Climate
Change

Climate Data Store

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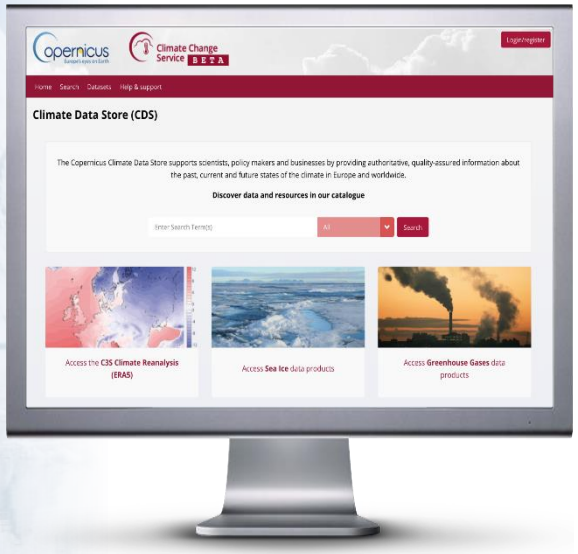
European
Commission

Climate Data Store

Climate Change

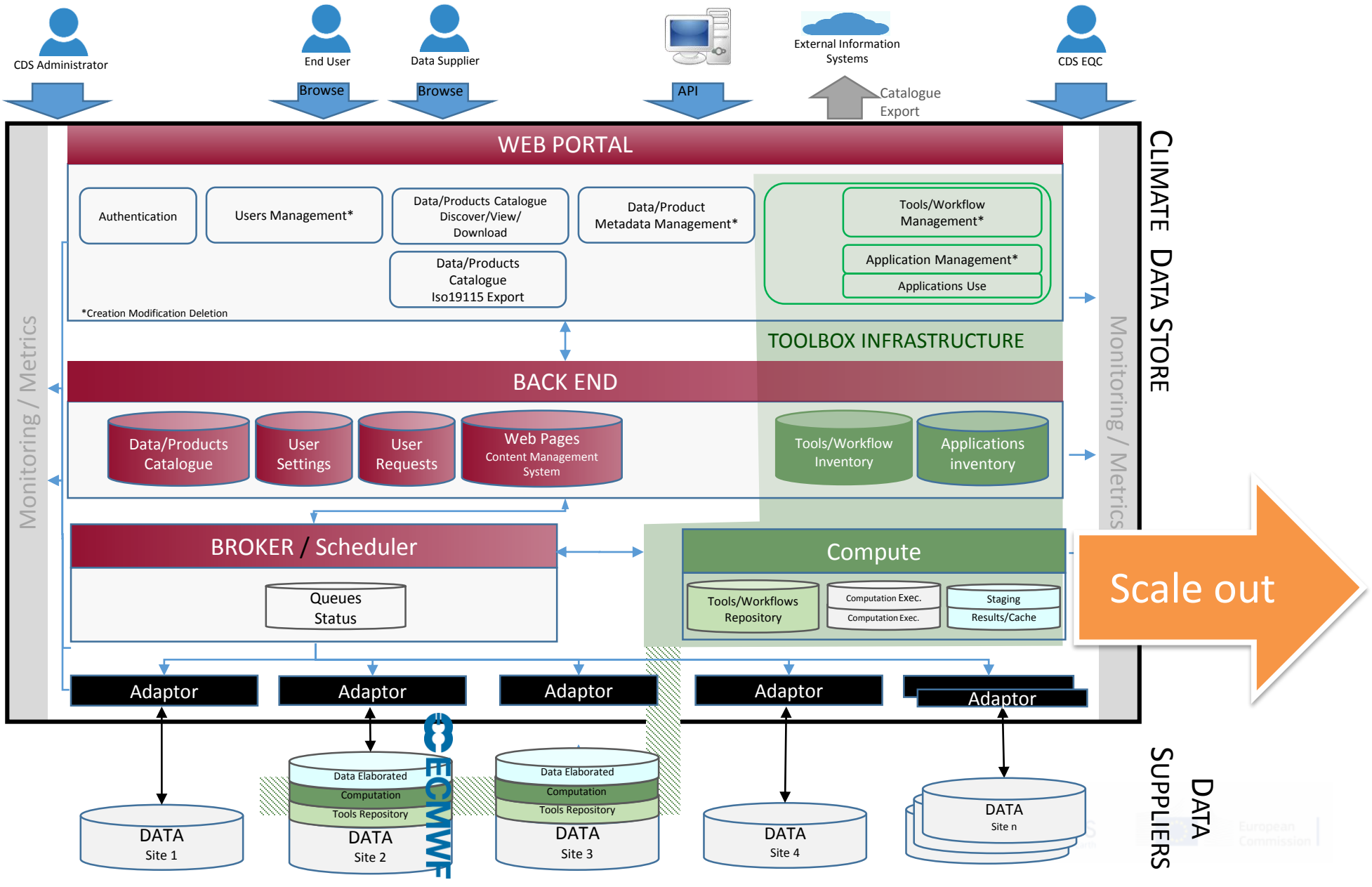


- The CDS contains **observations**, global and regional **climate reanalyses**, global and regional **climate projections** and **seasonal forecasts**

- The CDS is designed as a **distributed system**, providing improved access to **existing datasets** through a **unified web interface**

CDS – Overall technical Architecture

Climate Change



C D S - c o n t e n t

Climate Change

Scientific basis:

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

Observations	Global estimates of ECVs from satellite and in-situ observations	Reprocessed CDRs, reference observations	Support for data rescue, climate data collections	**Climate Indicators**
Climate reanalysis	Global atmosphere, ocean, land	Regional reanalysis for Europe	Coupled climate reanalysis for 100 years	
Model output	Multi-model seasonal forecast products	Access to CMIP data and products (global and regional)	Reference set of climate projections for Europe	

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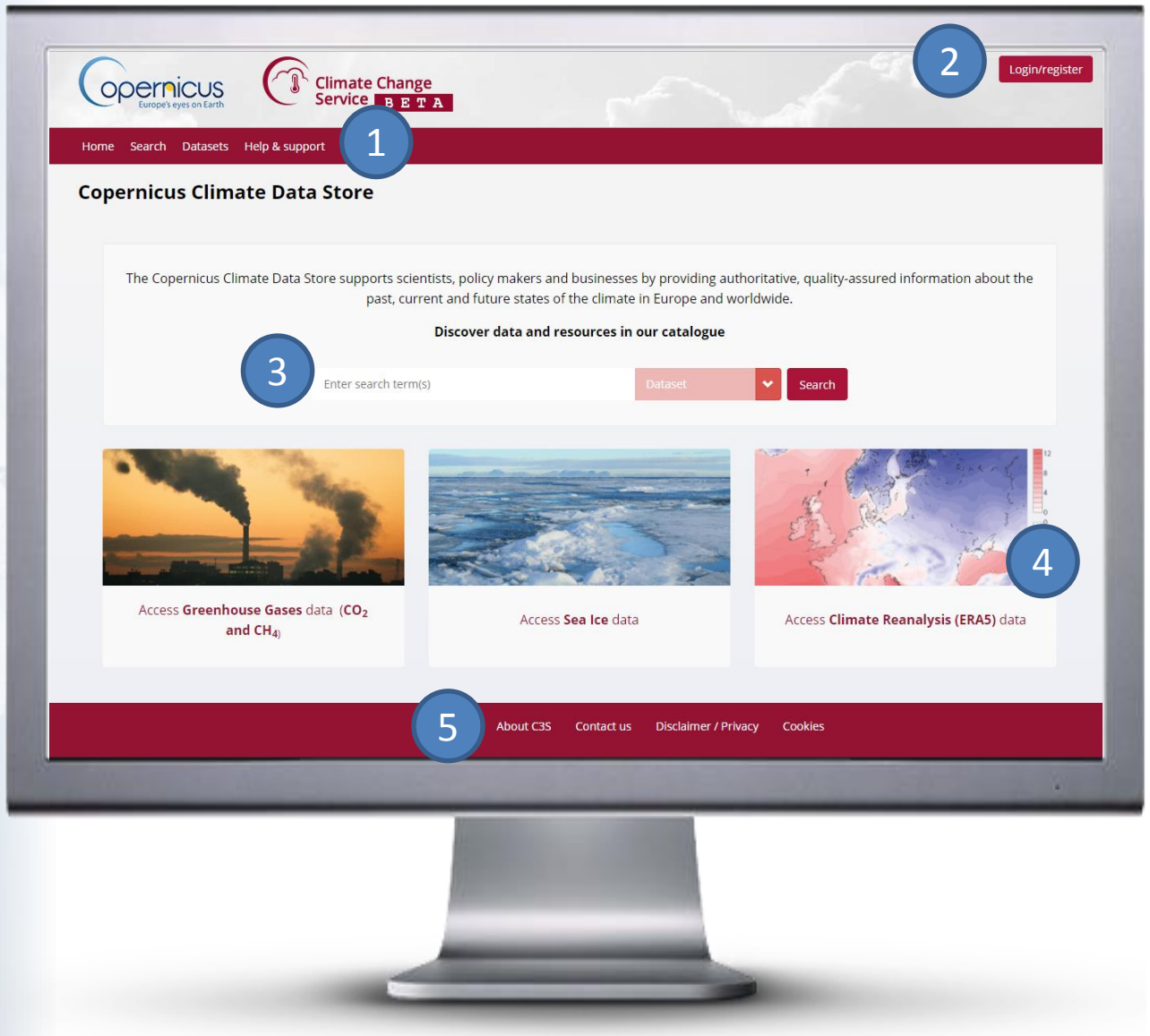
Climate Data Store-Navigation

