

Climate4Impact portal

Step-by-step examples how to access, visualize and process data

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Below some step-by-step examples are given on how to use the Climate4Impact portal. Some more examples can be found on: <https://climate4impact.eu/impactportal/help/howto.jsp?q=uc-data-discovery-and-download>.

1 How to register and sign in

In the descriptions below we use the climate4impact portal (<https://climate4impact.eu>) to show step-by-step how gridded climate data (in NetCDF) can be accessed, visualized and processed. This portal has been developed by the IS-ENES project and offers many options to visualize and process data. There are also other portals or tools available that can do (partly) the same things.

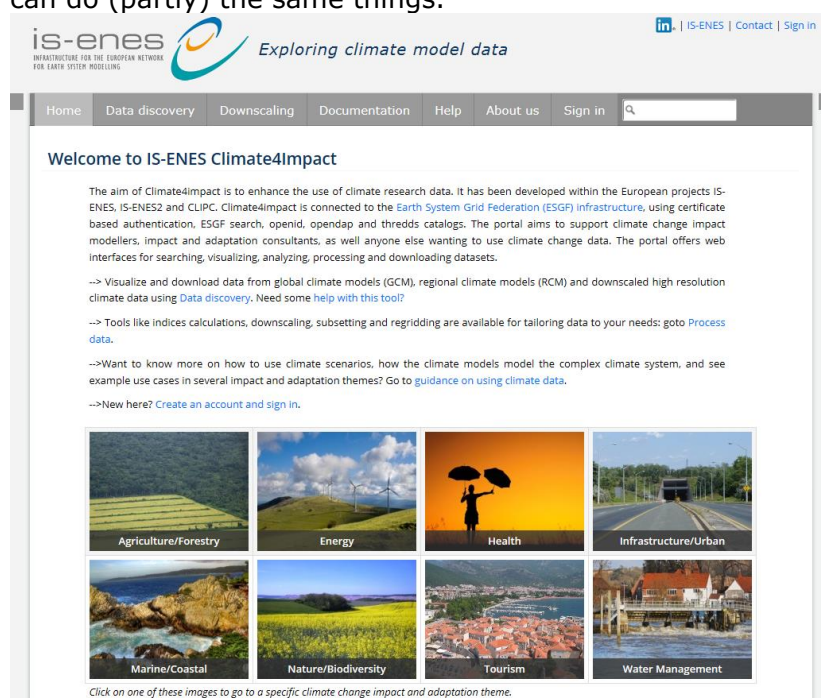


Figure 1.1 Starting page of the Climate4impact portal.

To get access to certain datasets within the Climate4impact portal you have to get an account and sign in. Some datasets are freely available to all persons who want to use

them, others are only available to a restricted group, e.g. only for research and not for commercial use. In the case below we use the E-OBS dataset, which is not available for commercial use.

Below we show how you can register and sign in.

- First go to "Sign in" on the top right of the home page and you will get the screen in figure 1.2. (<https://climate4impact.eu/impactportal/account/login.jsp>). If you want to use the Climate4impact portal, it is easiest to sign in first. If you do not sign in directly you can see what data sets are available, but you cannot process the data without signing in if there are restrictions on the use of the data set. When you select the datasets of your interest, you will be asked to sign in at a later stage (in case of restricted data sets).
- If you do have a CEDA/BADC account, click on "Sign in with CEDA/BADC" and you will get the screen in figure 1.3. After filling in your user name and password, click on "sign in".
- If you do not have such an account, click on "Register" to get one. You will get the screen in Figure 1.4.

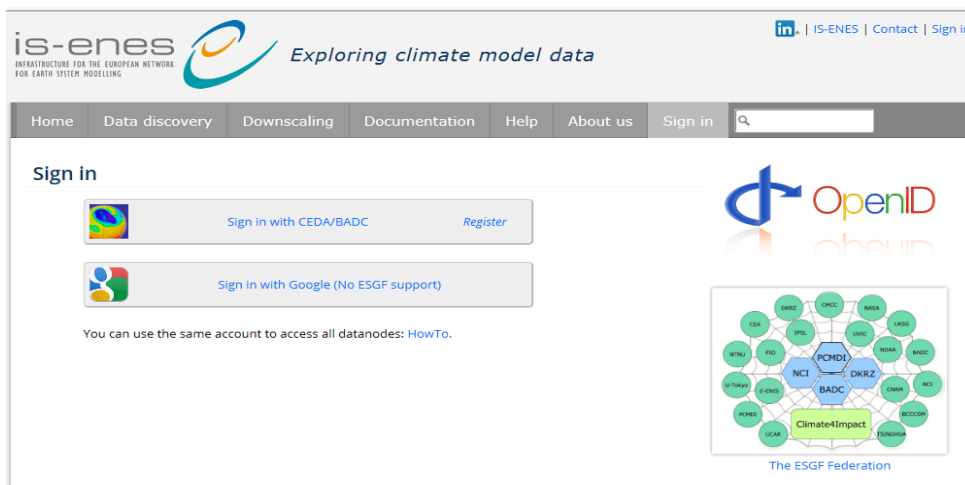


Figure 1.2. Screen to sign in at the Climate4impact portal.

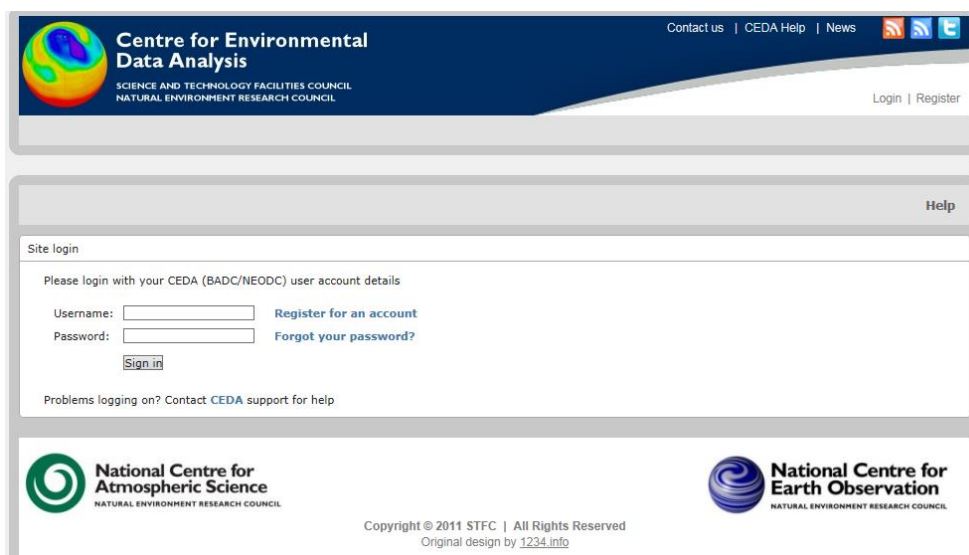


Figure 1.3. Screen to sign in with your CEDA/BADC account in the Climate4impact portal.

- If you want to use the Climate4impact portal, it is easiest to sign in first. If you do not sign in directly you can see what data sets are available, but you cannot

process the data without signing in if there are restrictions on the use of the data set. When you select the datasets of your interest, you will be asked to sign in at a later stage (in case of restricted data sets).

- If you want to register, go to "continue". Fill in the form below (Figure 1.5).

The screenshot shows the 'New User Registration Information' page. At the top, there is a header with the Centre for Environmental Data Analysis logo and navigation links. Below the header, a breadcrumb trail shows 'Home > myceda > Register'. The main content area is titled 'New User Registration Information' and includes a welcome message and a 'Sign In or Register' link. A navigation bar contains links to 'Main CEDA Site', 'Datasets and Services', 'MyCEDA', 'Contact Us', and 'Help'. The registration information section explains that access to CEDA datasets varies and provides three types of access: public, registered user, and restricted. It also includes a 'Continue' button at the bottom.

Figure 1.4. Starting screen to register for a CEDA/BADC account.

The screenshot shows the 'User Registration' form. It includes a header with the Centre for Environmental Data Analysis logo and navigation links. Below the header, a breadcrumb trail shows 'Home > myceda > Register'. The main content area is titled 'User Registration' and includes a welcome message and a 'Sign In or Register' link. A navigation bar contains links to 'Main CEDA Site', 'Datasets and Services', 'MyCEDA', 'Contact Us', and 'Help'. The registration form itself contains fields for Title, Surname, Other names, Email Address, Telephone number, Discipline, Degree you are studying for, Supervisor's name, Institute Name, and Department. It also includes checkboxes for 'I am over 18' and 'I agree to the CEDA terms and conditions'. A 'Next' button is located at the bottom of the form.

Figure 1.5 User registration form to register for a CEDA/BADC account.

- After filling in the form proceed by clicking on "next". A username has been automatically generated, but you can enter an alternative name. Choose your password and go to "OK" (Figure 1.6).

- Figure 1.7 shows the screen you get after you've successfully registered. After this you will have access to all available datasets. No further applying for freely available datasets is required.
- Now sign in with your CEDA-account on the Climate4Impact portal (Figure 1.3): go to <https://climate4impact.eu>. Do not sign in through the "Login to my CEDA" through the screen in Figure 1.7 (this will bring you to the CEDA portal). After signing in on the Climate4Impact portal you will get the screen in Figure 1.8 indicating that you signed in successfully. Depending on where you are working from, you may get some screen first where you may be asked to allow for something before getting the screen in figure 1.8.
- When you have the screen in figure 1.8 you can click on "Home" to go again to the home page of the Climate4Impact portal (Figure 1.1, but now signed in).

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Welcome. Sign In or Register

Home > myceda > Register

Main CEDA Site Datasets and Services MyCEDA Contact Us Help

User Registration - username and password

User Name: A username has been automatically generated for you, but you can enter an alternative name if desired. The username must only contain the characters a-z and 0-9 and be between 3 and 20 characters in length.

Password: A password is required for your CEDA account. Please enter your chosen password below as indicated. Your password must meet the following CEDA password rules:

[Rules for passwords](#)

User Name:

Enter Password:

Re-enter Password:

OK

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Figure 1.6. Screen for user registration: adjust user name and choose password.

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Welcome. Sign In or Register

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User Registration Complete

You have successfully registered as CEDA user "rvanderbilt"

In addition to having access to open datasets and services you now have access to some additional resources available to all registered users. However, you will still need to apply for access to specific restricted datasets and services where you see an "Apply for access" link.

You may log in to your myCEDA page or register for restricted datasets and services by using the buttons below. For further assistance with your account or registration please [Contact Us](#).

[log in to MyCEDA](#) [Register for Resources](#)

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Figure 1.7. Screen after successfully registering.

