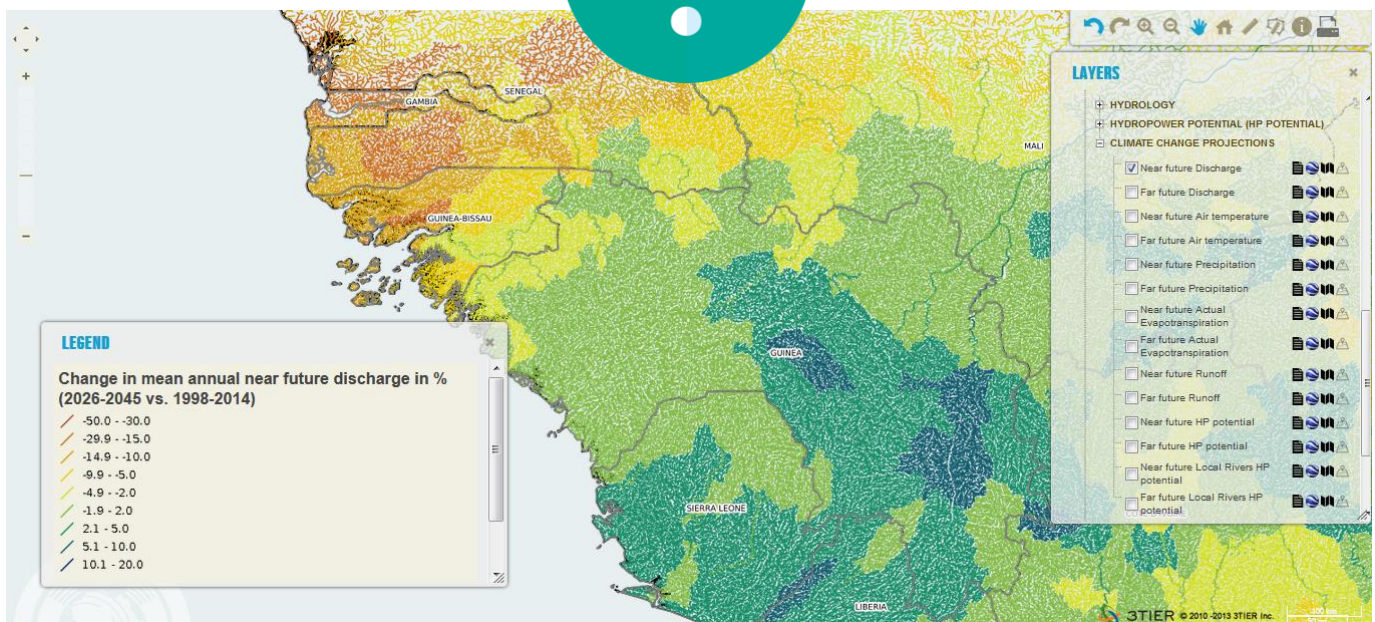


ECOWREX SDI – Map Viewer help document

This document is a guideline containing the help for public use of the ECOWREX Map Viewer. It aims at guiding end-users with the use of the platform. Last update: 10-05-2017



