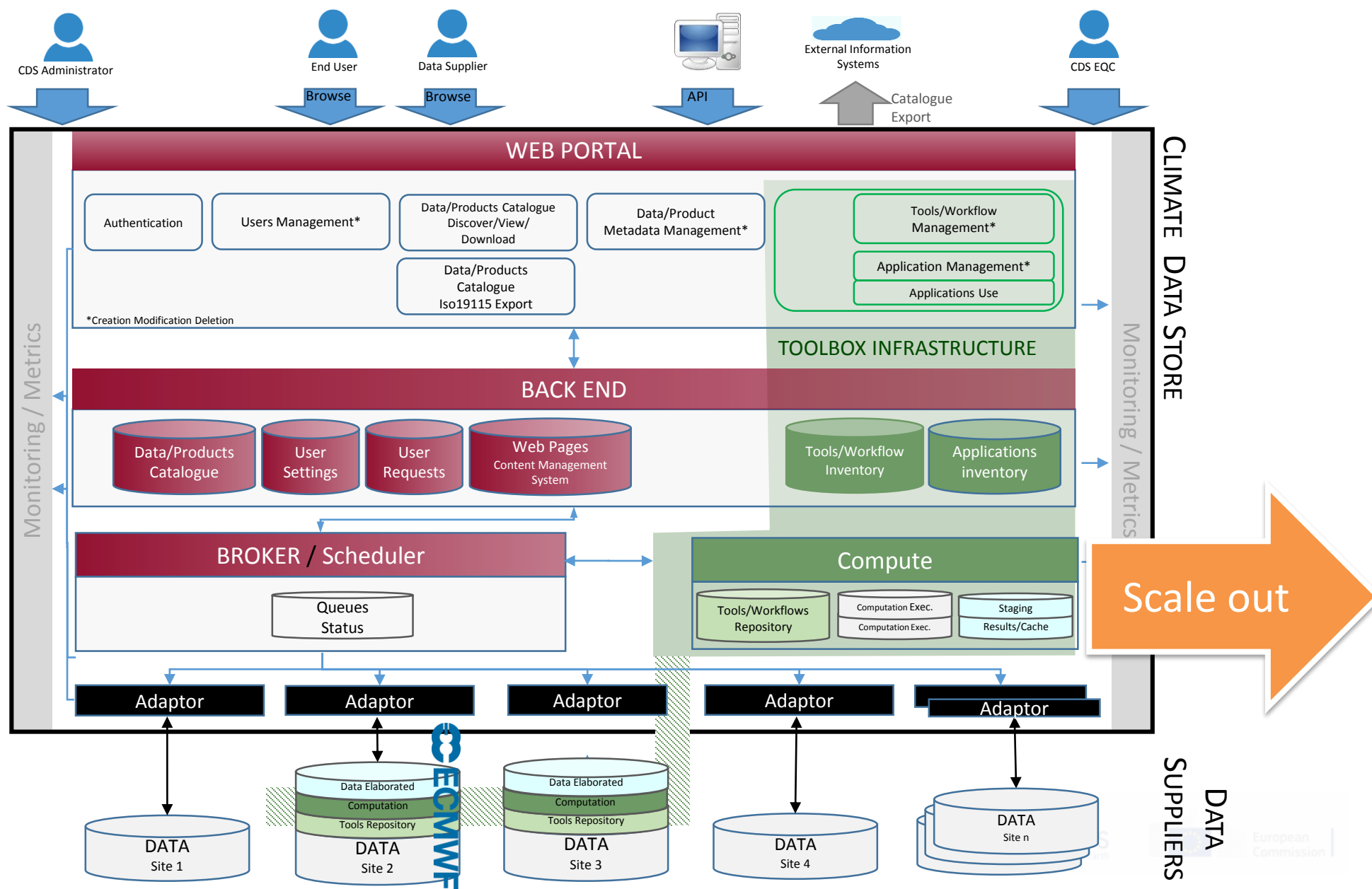


- The CDS contains **observations**, global and regional **climate reanalyses**, global and regional **climate projections** and **seasonal forecasts**
- The CDS is designed as a **distributed system**, providing improved access to **existing datasets** through a **unified web interface**