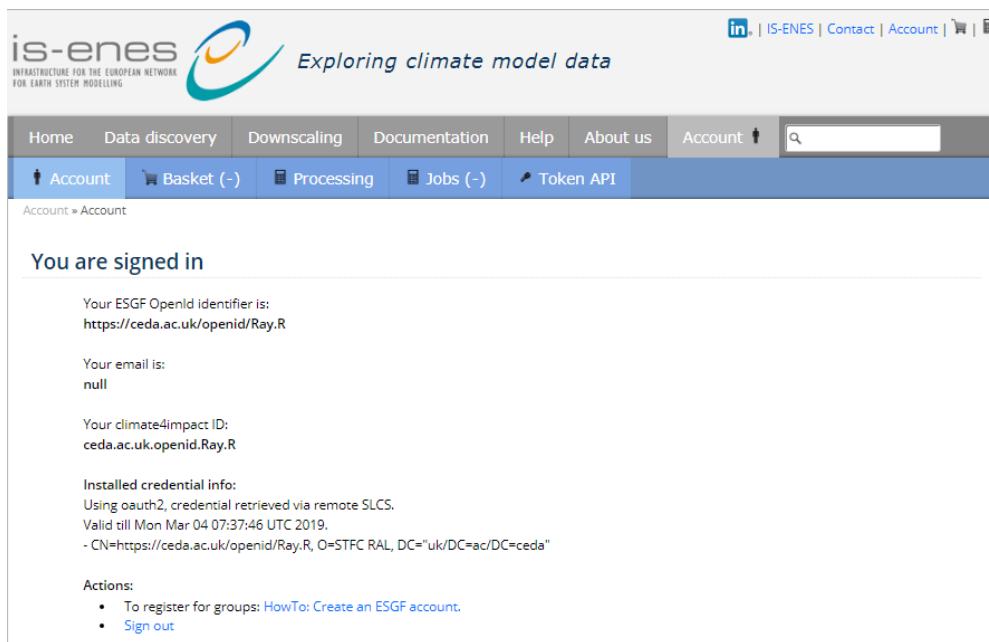


Figure 1.8 Screen after successfully signing in.

2 How to find and access data sets

In this first example we show how to get access to an E-OBS dataset.

- Go to 'Data discovery' and then to 'Catalogs' (See figure 2.1).

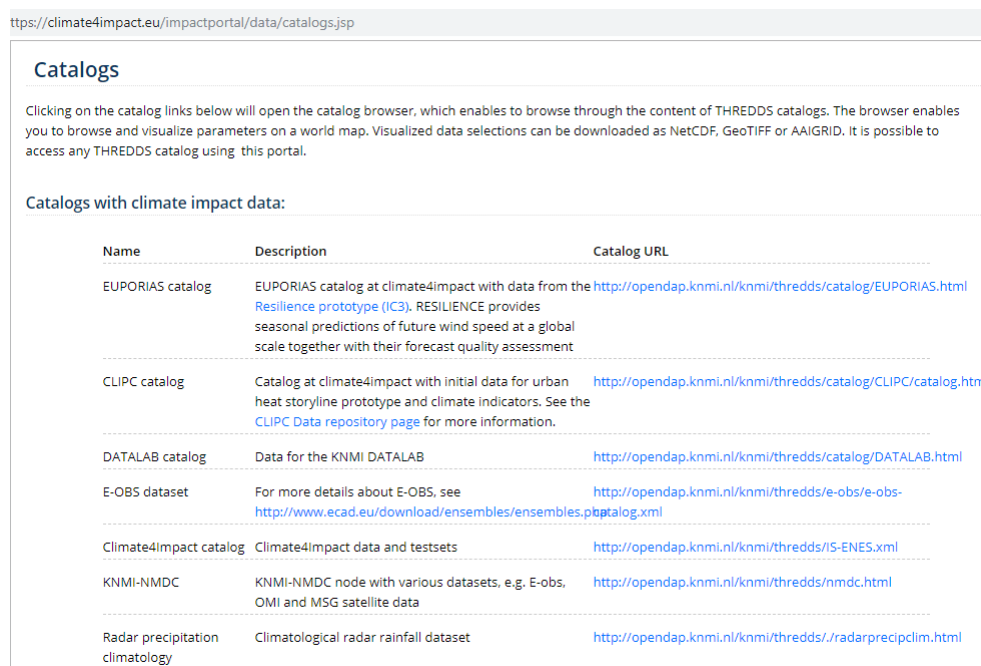




Figure 2.1. The catalogues page within the Climate4impact portal.

- Then go to 'E-OBS dataset' and click on the 'Catalog URL'. You'll get the page shown in Figure 2.2. (E-OBS cannot be found under "Search" in this case).

https://climate4impact.eu/impactportal/data/catalogbrowser.jsp?catalog=http://opendap.knmi.nl/knmi/thredds/e-obs/e-obs-catalog.xml


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[Search](#) | [Catalogs](#) | [Explore your own catalogs or files](#) | [Map & Plot](#) | [Processing](#)

Catalog browser

Catalog: <http://opendap.knmi.nl/knmi/thredds/e-obs/e-obs-catalog.xml>

Catalog

Catalog url: <http://opendap.knmi.nl/knmi/thredds/e-obs/e-obs-catalog.xml>

Text filter:







#	Resource title	Size	Opendap	Download	Basket
1	E-OBS Gridded Dataset				
2	0.25 deg. regular grid				
3	0.50 deg. regular grid				
4	0.22 deg. rotated grid				
5	0.44 deg. rotated grid				

Figure 2.2. The catalogs page for the E-OBS datasets in the Climate4impact portal.


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[Search](#) | [Catalogs](#) | [Explore your own catalogs or files](#) | [Map & Plot](#) | [Processing](#)

Catalog browser

Catalog: http://opendap.knmi.nl/knmi/thredds/catalog/e-obs_0.25regular/catalog.html?

Catalog

Catalog url: http://opendap.knmi.nl/knmi/thredds/catalog/e-obs_0.25regular/catalog.xml?

Text filter:













#	Resource title	Size	Opendap	Download	Basket
1	0.25 deg. regular grid				
2	elev_0.25deg_reg_v17.0.nc	376.4K	view		
3	pp_0.25deg_reg_v17.0.nc	4.632G	view		
4	pp_stderr_0.25deg_reg_v17.0.nc	4.632G	view		
5	rr_0.25deg_reg_v17.0.nc	4.632G	view		
6	rr_stderr_0.25deg_reg_v17.0.nc	4.632G	view		
7	tg_0.25deg_reg_v17.0.nc	4.632G	view		
8	tg_stderr_0.25deg_reg_v17.0.nc	4.632G	view		
9	tn_0.25deg_reg_v17.0.nc	4.632G	view		
10	tn_stderr_0.25deg_reg_v17.0.nc	4.632G	view		
11	tx_0.25deg_reg_v17.0.nc	4.632G	view		
12	tx_stderr_0.25deg_reg_v17.0.nc	4.632G	view		

Figure 2.3. The screen with an overview of the available climate variables in the selected E-OBS dataset in the Climate4impact portal.

- Choose the E-OBS Gridded Dataset you would like to use and click on the "basket". In this case '0.25 deg. regular grid' was chosen. You will get a screen with the various climate variables available in this data set (see figure 2.3). In our case we selected "Tx_0.25_deg_reg_v17.0.nc" in which Tx stands for the

maximum air temperature¹ and v17.0 indicates that it concerns version 17.0 of this dataset (not with the homogenized temperature data yet).

- If you click on the “basket” at the right side of the selected variable you can get the dataset in your account. If you didn’t sign in yet, you will be asked to do so at this moment (see figure 2.4).

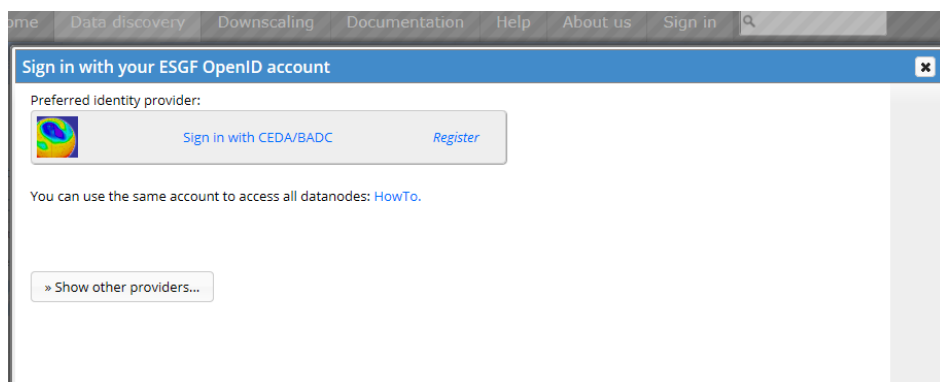


Figure 2.4. The screen you get when you’re asked to sign in before you can get access to the selected dataset in the Climate4impact portal (if you didn’t sign in yet).

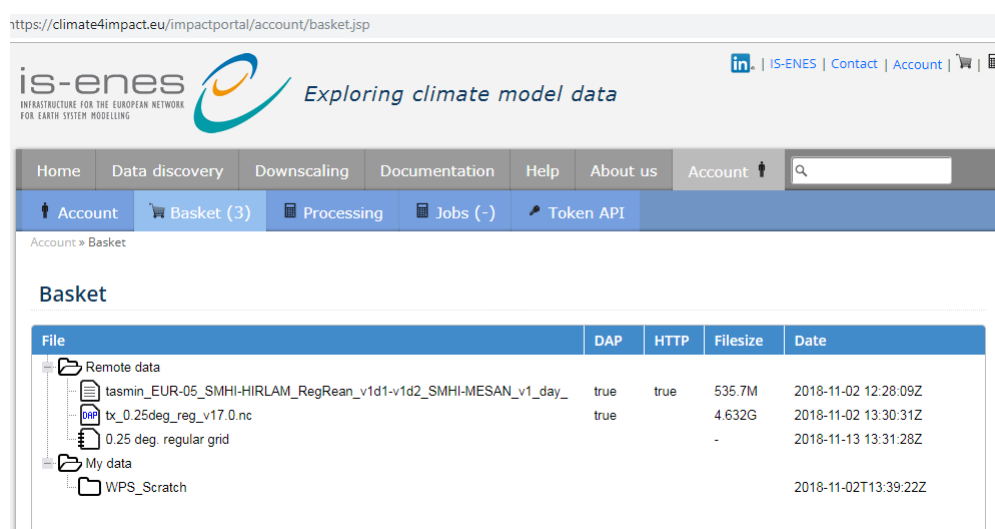


Figure 2.5. Your “basket” after you’ve selected some E_OBS gridded datasets in the Climate4impact portal.

- Then go to ‘Account’ and ‘Basket’ on the upper side of your screen. You will see something similar as shown in Figure 2.5.
- The dataset has been added to your basket (tx_0.25deg_reg_v17.0.nc).
- Click on the dataset and then click on “view” in the bottom of the screen to preview the dataset (figure 2.6).

¹ Different variable codes may be used for the same climate variable. For Maximum air temperature sometimes Tx is used, but Tasmax is also used in some cases.