Contents

BASE MAPS	3
TOOLBAR.....	3
LAYERS.....	6
LEGEND.....	7
BOTTOM MENU BAR.....	9
METADATA.....	14

Table of Figures

Figure 1: Default base map (Google Physical map) with zoom control tool in left.....	3
Figure 2: Map viewer Toolbar	3
Figure 3: Length of a measurement with the measuring tool. The measure appears at the bottom right of the map viewer	4
Figure 4: Area of a measurement with the polygon tool. The measure appears at the bottom right of the map viewer	4
Figure 5: Query information using the information tool.....	5
Figure 6: print preview of a map composition in Firefox	5
Figure 7: Layers window	6
Figure 8: Layers window and corresponding icons	6
Figure 9: information required for downloading geospatial data.....	7
Figure 10: the legend window	8
Figure 11: details of the legend window; scrolling down and expanding option at the bottom right	8
Figure 12: details of the legend, moving and placing the legend window in different locations	9
Figure 13: moving and placing the legend window in different locations	9
Figure 14: the LOCATE window	10
Figure 15; locate by geonames.....	10
Figure 16: the search menu.....	11
Figure 17: table of results after a search query	11
Figure 18: the results window containing information on active layers	11
Figure 19: screen capture of the ECOWREX metadata catalog in Geonetwork.....	12
Figure 20: the share menu allowing to embed or bookmark a map composition, or to access data through web services	13
Figure 21: example of ECOWREX map embedding in an external application	13

BASE MAPS

The default base map used in the ECOWREX Map Viewer is the Google physical map. It is centered on West Africa with a given zoom level. It also contains a zoom control tool that allows zooming in and out on 13 different levels. The level of details dynamically changes depending on the scale.



Figure 1: Default base map (Google Physical map) with zoom control tool in left

The following base maps are available:

- Digital Elevation map
- Google Satellite map
- Google Street map
- Google Hybrid map
- Google Physical map (default map)
- ECOWAS Blank map

Users can only choose one base map at the same time. But base maps can be displayed in combination with other GIS layers.

TOOLBAR

There is a toolbar appearing by default on the top right of the screen on the ECOWREX Map Viewer. It can be enabled/disabled by clicking on the **TOOLS** button at the bottom menu. When mousing over any of the tools, a pop-up window gives a brief explanation of the tool and the same information displays simultaneously in the bottom right bar.

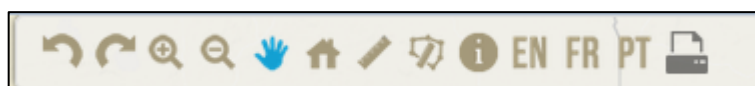












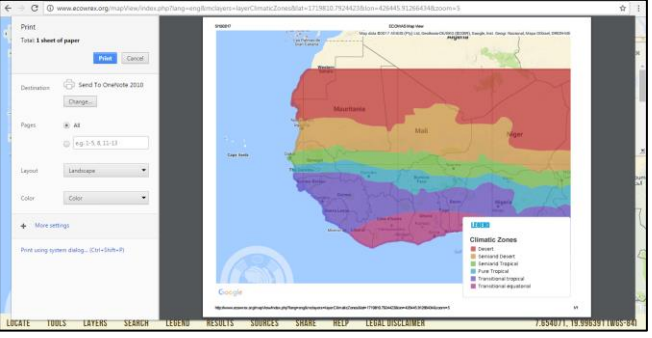


Figure 2: Map viewer Toolbar

The following tools are available:

Icon	Tool-name	Definition
	BACK tool	To return to the previous historical location on the map
	NEXT tool	To go to the next historical location in case the “back” location was used
	ZOOM IN	To zoom in into a location by drawing a box
	ZOOM OUT	To zoom out by drawing a box
	PAN tool	To navigate through the map
	HOME tool	To go back to the default location centered in West Africa and at zoom level 5
	MEASURING tool	<p>To get distances between points on the map in kilometers. Several consecutive segments can be drawn and the total length will appear. To finish segments, double click on the map. When it is done, the length appears on the bottom right bar and the value can be copied with the mouse for further pasting in into other application</p> <div data-bbox="630 1346 1042 1382" data-label="Text"> <p>LAST MEASURE: 733.63 KM 733.63 KM</p> </div> <p>Figure 3: Length of a measurement with the measuring tool. The measure appears at the bottom right of the map viewer</p>
	POLYGON tool	<p>To draw a polygon on the map; to close the polygon, double-click on the map. When the polygon is closed, the total surface in square kilometers is displayed at the bottom right bar. This tool must also be used when part of a layer must be downloaded (see full explanation in the LAYERS section)</p> <div data-bbox="630 1823 1142 1859" data-label="Text"> <p>LAST MEASURE: 559494.31 KM2 559494.31 KM2</p> </div> <p>Figure 4: Area of a measurement with the polygon tool. The measure appears at the bottom right of the map viewer</p>