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# CDS – Overall technical Architecture





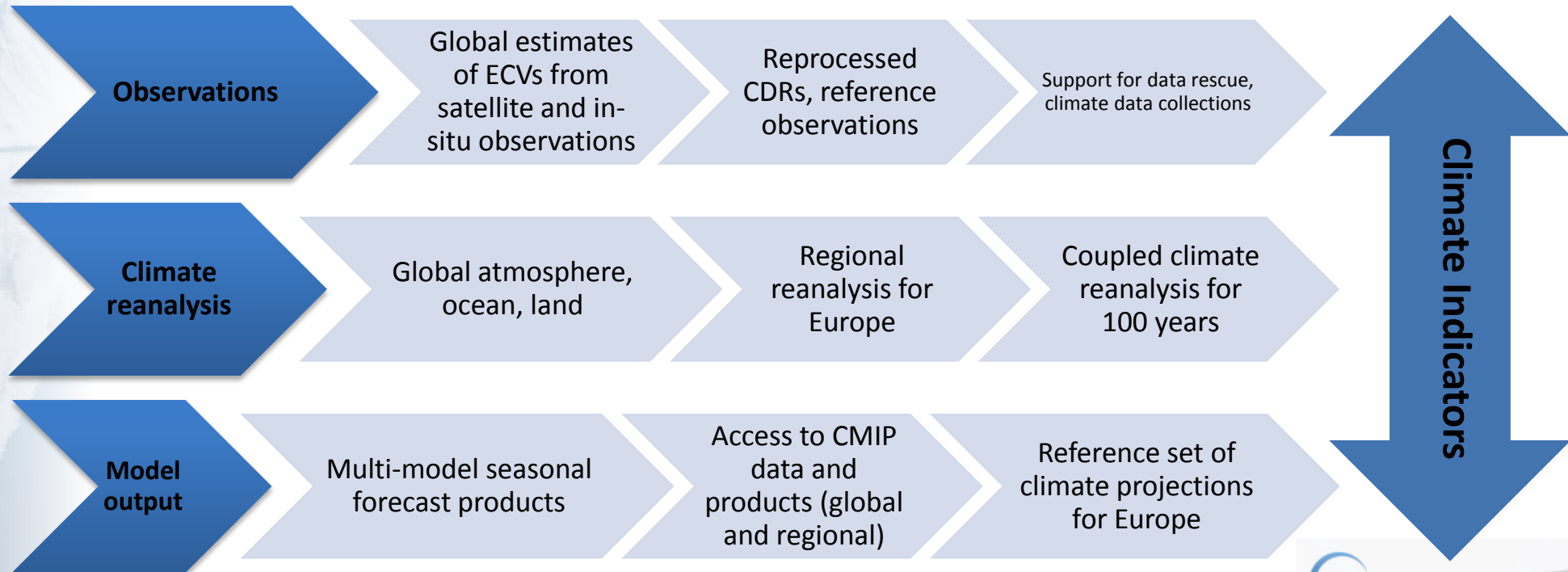
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# CDS - content