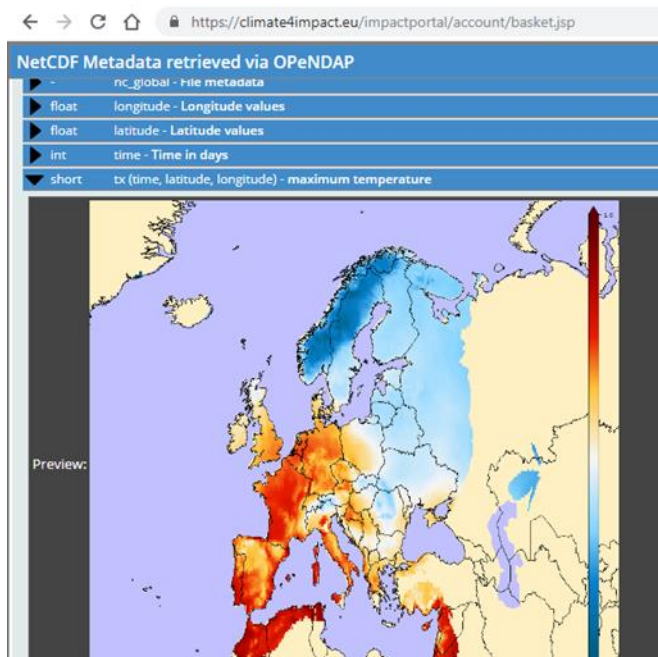


Figure 2.6. Preview of the dataset in your basket.

3 Processing: select an area

After you added the data set to your basket, you can start processing the data by using 'Processing'. Here we show how you can select a sub region of the dataset.

The screenshot shows the is-enes website interface. The header includes the logo "is-enes" and the tagline "Exploring climate model data". The navigation bar contains links: Home, Data discovery, Downscaling, Documentation, Help, About us, Account, and a search bar. Below the navigation bar, there is a section titled "Processing wizards" with the text "Choose a wizard to help you guide through processing, analysis and data extraction options.".

Name	Description
Convert and subset	Extracts a region in space and time, regrid and converts to other formats. Uses the WCS_subsetting WPS in the background.
CLIPC DRS Checker	Checks files against the CLIPC DRS metadata standard.
ICCLIM simple climate indicator calculation	Calculates simple climate indices with ICCLIM.
ICCLIM Time averaging	Computes time averages for any parameter by month, year of various seasons using ICCLIM.
Combine two fields	Performs operation like normalisation and raster arithmetic on two nc files and return the answer as a new file
Polygon overlay	Polygon overlay function to calculate statistics for a gridded file by extracting geographical areas defined in a GeoJSON file. The statistics per geographical area include minimum, maximum, mean and standard deviation. The statistics are presented in a CSV table and a NetCDF file. Statistics can be calculated for several dates at once.

Below the table, there is a section titled "Web Processing Services" with the text "Web processing services are processing services are used by the wizard but can be controlled manually.".

Name	Abstract
Polygon overlay	Polygon overlay function to calculate statistics for a gridded file by extracting geographical areas defined in a GeoJSON file. The statistics per geographical area include minimum, maximum, mean and standard deviation. The statistics are presented in a CSV table and a NetCDF file. Statistics can be calculated for several dates at once.
CLIPC Create statistics per NUTS region Identify	Identify process for statistics per NUTS region calculations

Figure 3.1. The screen you get when you click on "Processing".

- To 'narrow' the dataset (geographical extend) to The Netherlands, go to 'Processing' (in this example another data file than the E-OBS dataset has been used; Figure 3.1).
- To select a region go to 'Convert and subset' (Figure 3.2).
- Now select a file (Resource, Please select a file) by clicking on the symbol basket (figure 3.3).
- Double click on file you want to use and something similar to Figure 3.4 will appear.

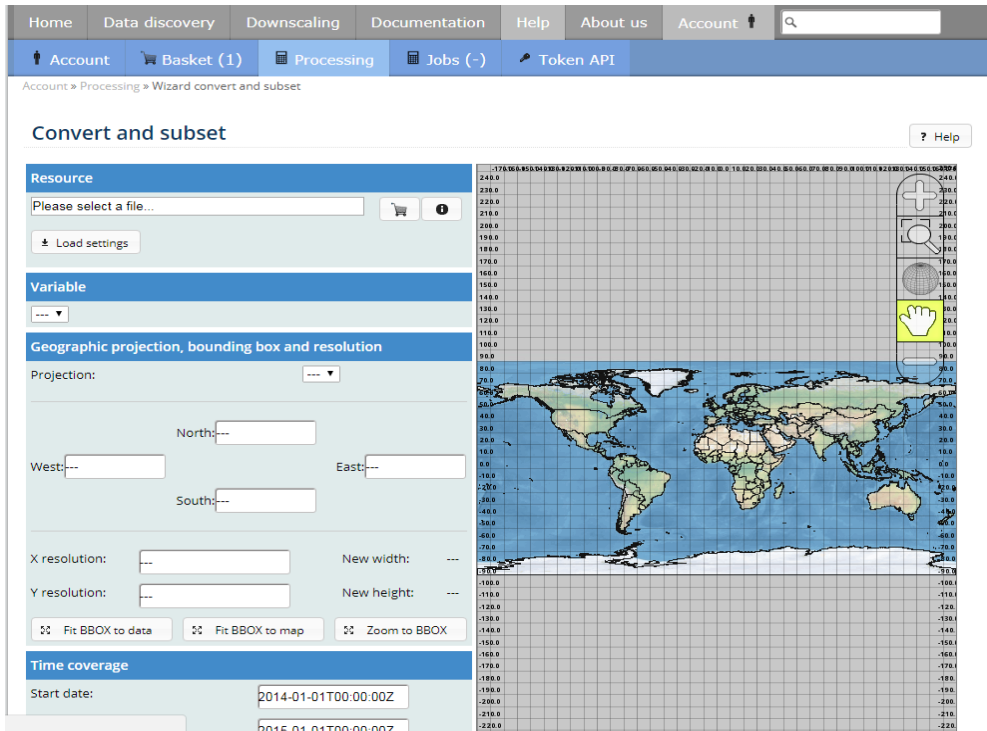


Figure 3.2. The screen you get when you click on "Convert and subset".

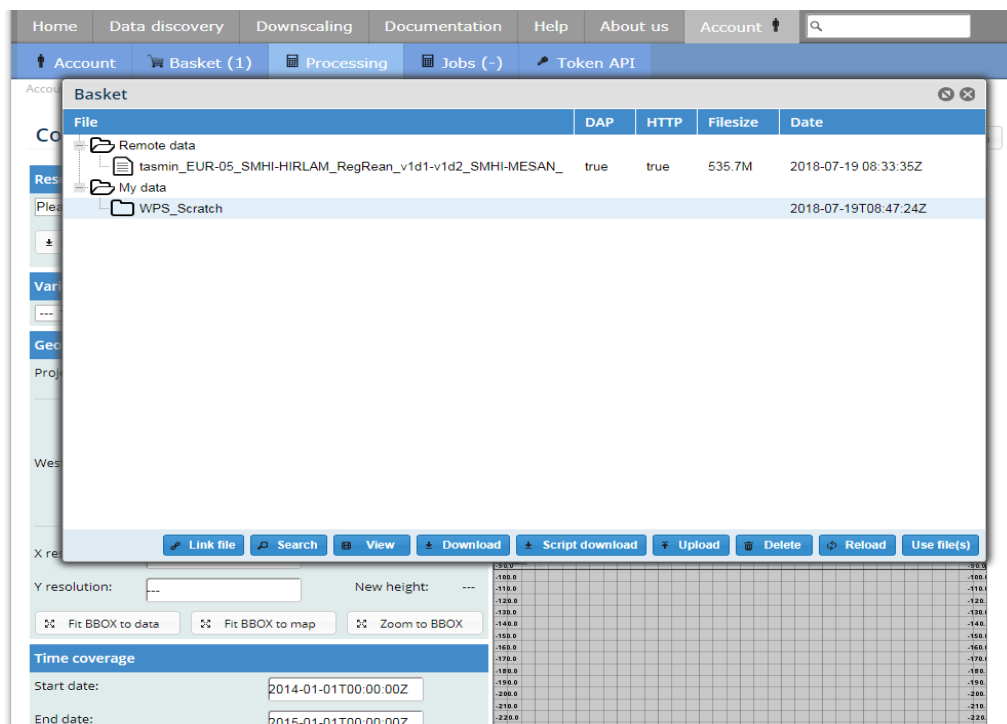


Figure 3.3. The screen you get when you click on the basket after "Please select a file".

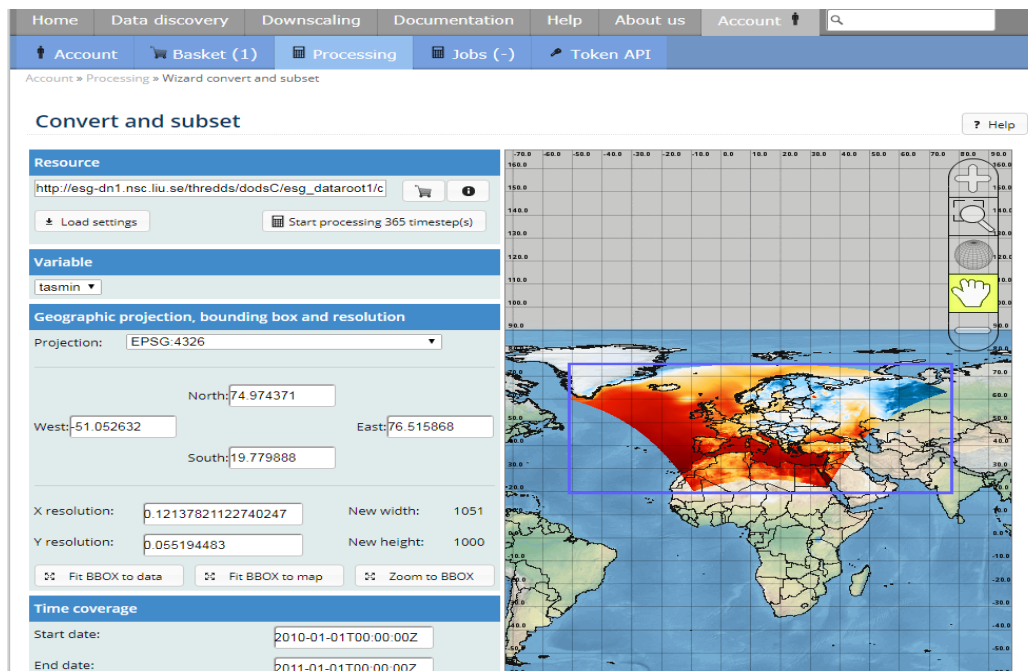


Figure 3.4. The screen you get when you select the file after clicking on “Convert and subset”.