	<p>INFORMATION tool</p>	<p>To query information from a layer and displays its information in a separate RESULTS window. To use it properly, the user should: (1) display the layer he/she wants to visualize, (2) click on the information tool, (3) click in the point of the map from which they want to query the information, (4) the information will be displayed in the RESULTS AREA window.</p> <p>Please note that all active layers can be selected in the RESULTS AREA window in order to use the information tool. In this context, please keep in mind that if different layers are displayed you need to first select the layer you want to check the information in the results area window before using the information tool.</p>  <p>Figure 5: Query information using the information tool</p>
	<p>LANGUAGE buttons</p>	<p>To change the language in which the map viewer is displayed. EN for English; FR for French and PT for Portuguese</p>
	<p>PRINT tool</p>	<p>To directly trigger the print feature of the client computer. It has been set up to only keep the map and the legend. Some other elements also appear (url, date, page number, etc.) but these need to be removed directly in the client computer's browser print settings as the parameters are different depending on the browser</p>  <p>Figure 6: print preview of a map composition in Firefox</p>

		<p>Please do consider the following tips: (1) Best results are achieved using Google Chrome, (2) It is recommended to setup the page layout to landscape, (3) Moving the relevant map content to the left side of the browser viewport will adjust this content to appears in the print region, (4) With Firefox you can preview the result by using the browser 'Print' menu item instead of clicking the print button tool.</p>
--	--	---

LAYERS

All the layers available in the ECOWREX map Viewer are available in the LAYERS window that appears by default. The layers are grouped in several expandable categories and can be selected individually by clicking in their corresponding check box. Next to each layers, 4 icons give the possibility to: (1) get more information about the layer (metadata); (2) download the layer in Google Earth KML format; (3) download the layer in its original format file (normally shapefile for vector layers and geotiff for raster layers); (4) download the layer in its original format file for a defined area that previously should



have been defined by using the POLYGON tool.

Figure 7: Layers window

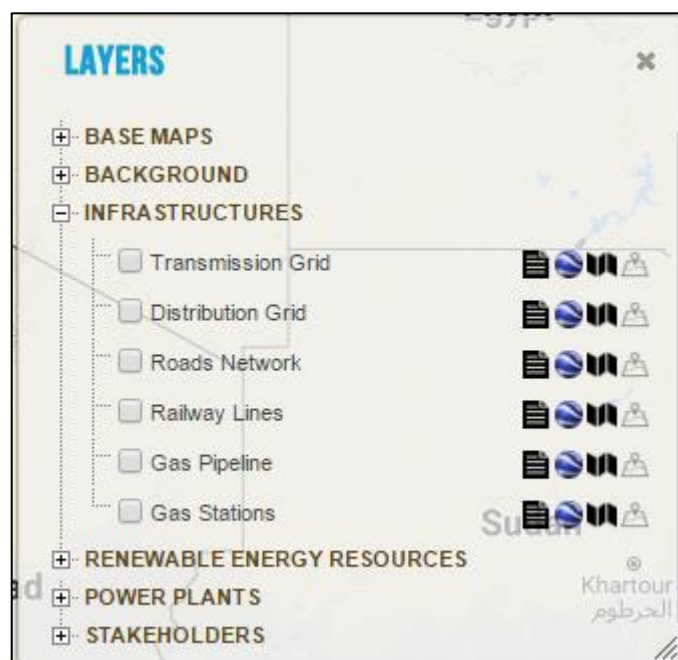






Figure 8: Layers window and corresponding icons

Icon	Icon-name	Definition
	Metadata icon	To access to the metadata of the layer. This metadata is contained in a metadata catalogue called Geonetwork. More details are given in the specific METADATA section of this document.