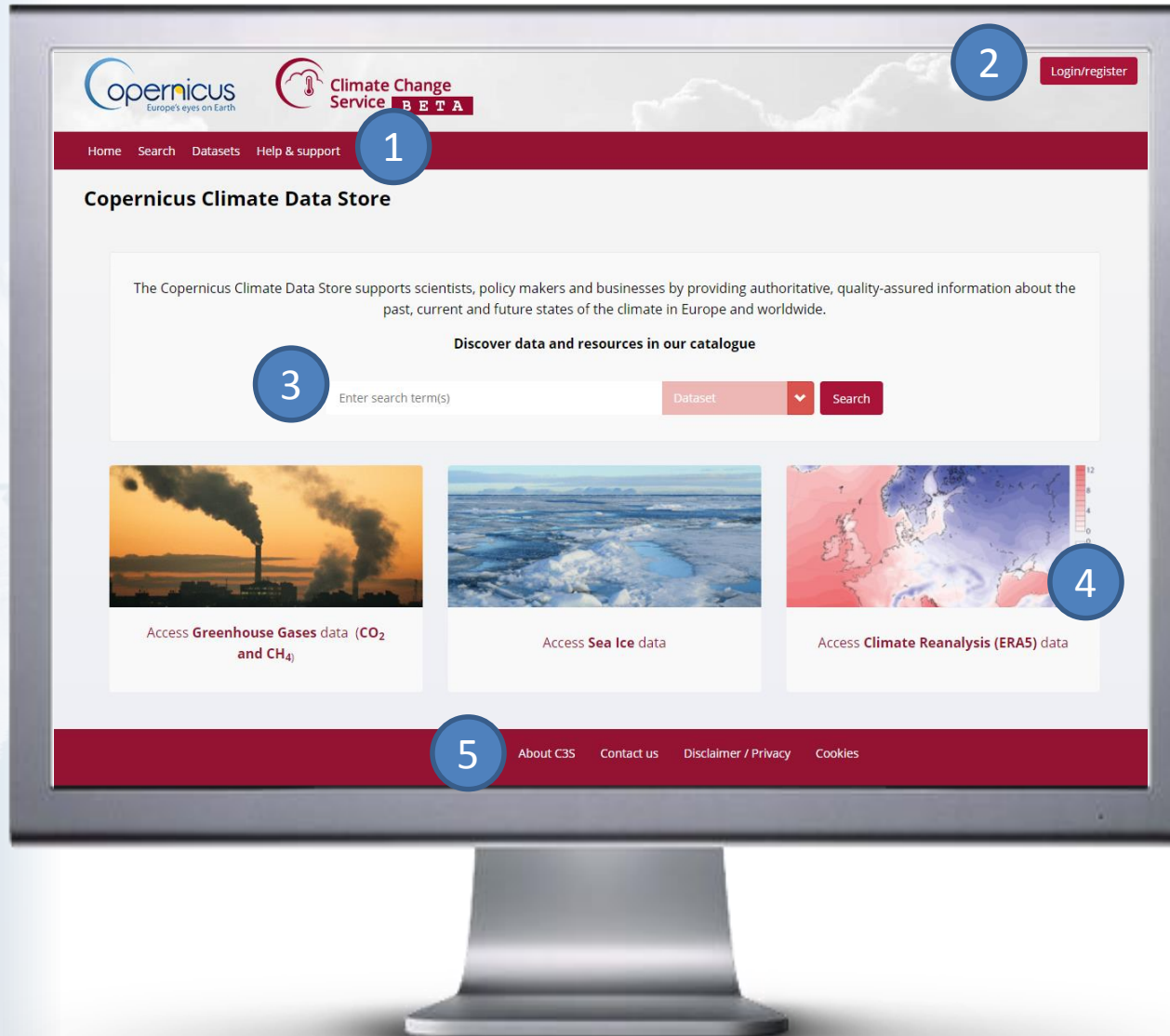


## Scientific basis:

- Essential Climate Variables as defined by GCOS
- GCOS Status Report and Implementation Plan
- IPCC, CMIP