"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 (datesets, applications, CMS, all)

4. **Direct access to products**: pre-filtered access to set of products.

5. **Generic portal toolbar**

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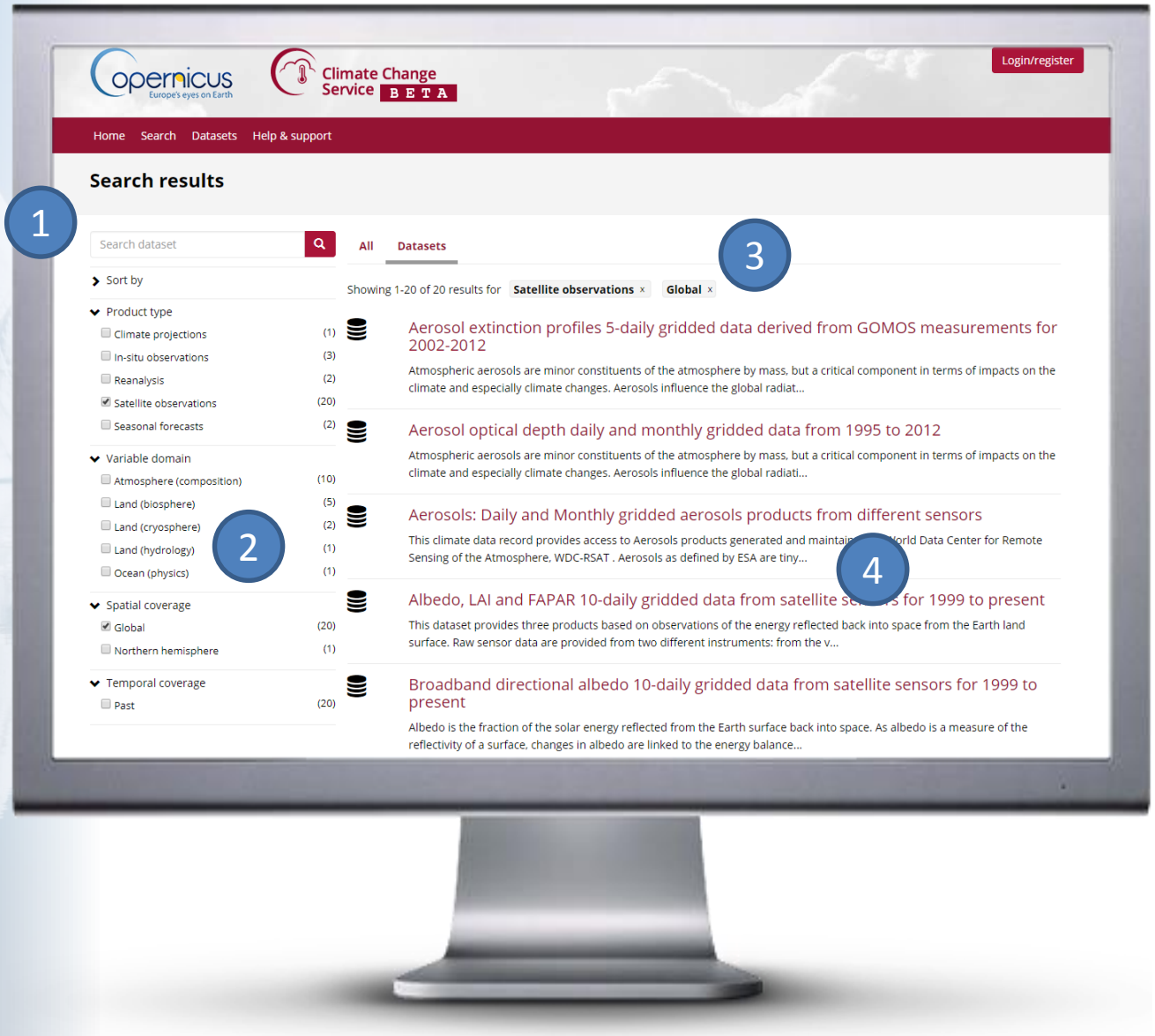
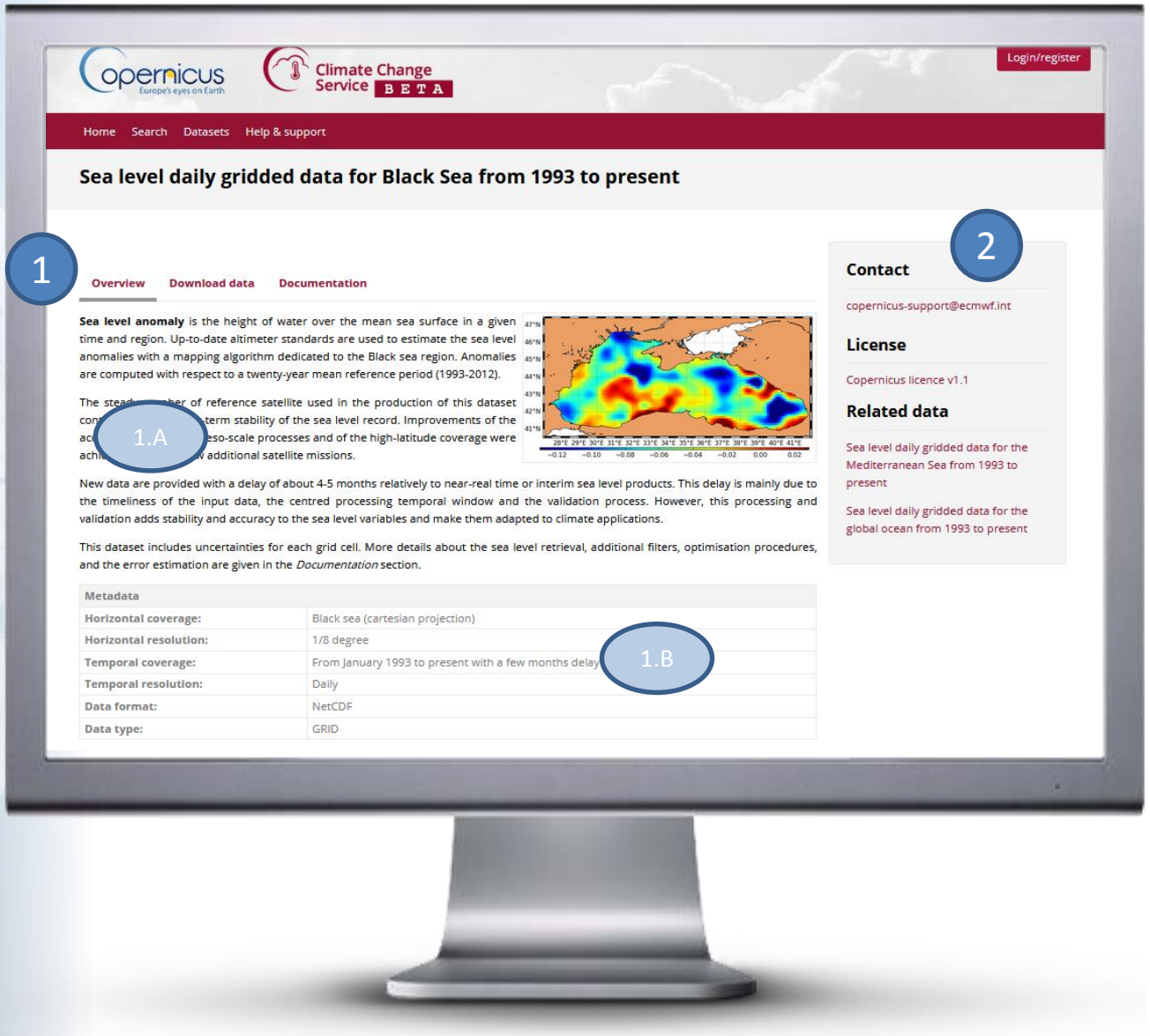
Search *"datasets"*



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.