	KML downloader icon	To download the layer as a .kml file and hence to display it in the Google Earth software (if it is installed on the client's computer)
	Data download icon	To download the layer in its original format file (normally shapefile for vector layers and geotiff for raster layers)
	Data download icon for defined area	To download the layer in its original format file for a defined area that previously should have been defined by using the POLYGON tool from the tools bar

In order to keep track of the use of ECOWREX geospatial data, the user needs to fill in his/her name, email address and reason of interest in the data before being able to download the layer. Additionally, a CAPTCHA is also used for security reasons.

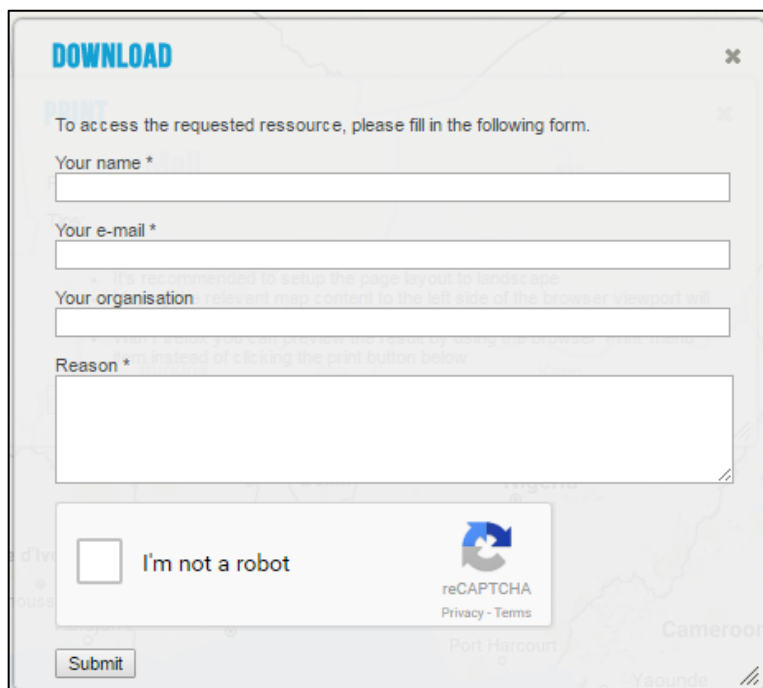


Figure 9: information required for downloading geospatial data

Once the user information is submitted, the download link appears and the layer can be downloaded.

LEGEND

The LEGEND window displays the legend corresponding to the active layer(s). By default the LEGEND window appears under the LAYERS window when one or more layers have been activated. In case several layers are active, the legend of each layer displays in this window on top of each other. It can be scrolled down in case several

layers are displayed. This legend window can be enabled/disabled by clicking on the



bottom menu.

Please consider the following tips: (1) expand the size of the legend by clicking at the bottom right part of the window when several layers are displayed and/or scroll down to adjust all information in the legend, (2) you can also move the legend to other location in the map viewer to help visualizing you better the information displayed by simply using the mouse and clicking on the legend window and moving it without unclicking.