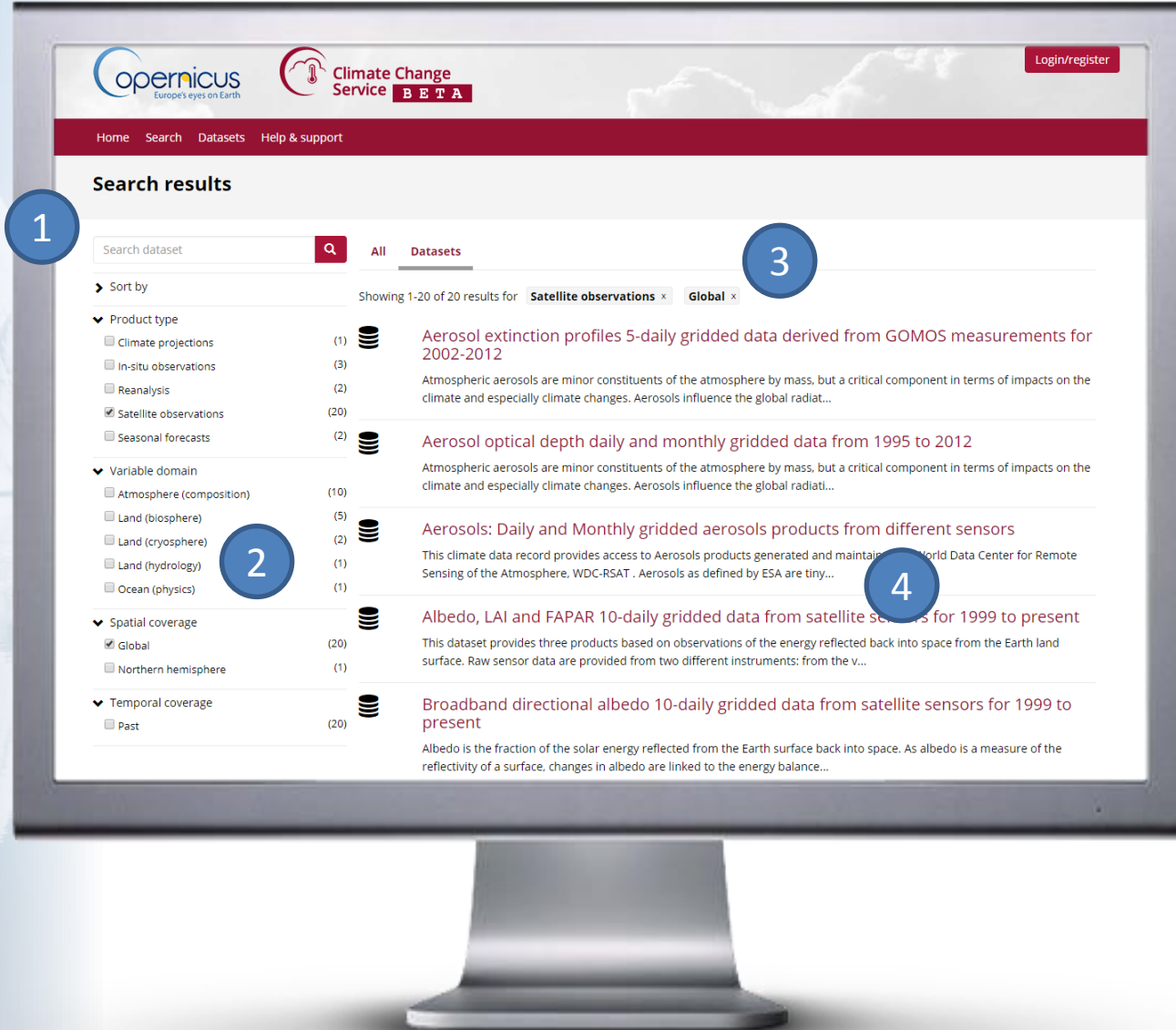
## “Home” page and global search function



- 1 **CDS navigation toolbar**
  - Search: facets, textual over the complete catalogue.
  - Datasets: facets, textual restricted to data.
  - Applications:
  - Your requests: user space to manage requests.
  - Help&support: Access to the *Copernicus knowledge base*.
- 2 **Registration (new user) and login** (registered users)
- 3 **Search engine:** free text plus content scope (datasets, applications, CMS, all)
- 4 **Direct access to products:** pre-filtered access to set of products.
- 5 **Generic portal toolbar**