- The file has been loaded and is ready for adjustment. To adjust the file to “The Netherlands area”, change the coordinates (e.g. 50 degrees South, 0 degrees West, 55 degrees North and 10 degrees East) under ‘Geographic projection, bounding box and resolution’.
- The selected area is shown in the blue delimited rectangle on the map (the blue rectangle in figure 3.4 is the area in the original file and will be adjusted with the new coordinates).
- To zoom in to the selected area, choose ‘Zoom to BBOX’ (just above ‘Time coverage’). ‘Fit BBOX to map’ selects all the data in the selected map, to go back to the whole data file, choose ‘Fit BBOX to data’ followed by ‘Zoom to BBOX’. It is also possible to zoom using the mouse by clicking on the ‘+’ on the top right in the map or selecting the ‘magnifying glass’ (top right) followed by using the left mouse button to The Netherlands area.
- Under ‘Format’ you can select the file format, default .nc (or geotiff or aagrid if wanted). The available file has a .nc extinction. If you don’t adjust the file name, the name will automatically be ‘out.nc’ (default) or ‘out.zip’ if geotiff or aagrid has been selected.
- Now start processing with ‘Start processing 365 (one year) time step(s)’ (top left under ‘Resource’). You will get the box as presented in figure 3.5.
- Choose ‘Start’ after checking and confirming the processing settings. If the settings are not correct, use ‘Cancel’ to go back to the former screen and to adjust e.g. the variable, geographic projection, bounding box, resolution, the time period used and the area selected.

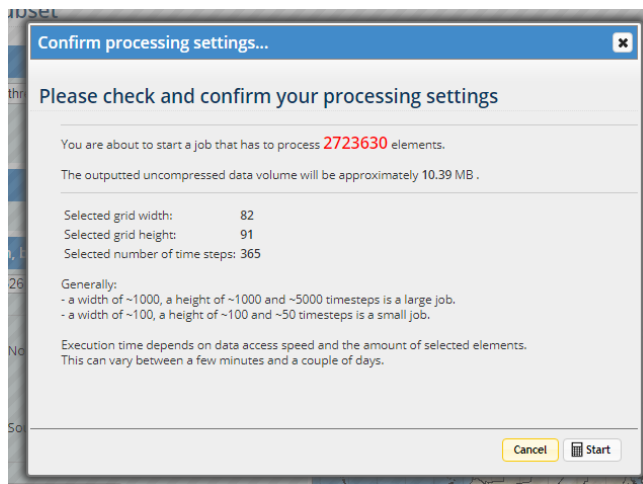


Figure 3.5. The box that will appear after you clicked on 'Start processing 365 (one year) time step(s)'.

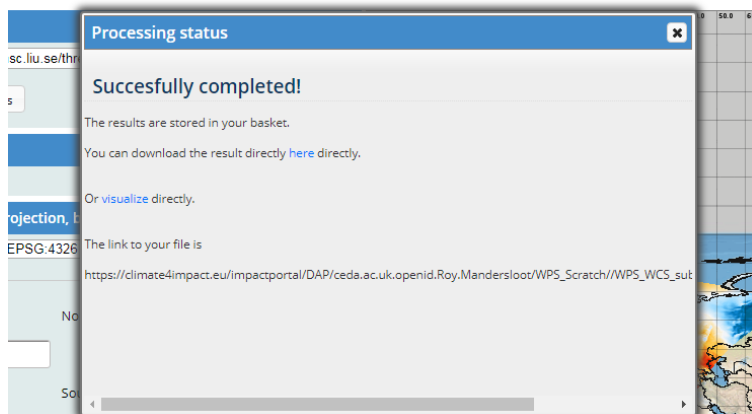


Figure 3.6. The box that will appear after the processing has been completed successfully.

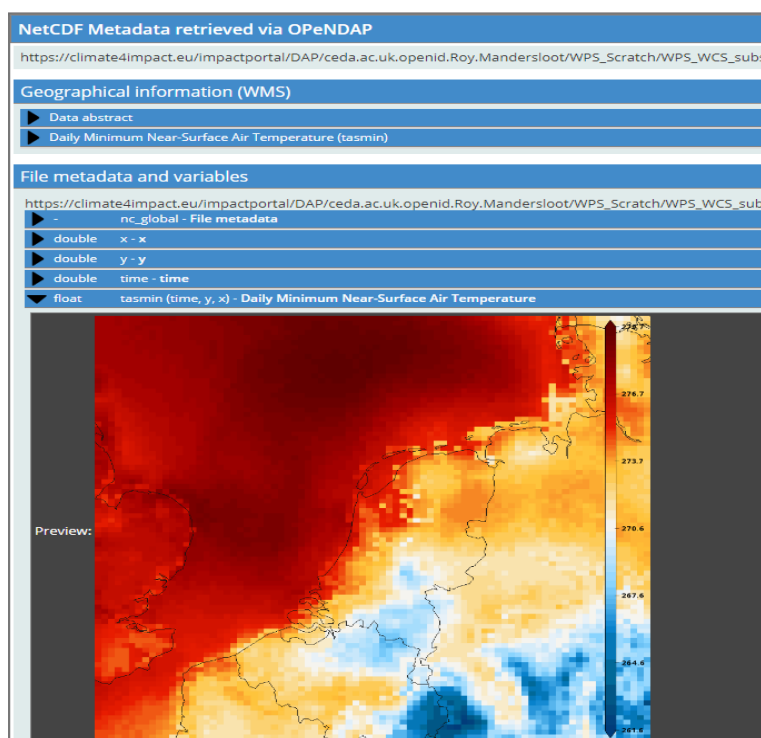


Figure 3.7. Visualisation of the processed dataset.

- The data are now available in a NetCDF format.
- After the processing is successfully completed (Figure 3.6) the data can be downloaded (filename out.nc if not adjusted) or visualized (Figure 3.7).
- The data can also be found in your basket. Go to 'Basket' and after double clicking on 'out.nc' the following appears.
- Data and file information can be found under 'NetCDF Metadata retrieved via OPeNDAP', 'Geographical Information (WMS)' and 'File metadata and variables' (Figure 3.7).
- By double clicking in the map the viewer in Figure 3.8 appears.
- With this viewer you can select and add (predefined) layers, base maps and overlays and play animations. For animations click on the clock in the top left part of the screen in figure 3.8 and you will get the screen in figure 3.9. Select the starting time and on 'Play animation' to start it.

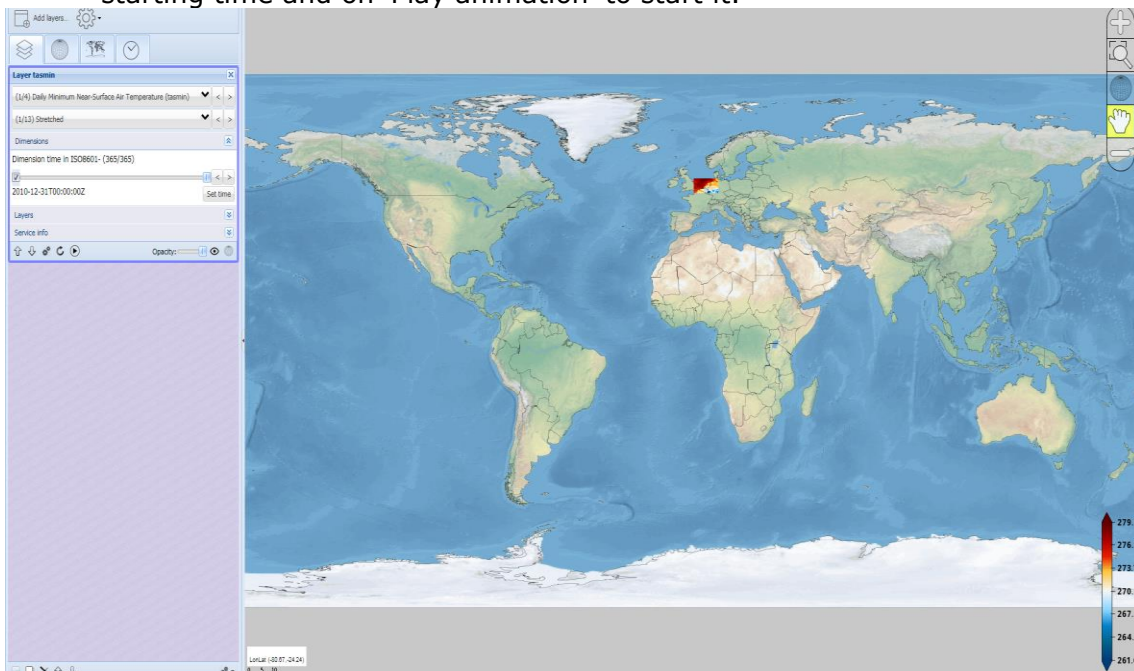


Figure 3.8. Screen shot of the viewer.

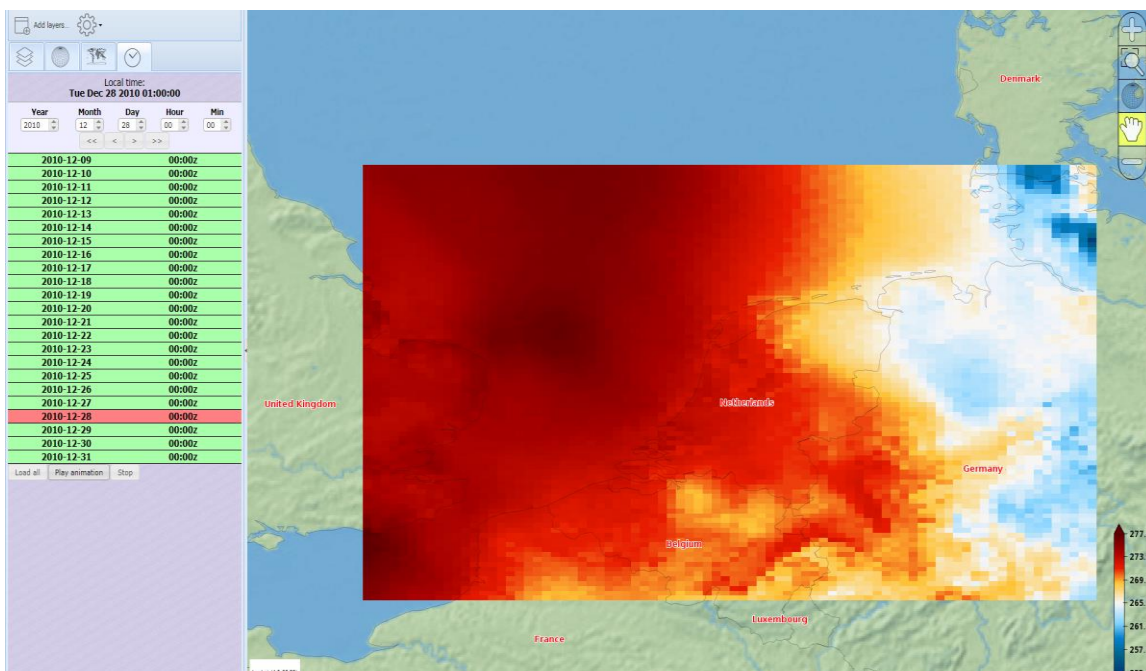


Figure 3.9. How to start animations within the viewer.

There are more options to select an area than just defining a rectangle (e.g. select a country). This is not explained at the moment in this document.

4 Processing: select a time period

Besides narrowing the area you can also select a time period. Here we show how you can select a time period of the dataset (in this case one month, January 2010).