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)

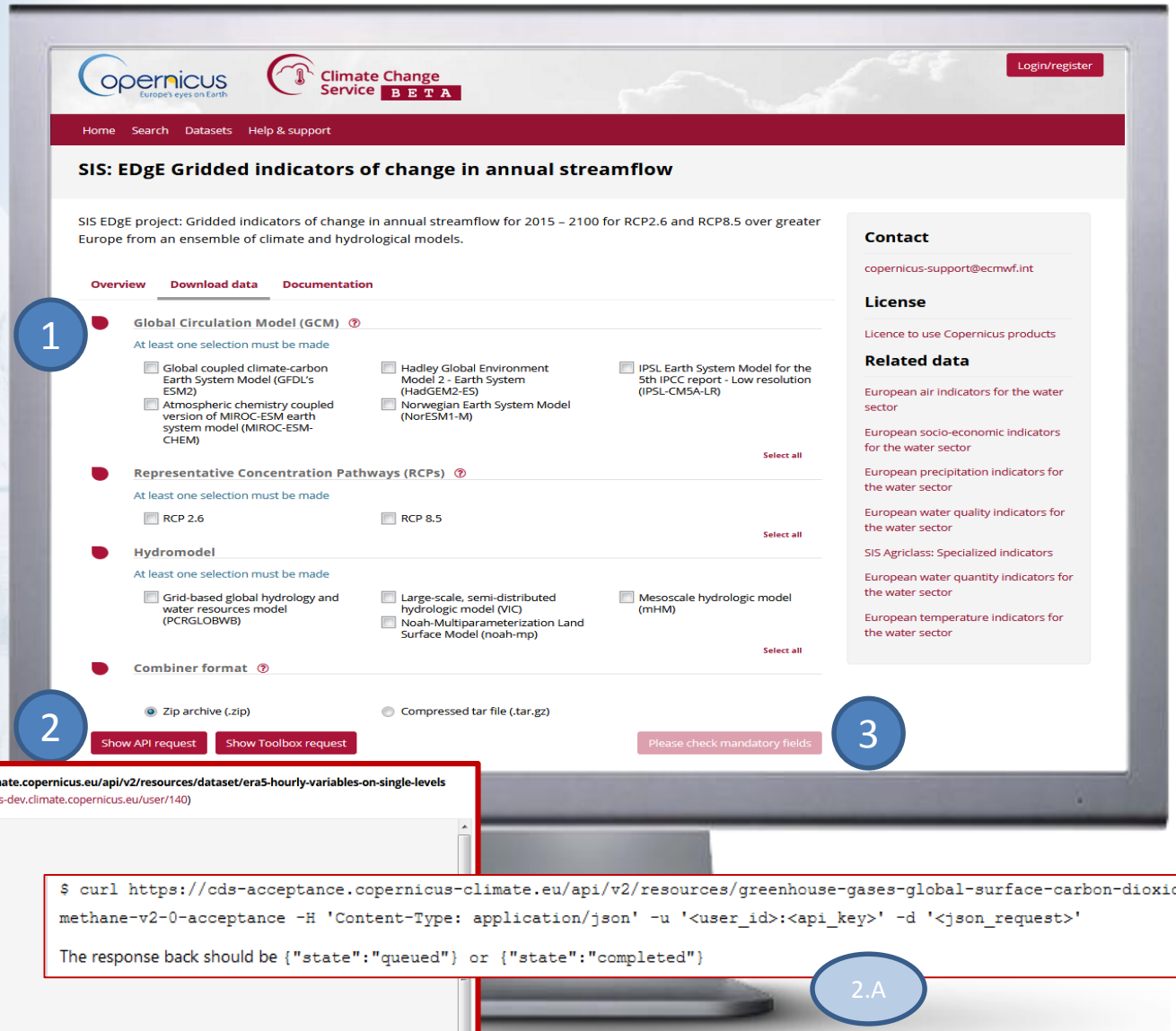
1.A **Abstract**: user readable explanation about the product.