## Search “datasets”



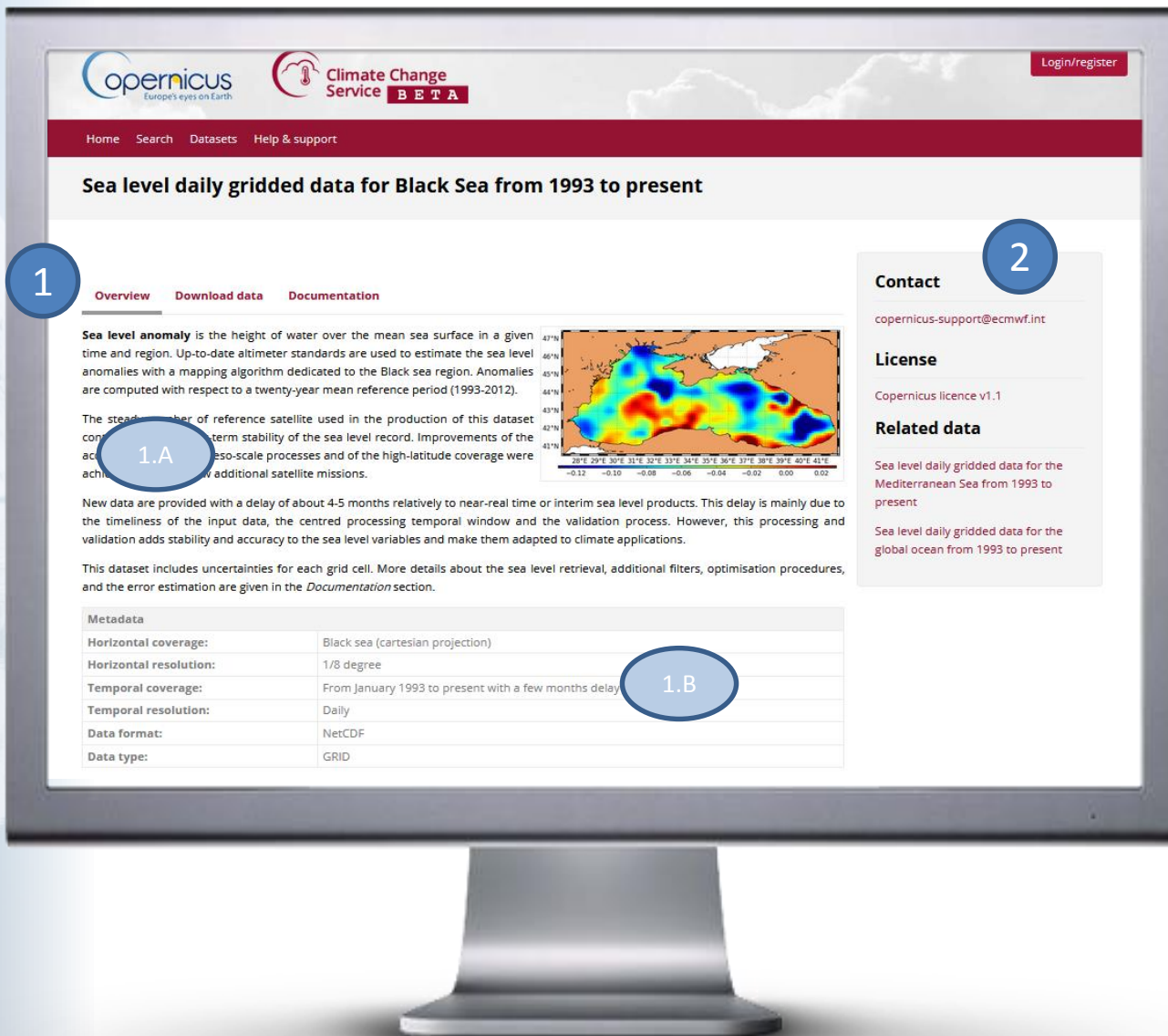
- 1 **Textual search:** free text.
- 2 **Facetted search:** Multiple criteria, only available combinations are displayed.
- 3 **Current searching criteria** (acumulative: textual + facetted + tipology of product)
- 4 **List of matching products in the catalogue:** Navigable by clicking on the title to the product dedicated area.