- To select a time period of the dataset, go to 'Processing' (in this example another data file has been used). To select a time period go to 'Convert and subset' (Figure 3.2).
- Now select a file (Resource, Please select a file) by clicking on the symbol basket (figure 3.3).
- Double click on file you want to use and something similar to Figure 3.4 will appear.
- The file is now loaded and is ready for adjustment. To adjust the file to one month (January 2010), go to under 'Time coverage and adjust the 'End date' to 2010-02-01T12:00:00Z (see figure 4.1). (for other options for adjustments (format, area, etc.) look in chapter 2)
- Now start processing by clicking on 'Start processing 32 (one month) time step(s)' (top left under 'Resource'; here with an example for 1 year=365 time steps). You will get the box as presented in figure 4.2.
- Choose 'Start' after checking and confirming the processing settings. If the settings are not correct, use 'Cancel' to go back to the former screen and to adjust e.g. the variable, geographic projection, bounding box, resolution, the time period used and the area selected. When the processing is ready you will get a similar screen as presented in figure 3.6.

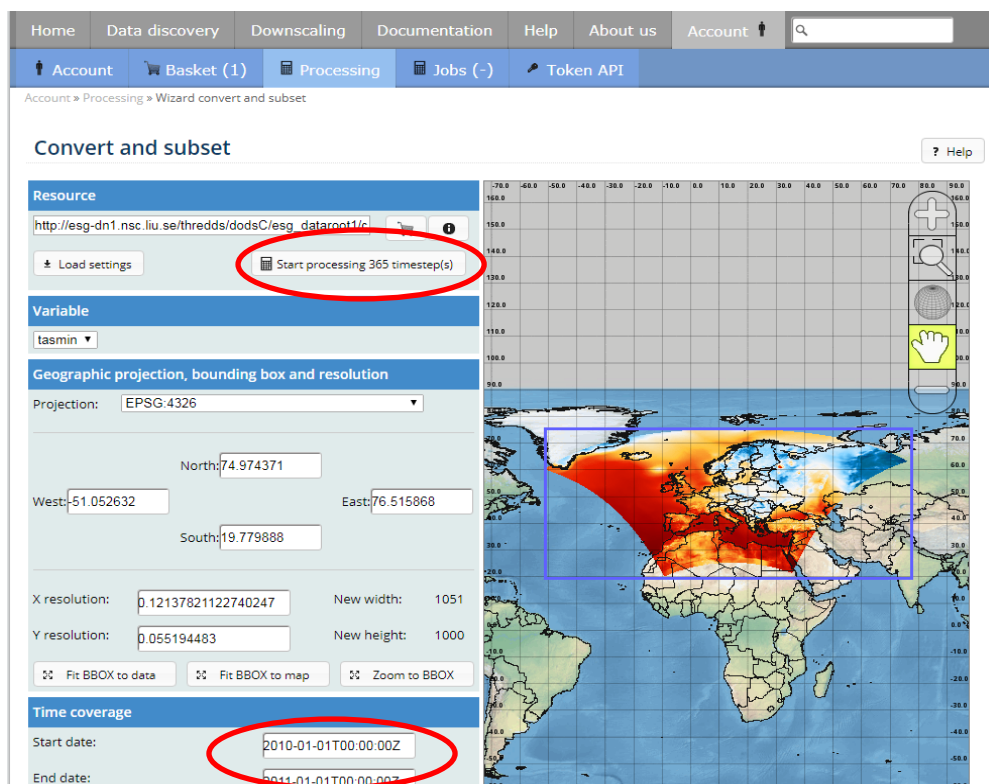


Figure 4.1. The screen you get when you select the file after clicking on "Convert and subset".

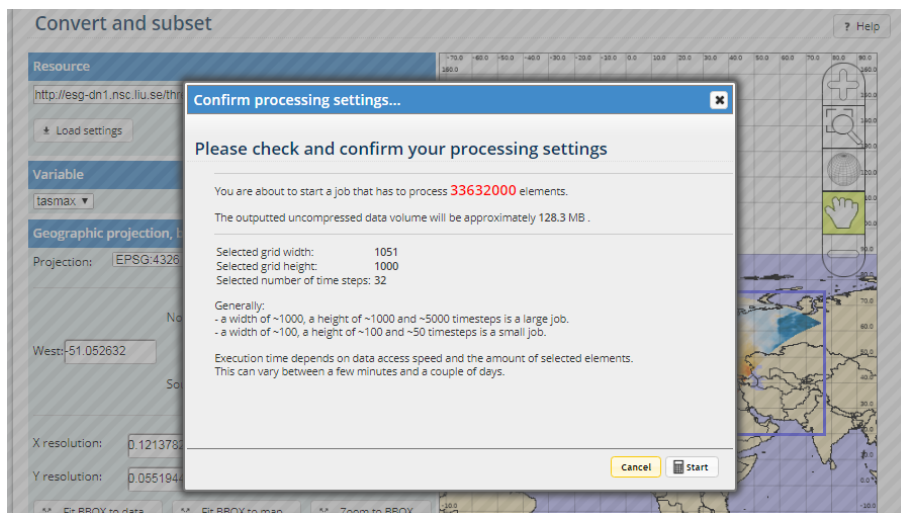


Figure 4.2. The box that will appear after you clicked on 'Start processing 32 (one month) time step(s)' (as Figure 3.5)

- After the processing is successfully completed the data can be downloaded (filename out.nc if not adjusted) or visualized (Figure 4.3).
- The data can also be found in your basket. Go to 'Basket' and after double clicking on 'out.nc' the following appears.

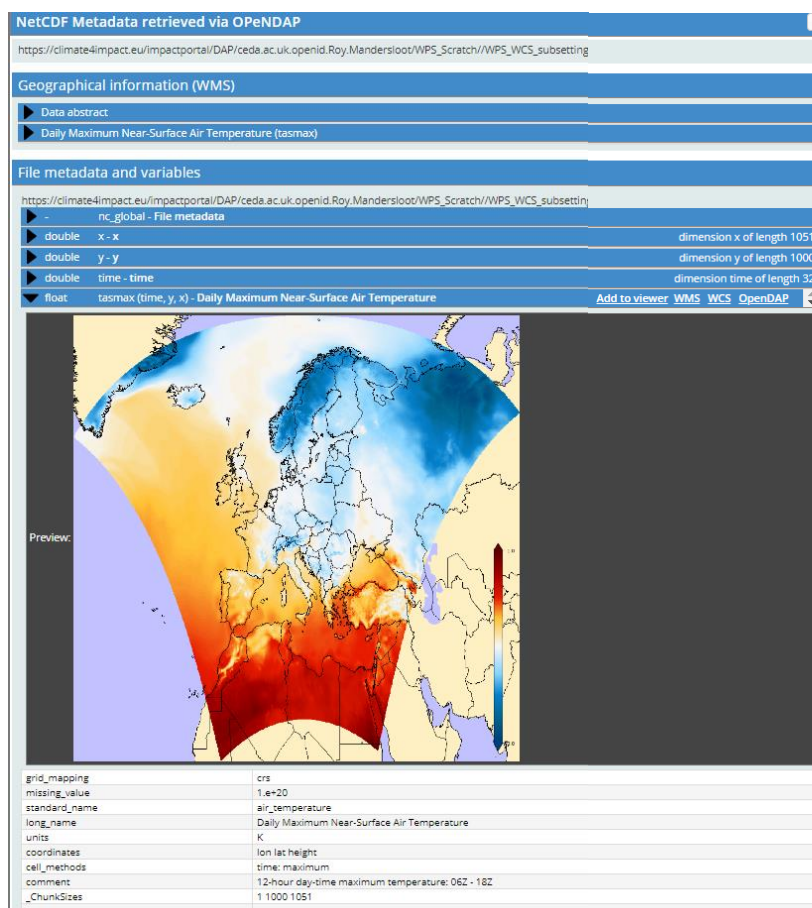


Figure 4.3. Screen after the successful selection of the time period.

Data and file information can be found under 'NetCDF Metadata retrieved via OPeNDAP', 'Geographical Information (WMS)' and 'File metadata and variables' (Figure 4.7).

- By double clicking in the map, the viewer in Figure 4.4 appears.

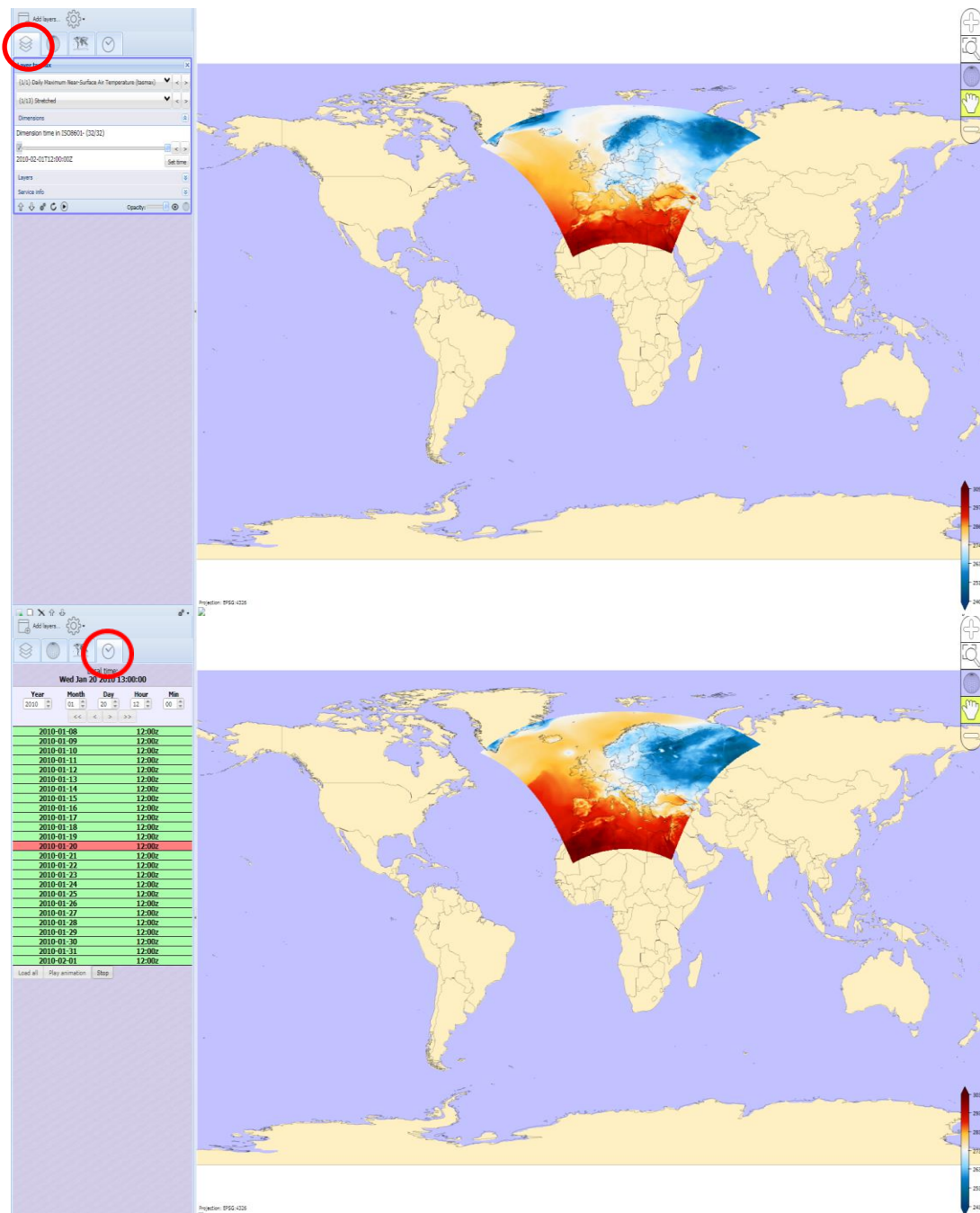


Figure 4.4 Different ways in which the data for the days in the selected period can be viewed, by selecting one of the icons in the top left of the screen.