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.

"Download data" form and API



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"}

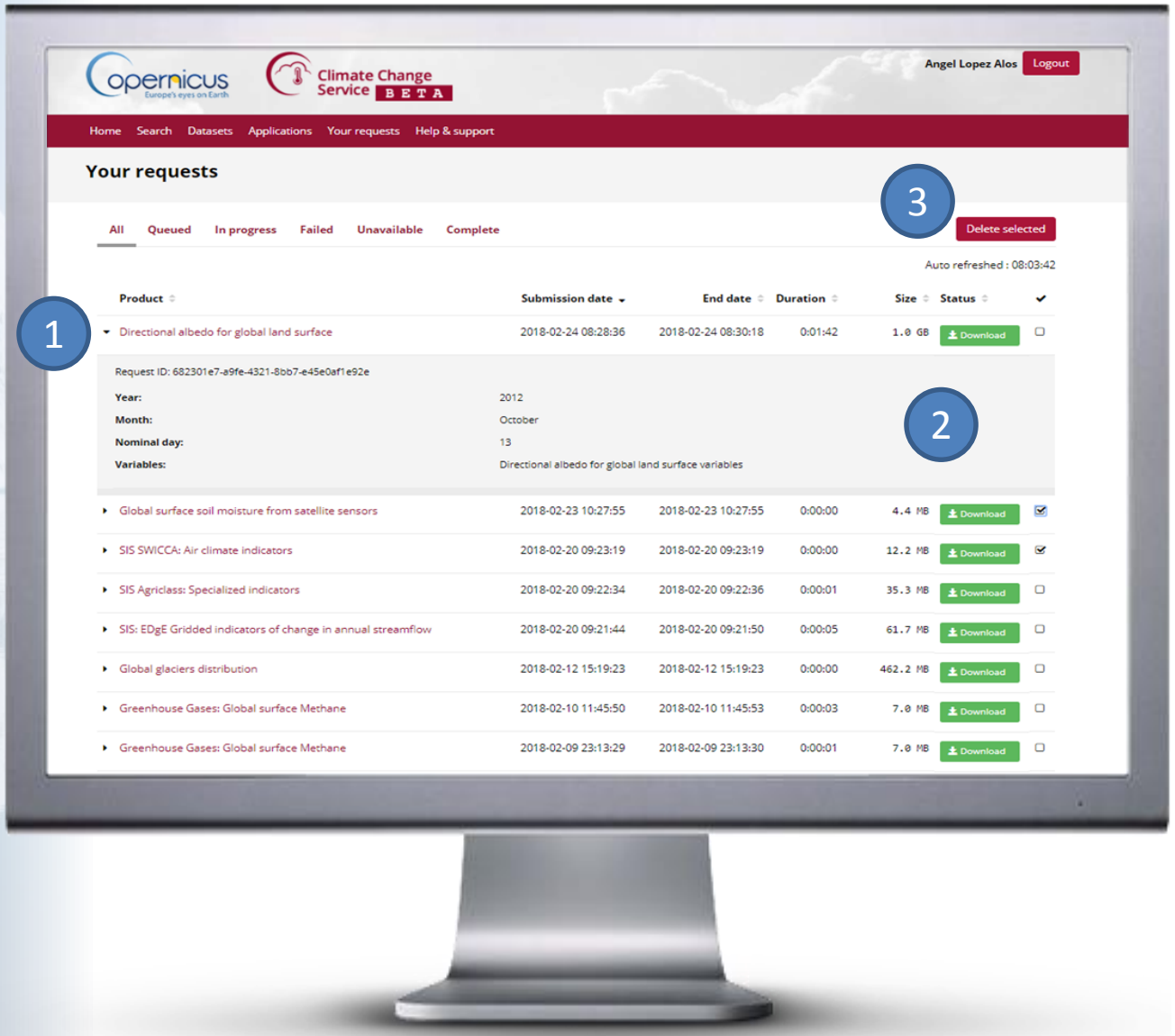
2.A

1. **Subsetting form**: Set of widgets which alow users to created ad-hoc requests. Forms are dinamically 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 need to be logged in order to be able to submit a request.
   - *Submit request: redirect to "your request" page*