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## Product “overview”



### 1 Product toolbar:

- *Overview*: Global textual description (abstract)
- *Download data*: Subsetting form.
- *Documentation*: Access to detailed documentation (technical guidelines, user manuals, EQC reports)

**1.A Abstract:** user readable explanation about the product.

**1.B Detailed information:** Metadata about the product

### 2 Related information block:

- *Contact*: Mail box for questions about the product.
- *License*: All data is freely available but subject to some use licences.
- *Related data*: Products sharing facets.



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## “Download data” form and API

**1** Global Circulation Model (GCM) ⓘ  
At least one selection must be made

☐ Global coupled climate-carbon Earth System Model (GFDL's ES-M2) ☐ Hadley Global Environment Model 2 - Earth System (HadGEM2-ES) ☐ IPSL Earth System Model for the 5th IPCC report - Low resolution (IPSL-CM5A-LR)

☐ Atmospheric chemistry coupled version of MIROC-ESM earth system model (MIROC-ESM-CHEM) ☐ Norwegian Earth System Model (NorESM1-M)

**2** Representative Concentration Pathways (RCPs) ⓘ  
At least one selection must be made

☐ RCP 2.6 ☐ RCP 8.5

**3** Hydromodel  
At least one selection must be made

☐ Grid-based global hydrology and water resources model (PCR-GLOBWB) ☐ Large-scale, semi-distributed hydrologic model (VIC) ☐ Mesoscale hydrologic model (miHM)

☐ Noah-Multiparameterization Land Surface Model (noah-mp)

**2.A** Combiner format ⓘ

☒ Zip archive (.zip) ☐ Compressed tar file (.tar.gz)

[Show API request](#) [Show Toolbox request](#) [Please check mandatory fields](#)

Post to API endpoint <https://cds-dev.climate.copernicus.eu/api/v2/resources/dataset/era5-hourly-variables-on-single-levels>  
(Use your UID and API key from <https://cds-dev.climate.copernicus.eu/user/140>)

```
{
  "class": "ea",
  "levtype": "pl",
  "date": [
    "2010-01-01/2010-01-01"
  ],
  "time": [
    "00:00"
  ],
  "param": [
    "167.128"
  ],
  "dataset": [
    "best"
  ],
}
```

```
$ curl https://cds-acceptance.copernicus-climate.eu/api/v2/resources/greenhouse-gases-global-surface-carbon-dioxide-and-methane-v2-0-acceptance -H 'Content-Type: application/json' -u '<user_id>:<api_key>' -d '<json_request>'
```

The response back should be {"state": "queued"} or {"state": "completed"}

- 1 Subsetting form:** Set of widgets which allow users to create ad-hoc requests. Forms are dynamically created per each product.
- 2 Show request functions:**
  - 2.A Show API request:** Allow users to have access to the request as to be used by the API.
    - Example of API request.
  - Show toolbox request:** Allow users to have access to the request as to be used by the toolbox.
- 3 Submit request:** Different status
  - Please check mandatory fields: when the form is not completed.
  - Login/register to submit request: User needs to be logged in order to be able to submit a request.
  - Submit request: redirect to “your request” page





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## “Your request” management

The screenshot displays the 'Your requests' management page in the Copernicus Climate Change Service. The page includes a navigation bar with links to Home, Search, Datasets, Applications, Your requests, and Help & support. The main content area shows a list of requests with columns for Product, Submission date, End date, Duration, Size, and Status. A detailed view of a selected request is shown on the left, and a 'Delete selected' button is on the right. Numbered callouts 1, 2, and 3 highlight key features: 1 points to the request list, 2 points to the detailed request information, and 3 points to the 'Delete selected' button.