5 Processing: calculate the average temperature

Below we will explain how to calculate the average temperature per year or per month over a certain period with the help of the Climate4impact-portal.

- First go to 'Processing' (Figure 3.1).
- Then click on 'ICCLIM time averaging' (Computes time average for any parameter by month, year of various seasons using ICCLIM) and you'll get the screen in figure 5.1.

Processing inputs

Slice mode (temporal grouping to apply for calculations) (*sliceMode*) min:0 / max:1
Selects temporal grouping to apply for calculations
 +

Input filelist (*wpsnetcdfinput_files*) min:0 / max: 1024
The input filelist to calculate the mean values for. The inputs need to be accessible by opendap URL's. It is also possible to select from the basket a catalog containing multiple files. The catalog will then be expanded to multiple files.
 +

Variable name to process (*wpsvariable_varName-wpsnetcdfinput_files*) min:0 / max:1
Variable name to process as specified in your input files.
 - +

A start/stop time range (*wpstimerange_timeRange-wpsnetcdfinput_files*) min:0 / max:1
Time range, e.g. 2010-01-01/2012-12-31. If None is selected, all dates in the file will be processed.
 - +

Name of output netCDF file (*wpsnetcdfoutput_outputFileName*) min:0 / max:1
 - +

Figure 5.1. The screen you get after clicking on 'ICCLIM time averaging'.

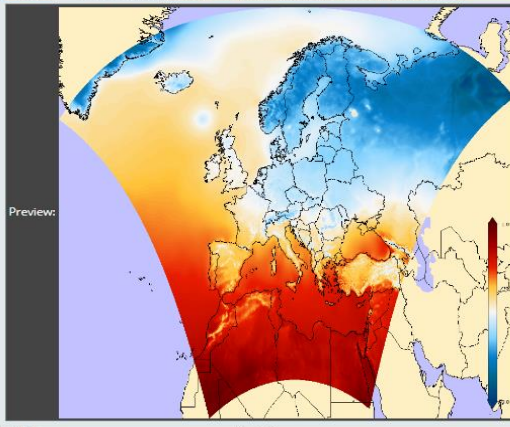
NetCDF Metadata retrieved via OPeNDAP
https://climate4impact.eu/impactportal/DAP/ceda.ac.uk.openid.Roy.Mandersloot/WPS_Scratch/WPS_1

Geographical information (WMS)
☒ Data abstract
☒ Daily Maximum Near-Surface Air Temperature (TIMEAVG)

File metadata and variables
https://climate4impact.eu/impactportal/DAP/ceda.ac.uk.openid.Roy.Mandersloot/WPS_Scratch/WPS_1

-	nc_global - File metadata
double	time - time
double	rlat - latitude in rotated pole grid
double	rion - longitude in rotated pole grid
double	time_bnds (time, bnds) - time_bnds
double	lon (rlat, rion) - longitude
double	lat (rlat, rion) - latitude
double	height (0) - height
byte	rotated_pole (0) - rotated_pole
float	TIMEAVG (time, rlat, rion) - Daily Maximum Near-Surface Air Temperature

Preview:



FillValue 1.e+20
grid_mapping rotated_pole

Figure 5.2. Screen after going to 'Jobs' and selecting the output file of interest.

- Choose 'year' or 'month' as selected time range under 'Slice mode'. In this case 'month' has been selected to calculate the average temperature per month.
- Choose the required dataset under 'Input filelist'
- Choose the climate variable under 'Variable name to process'
- Choose none under 'A start/stop time range' and the whole data file will be used for calculation.
- Give the output file a name under 'Name of output netCDF file' (default out_icclim.nc).
- Then click on 'Start processing'. This may take a while depending on the size of the dataset to be processed. The result of the processing is found under both

'Jobs' and 'Basket' (besides 'Processing' in the blue screen bar). In this example the file contains one value for each grid point (land area) per year (2001-2010). Go to 'Jobs' and click on 'View' and then on the link under value (Figure 5.2).

- Click on the map beside 'Preview', to go to the viewer in Figure 5.3.
- Go to the clock at the upper left corner.
- Select the year/month/.... of interest and click on 'Play animation' (under the dates) to see the average value (Figure 5.4).

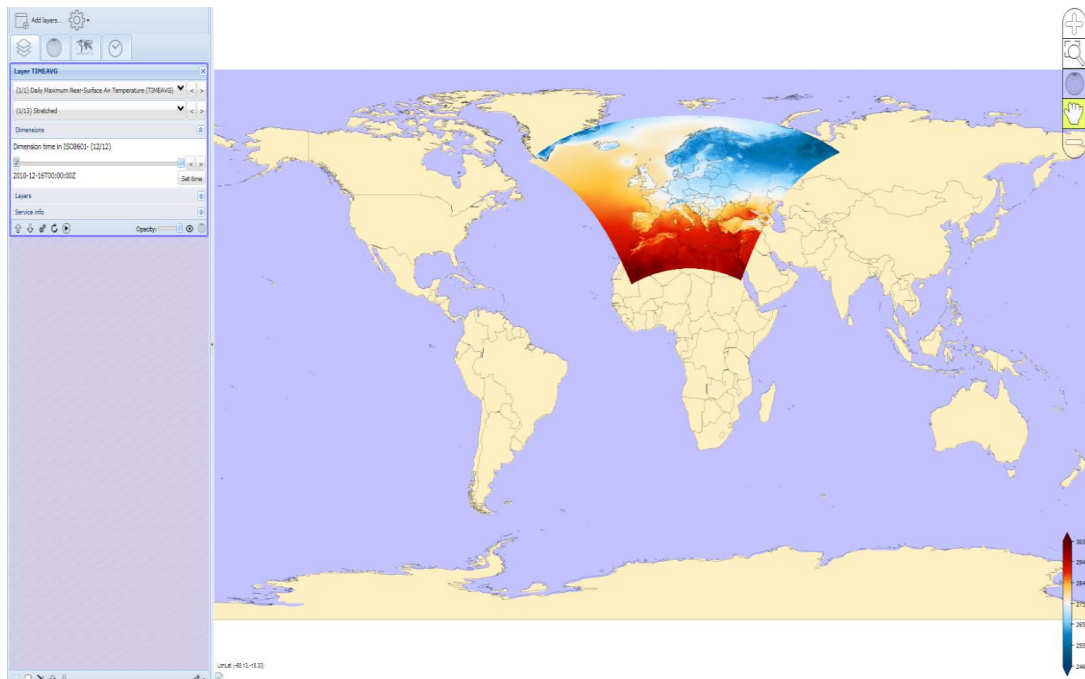


Figure 5.3. Screen shot of the viewer within Climate4impact.

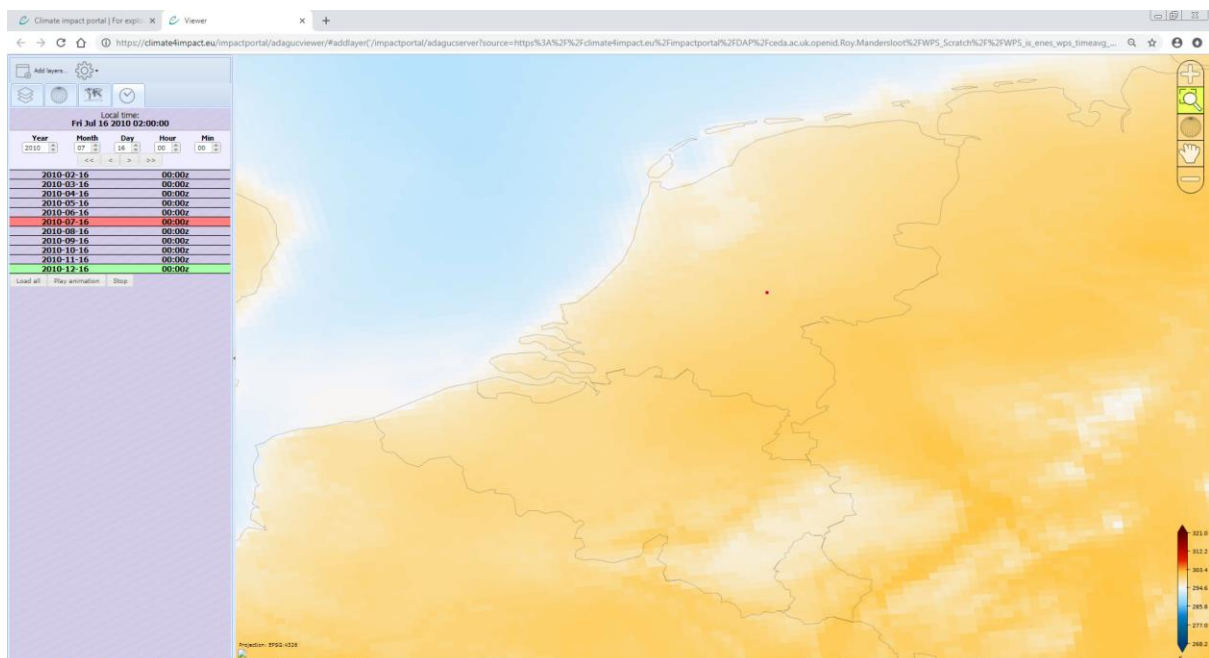


Figure 5.5. Screen shot of the viewer after zooming in and clicking on the clock in the upper left part.

To get the average per year follow the same procedure as above, but select "year" under 'Slice mode' in Figure 5.1 and use another output file name.

6 Processing: highest daily maximum temperature per year

Here we show how you can calculate the highest daily temperature per year. A similar approach can be used for the lowest temperature.

- To select the dataset of interest, go to 'Processing' (in this example another data file has been used; Figure 3.1).
- To select the highest maximum daily maximum temperature per year go to 'ICCLIM simple climate calculator' (Calculate simple climate indices with ICCLIM).
- Now select a file under "Input filelist" by clicking on the symbol basket (figure 7.1). Double click on file you want to use.
- Select under 'The indicator to calculate' TXX (Maximum daily maximum temperature calculated from tasmax). Make sure that the input variable mentioned is the name that is used in the input file that you use², in this case tasmax (Figure 6.1).
- Check also whether the time slice mode is correct (here "yearly"), whether the name of the output file is what you want, etc.