"Your request" management

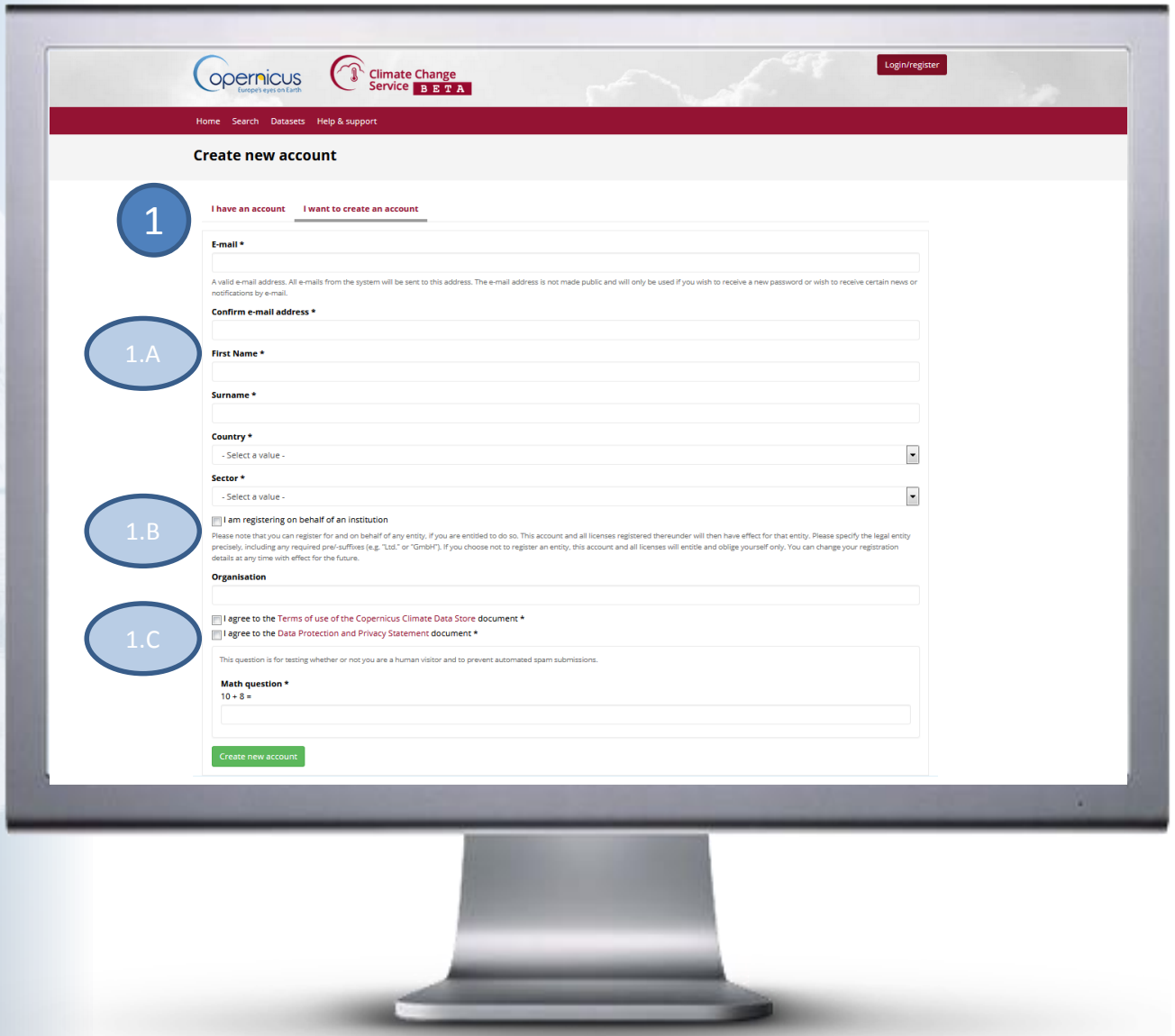


1. **Request information**: User have access to submitted requests.
   - *Product*: Short name of requested data product.
   - *Submission/End dates*.
   - *Duration*.
   - *Size of the file*.
   - *Status*:
     - Queued: waiting to by dispached to provider.
     - Running/In progress: Already dispatched to provider.
     - Download: data ready to be downloaded.
     - Failed: request migh fail. Error message should be presented.
     - Unavailable: requested result data no longer availble.