Product	Submission date	End date	Duration	Size	Status	✓
Directional albedo for global land surface	2018-02-24 08:28:36	2018-02-24 08:30:18	0:01:42	1.0 GB	Download	<input type="checkbox"/>
Request ID: 682301e7-a9fe-4321-8bb7-e45e0af1e92e						
Year:	2012					
Month:	October					
Nominal day:	13					
Variables:	Directional albedo for global land surface variables					
Global surface soil moisture from satellite sensors	2018-02-23 10:27:55	2018-02-23 10:27:55	0:00:00	4.4 MB	Download	<input checked="" type="checkbox"/>
SIS SWICA: Air climate indicators	2018-02-20 09:23:19	2018-02-20 09:23:19	0:00:00	12.2 MB	Download	<input checked="" type="checkbox"/>
SIS Agriclass: Specialized indicators	2018-02-20 09:22:34	2018-02-20 09:22:36	0:00:01	35.3 MB	Download	<input type="checkbox"/>
SIS: EDgE Gridded indicators of change in annual streamflow	2018-02-20 09:21:44	2018-02-20 09:21:50	0:00:05	61.7 MB	Download	<input type="checkbox"/>
Global glaciers distribution	2018-02-12 15:19:23	2018-02-12 15:19:23	0:00:00	462.2 MB	Download	<input type="checkbox"/>
Greenhouse Gases: Global surface Methane	2018-02-10 11:45:50	2018-02-10 11:45:53	0:00:03	7.0 MB	Download	<input type="checkbox"/>
Greenhouse Gases: Global surface Methane	2018-02-09 23:13:29	2018-02-09 23:13:30	0:00:01	7.0 MB	Download	<input type="checkbox"/>

- 1 Request information:** User have access to submitted requests.
  - *Product:* Short name of requested data product.
  - *Submission/End dates.*
  - *Duration.*
  - *Size of the file.*
  - *Status:*
    - Queued: waiting to be dispatched to provider.
    - Running/In progress: Already dispatched to provider.
    - Download: data ready to be downloaded.
    - Failed: request might fail. Error message should be presented.
    - Unavailable: requested result data no longer available.
- 2 Request information:** By clicking on the left arrow, detailed information about the scope of the request is displayed.
- 3 Delete requests:** User can remove old requests from the list by selecting them and clicking on the delete function.



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## “Login” and “registration”

The screenshot shows the 'Create new account' page of the Copernicus Climate Data Store. The page has a header with the Copernicus logo, 'Climate Change Service' logo, and a 'Login/register' button. Below the header is a navigation bar with links: Home, Search, Datasets, Help & support. The main content area is titled 'Create new account' and contains a form with the following elements:

- 1** A tabbed interface with 'I have an account' and 'I want to create an account'. The 'I want to create an account' tab is selected.
- 1.A** An 'E-mail \*' text input field.
- A confirmation message: 'A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.'
- 1.A** A 'Confirm e-mail address \*' text input field.
- 1.A** A 'First Name \*' text input field.
- 1.A** A 'Surname \*' text input field.
- 1.A** A 'Country \*' dropdown menu with the option '- Select a value -'.
- 1.A** A 'Sector \*' dropdown menu with the option '- Select a value -'.
- 1.B** A checkbox labeled 'I am registering on behalf of an institution'.
- A note: 'Please note that you can register for and on behalf of any entity, if you are entitled to do so. This account and all licenses registered thereunder will then have effect for that entity. Please specify the legal entity precisely, including any required pre-/suffixes (e.g. "Ltd" or "GmbH"). If you choose not to register an entity, this account and all licenses will entitle and oblige yourself only. You can change your registration details at any time with effect for the future.'
- 1.C** A text input field for 'Organisation'.
- 1.C** A checkbox labeled 'I agree to the Terms of use of the Copernicus Climate Data Store document \*'.
- 1.C** A checkbox labeled 'I agree to the Data Protection and Privacy Statement document \*'.
- A note: 'This question is for testing whether or not you are a human visitor and to prevent automated spam submissions.'
- 1.C** A 'Math question \*' section with the text '10 + 8 =' and a text input field.
- A green 'Create new account' button at the bottom.

**1 Create new account:** At the end of the process a confirmation e-mail should be received (*Please check your spam folder just in case*).