Processor CLIPC ICCLIM simple indicator calculator Execute

Title	CLIPC ICCLIM simple indicator calculator Execute
Identifier	clipc_simpleindicator_execute
Abstract	Using ICCLIM, single input indices of temperature TG, TX, TN, TXx, TNx, TNn, SU, TR, CSU, GD4, FD, CFD, ID, HD17; of rainfall: CDD, CWD, RR, RR1, SDII, R10mm, R20mm, RX1day, RX5day; and of snowfall: SD, SD1, SD5, SD50 can be computed.
Location	https://climate4impact.eu/impactportal/WP5?service=WPS&version=1.0.0&request=describeprocess&identifier=clipc_simpleindicator_execute

Start processing

Processing inputs

Indicator name (indName) min:0 / max:1
The indicator to calculate
SU - Number of Summer Days (Tmax > 25C) calculated from tasmax +

Time slice mode (sliceMode) min:0 / max:1
Selects temporal grouping to apply for calculations
year - Yearly time period +

Indicator threshold (threshold) min:0 / max:1024
Threshold(s) for certain indices (SU, CSU and TR). Input can be a single number or a number range, e.g. for SU this can be "20" or "20,21,22" degrees Celsius. None will use the default threshold as indicated by ICCLIM.
None - +

Input filelist (wpsnetcdfinput_files) min:0 / max:1024
The input filelist to calculate the mean values for. The inputs need to be accessible by opendap URL's. It is also possible to select from the basket a catalog containing multiple files. The catalog will then be expanded to multiple files.
https://opendap.knmi.nl/knmi/thredds/dodsC/IS-ENES/TESTSETS/tasmax_day_EC-EARTH_rcp26_r61p1_20060101- +

Input variable name (wpsvariable_varName-wpsnetcdfinput_files) min:0 / max:1
Variable name to process as specified in your input files.
tasmax - +

Figure 6.1. Selecting the input file for calculating the required climate index.

- Now click on 'Start processing' (top right in Figure 6.1). You will get the box as presented in figure 6.2.
- Choose 'Start' after checking and confirming the processing settings. If the settings are not correct, use 'Cancel' to go back to the former screen and to adjust e.g. the indicator to calculate, the input file, the variable name to process, and the time period used.

² In some file Tmax is used to denote the maximum daily temperature, in other file tasmax is used.

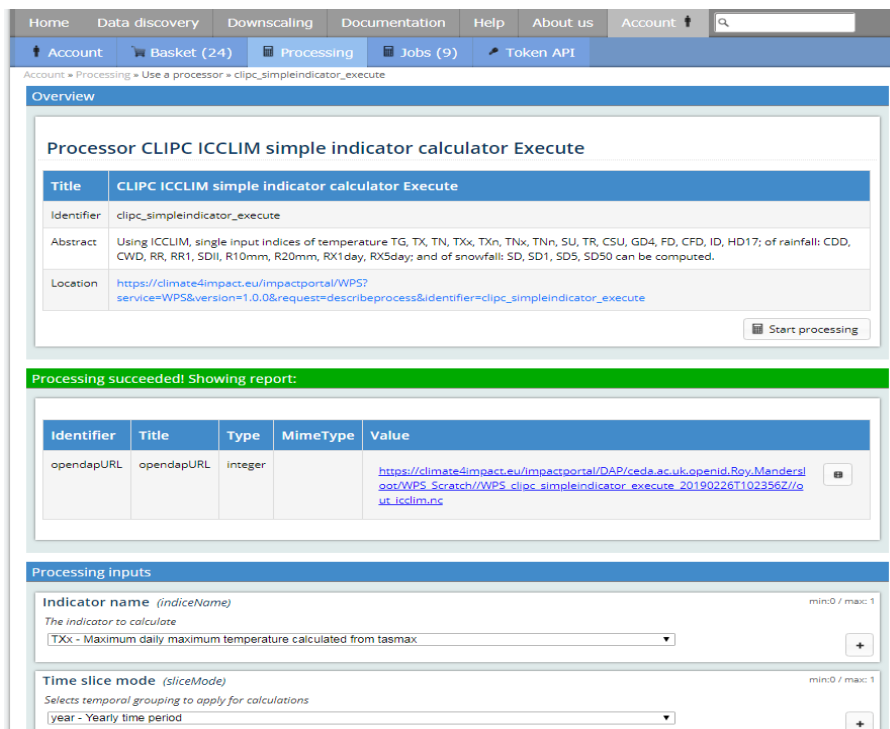


Figure 6.2. Screen after successfully calculating the yearly maximum maximum temperature.

- The data are now available in a NetCDF format (or geotiff or aagrid, can be selected under 'Format'). The available file has an .nc extinction. If you don't adjust the file name, the default name will be 'out.icclim.nc'. The data can be downloaded or visualized (Figure 6.3).
- The data can also be found in your basket. Go to 'Basket' and after double clicking on 'out_icclim.nc' (or the name you specified for the output).

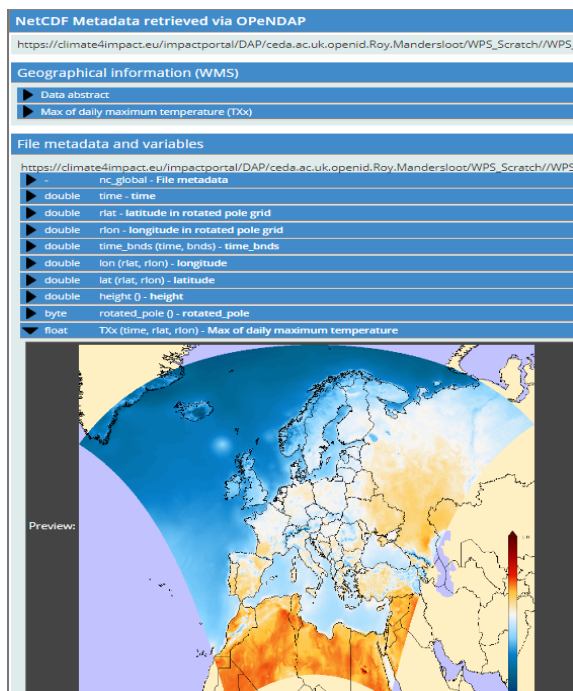


Figure 6.3 Preview of the visualization of the calculation of the yearly maximum maximum temperature.

- Data and file information can be found under 'NetCDF Metadata retrieved via OPeNDAP', 'Geographical Information (WMS)' and 'File metadata and variables' (Figure 6.3).
- By double clicking the map in Figure 6.3 the screen in figure 6.4 appears.
- One can zoom in to e.g. a country by using the "+" or the zooming tool on the top right. By clicking in the map on a certain location a box with coordinates and associated values of the location of interest appears (Figure 6.5, in this case one value, the maximum of the maximum daily temperature).

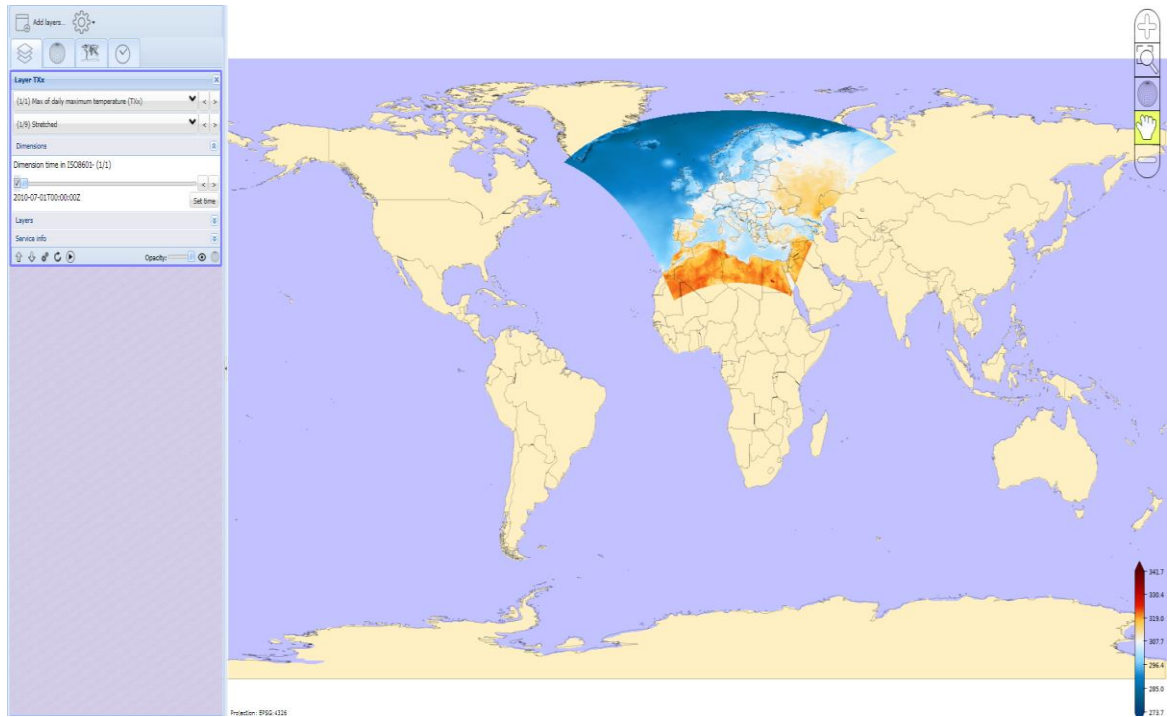


Figure 6.4. Visualization of the calculation of the yearly maximum maximum temperature in the viewer.

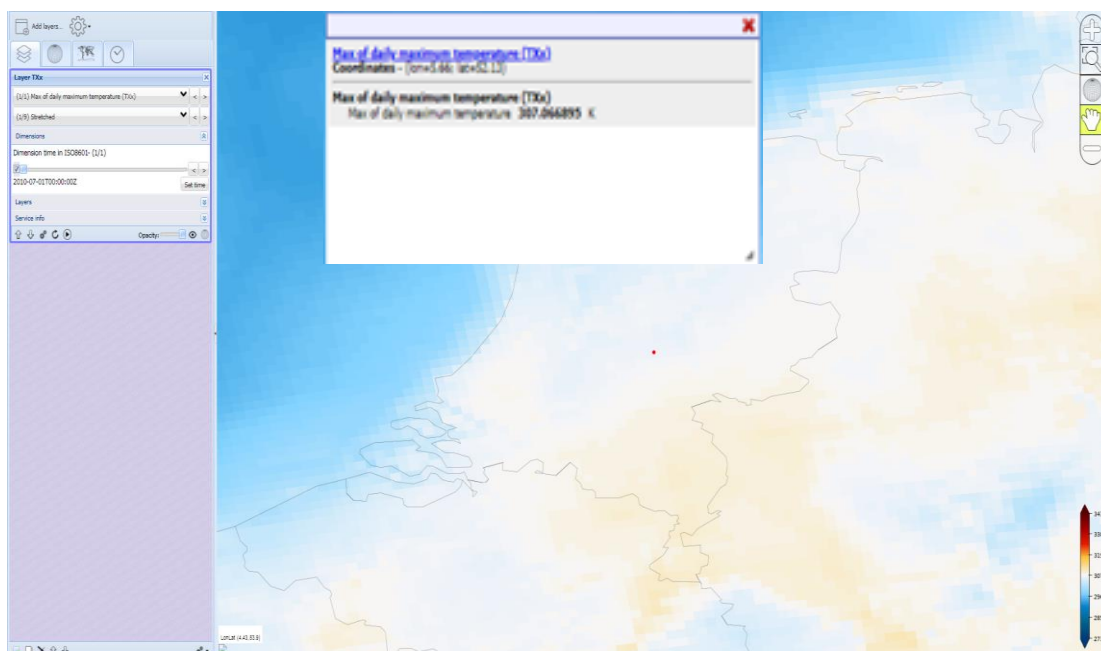


Figure 6.5. Zoomed in visualization of the calculation of the yearly maximum temperature in the viewer with a box that gives details for a certain location (red point in the middle of the figure).