2. **Request information**: By clicking on the left arrow, detailed information about the scope of the request is diplayed.

3. **Delete requests**: User can remove old requests from the list by selecting them and clicking on the delete function.

"Login" and *"registration"*

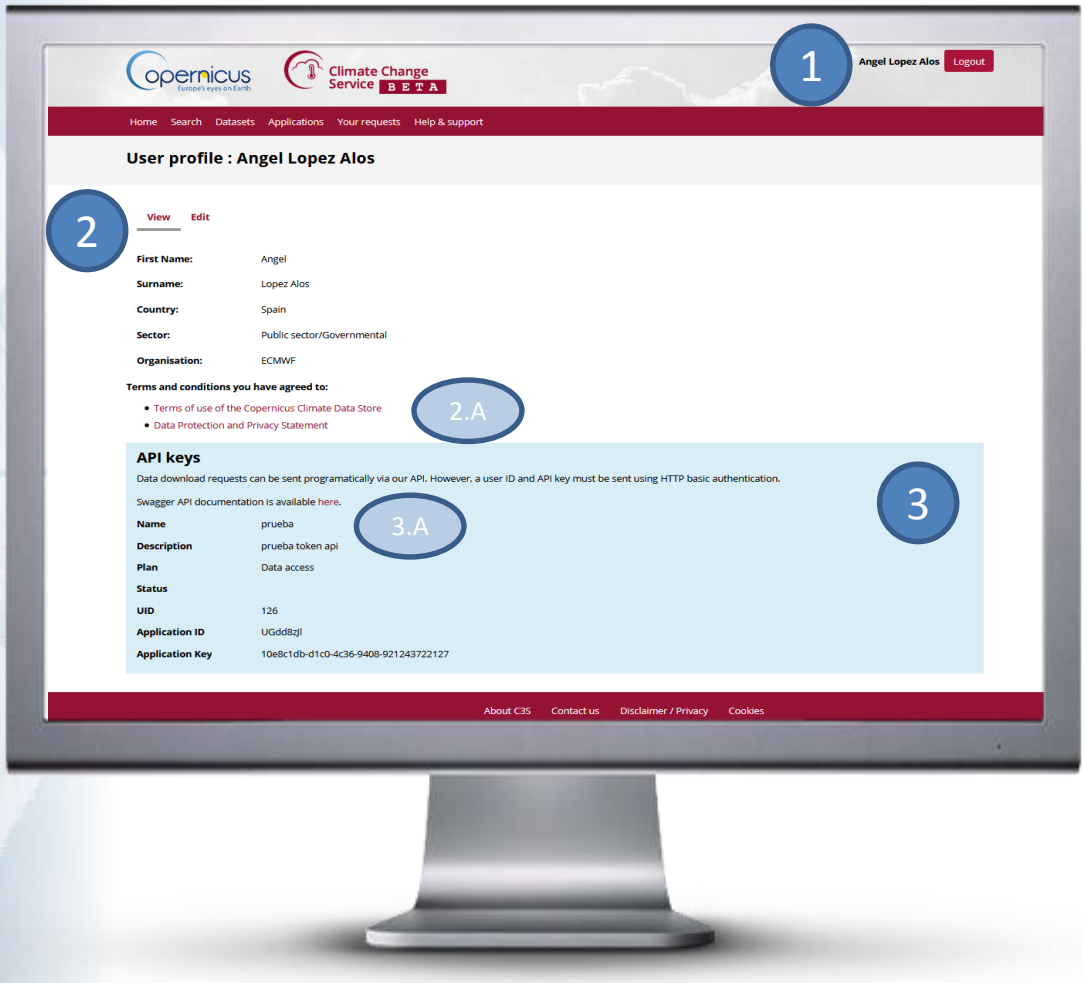


1 **Create new account**: At the end of the process a confirmation e-mail should be received *(Please check your spam folder just in case)*.

- 1.A General user information.
- 1.B Registration on behalf of an organization: requieres of additional information and the acceptance of special T&C.
- 1.C *Terms and conditions* and *Privacy statement.*

1 **Login for registered users**

"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.