**1.A** General user information.

**1.B** Registration on behalf of an organization: requires of additional information and the acceptance of special T&C.

**1.C** *Terms and conditions and Privacy statement.*

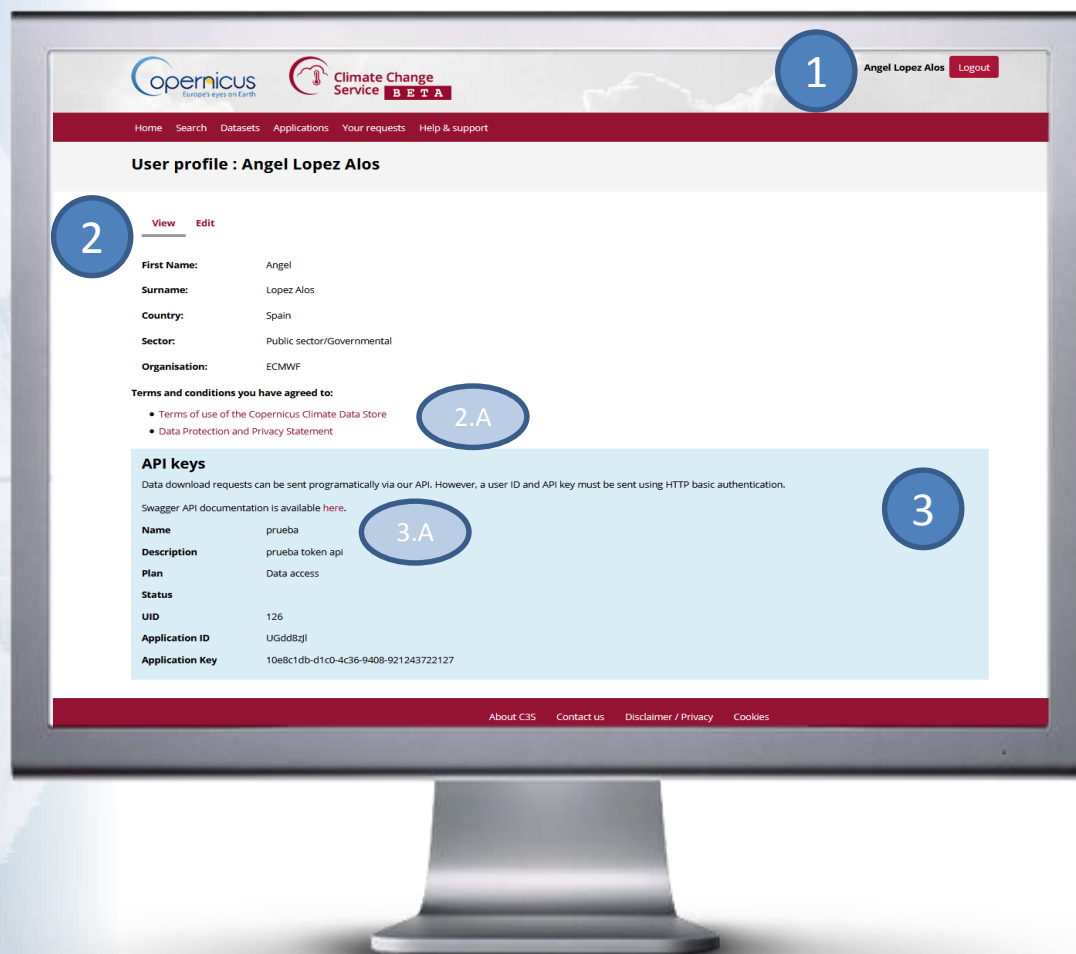
**1 Login for registered users**



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## “Edit profile” and get “API key”



- 1 Registered User:** By clicking on the name user navigates to the edit profile page.
- 2 User profile *view* and *edit*:** user have access to the data already provided just for consultation (*view*) or edit their personal data at any time (*edit*)
- 2.A** Agreed terms and conditions: list of already accepted terms and conditions.
- 3 API Keys:** In this área user can request the necessary keys to make use of the API.
- 3.A** Documentation about how to invoke the API is also available in swagger.