7 Processing: number of days with a maximum temperature $\geq 25^{\circ}\text{C}$

Here we show how you can get the number of days with a maximum temperature $\geq 25^{\circ}\text{C}$. For other thresholds a similar approach has to be used.

- To select the dataset of interest, go to 'Processing' (in this example another data file has been used; Figure 3.1).
- To select the number of days with a maximum temperature $\geq 25^{\circ}\text{C}$ go to 'ICCLIM simple climate calculator' (Figure 3.1).
- Select under 'Indicator name' SU (Number of Summer Days ($T_{\text{max}} > 25^{\circ}\text{C}$) calculated from tasmax). Make sure that the "input variable name" is correct, in this case tasmax.
- Check whether the other settings such as "Time range" and "Name of output netCDF file name" are correct.
- Now select a file by clicking on the symbol "basket" right of "Input filelist" (figure 6.1). Double click on file you want to use. If you don't get a similar screen as in figure 6.3, you can click on the symbol just right of the "basket" behind the "Input filelist".
- Then click on "Start Processing" (top right in Figure 6.1). You will get a box similar to what is presented in figure 7.1.

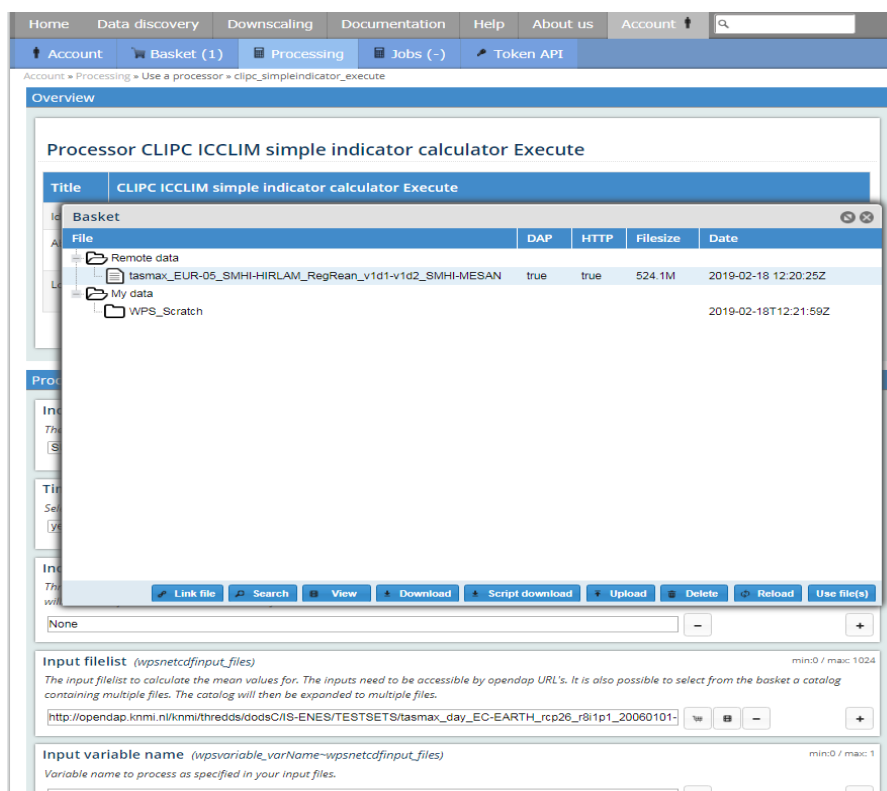


Figure 7.1. Screen shot of the web page you get after clicking on "Start Processing".

- The data are now available in a NetCDF format (or geotiff or agrid, can be selected under 'Format'). The available output file has an .nc extension. If you don't adjust the file name, the name will automatically be 'icclim.nc' (default).
- After the processing is successfully completed the data can be downloaded or visualized by double clicking the output file.

8 Processing: select a daily time series for one point/grid

- Time series are obtained by going to the viewer (Figure 8.1).
- Go to the upper left hand side and select the 'gear' (Figure 8.1 and 8.2).
- Then go to 'time series mode' and click in the map on the location for which you want a time series and the time series is shown on the upper right hand side for that particular point (Figure 8.3).

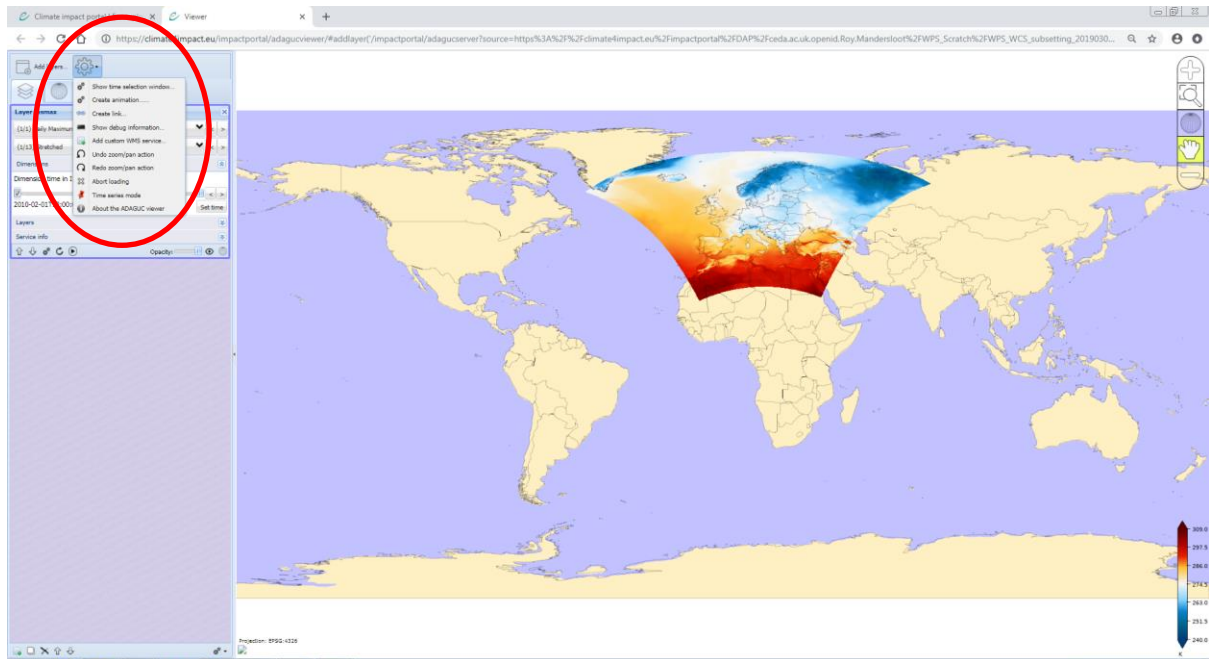


Figure 8.1. Screen shot of the viewer

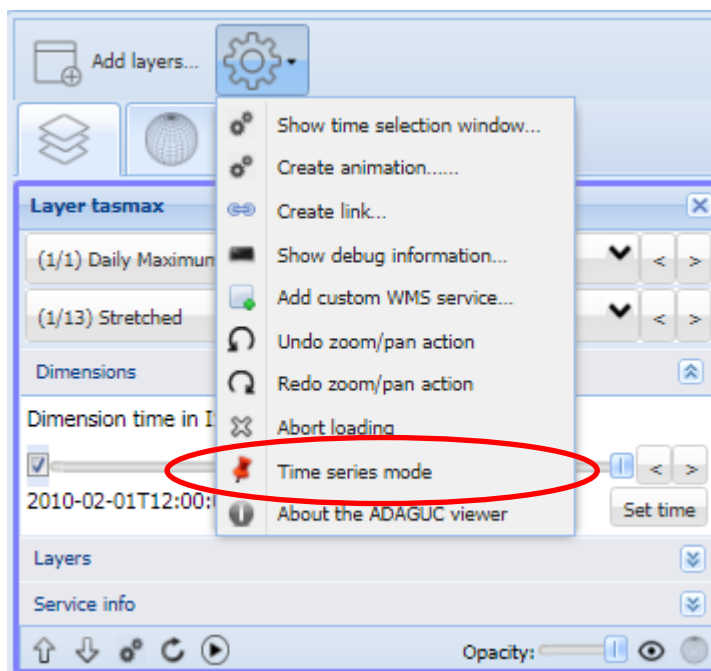


Figure 8.2. Screen shot of the panel in Figure 8.1 in the red circle.

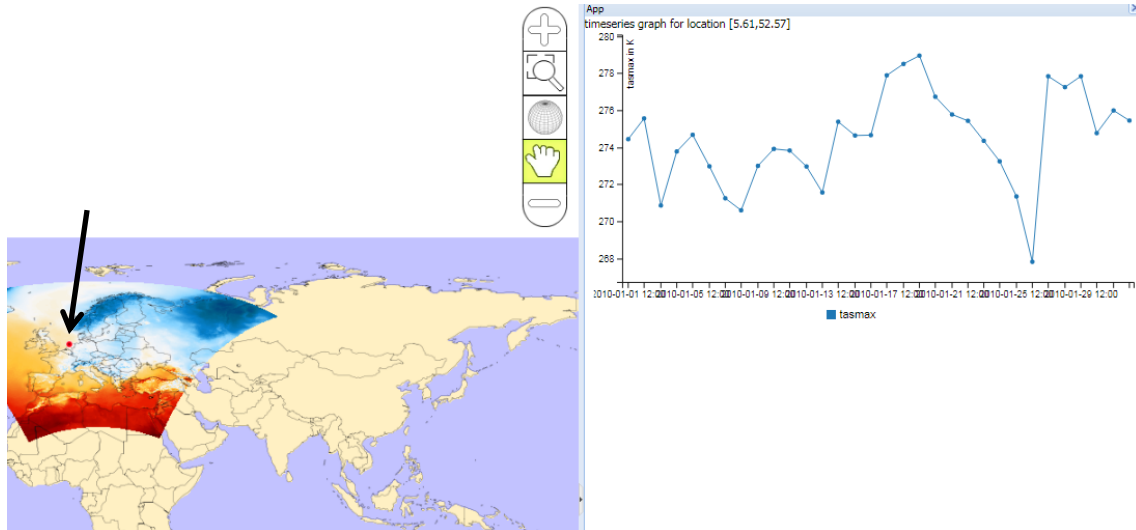


Figure 8.3. Part of the screen after selecting the time series mode. In the top right a time series is shown for the maximum annual maximum temperature (tasmax) for the location with the red dot (indicated with the arrow).