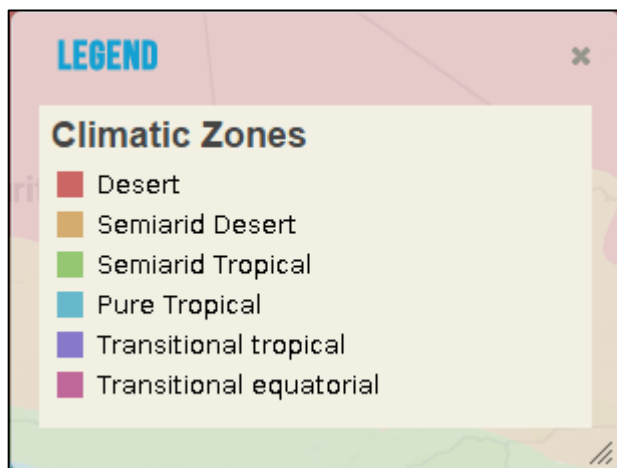


Figure 10: the legend window

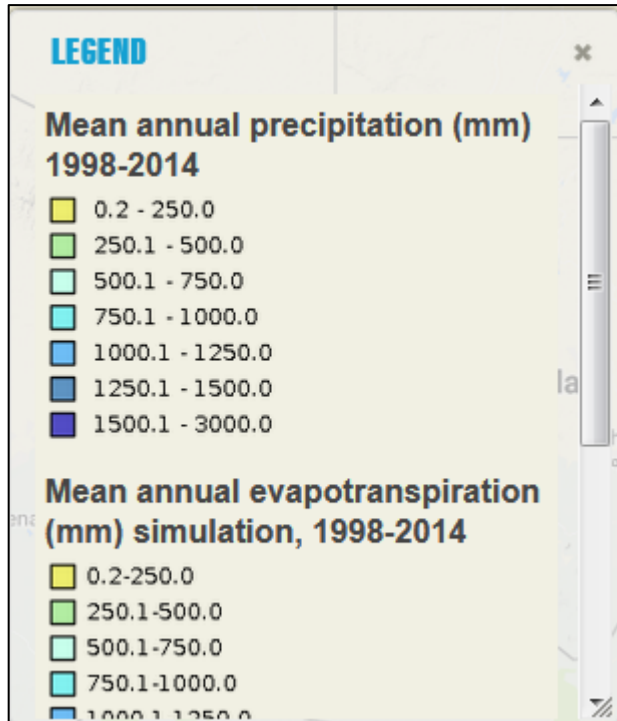


Figure 11: details of the legend window; scrolling down and expanding option at the bottom right

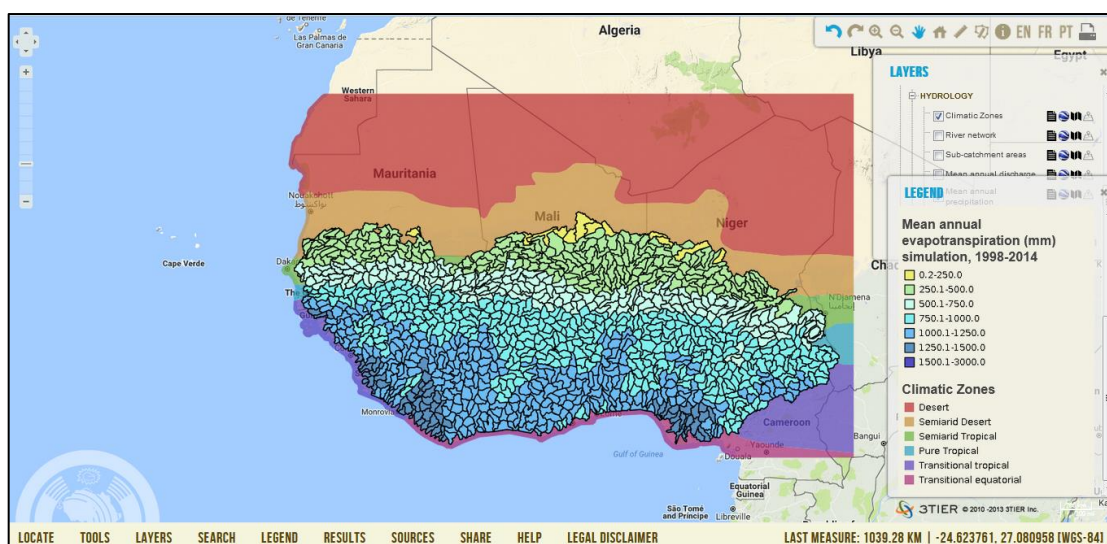


Figure 12: details of the legend, moving and placing the legend window in different locations

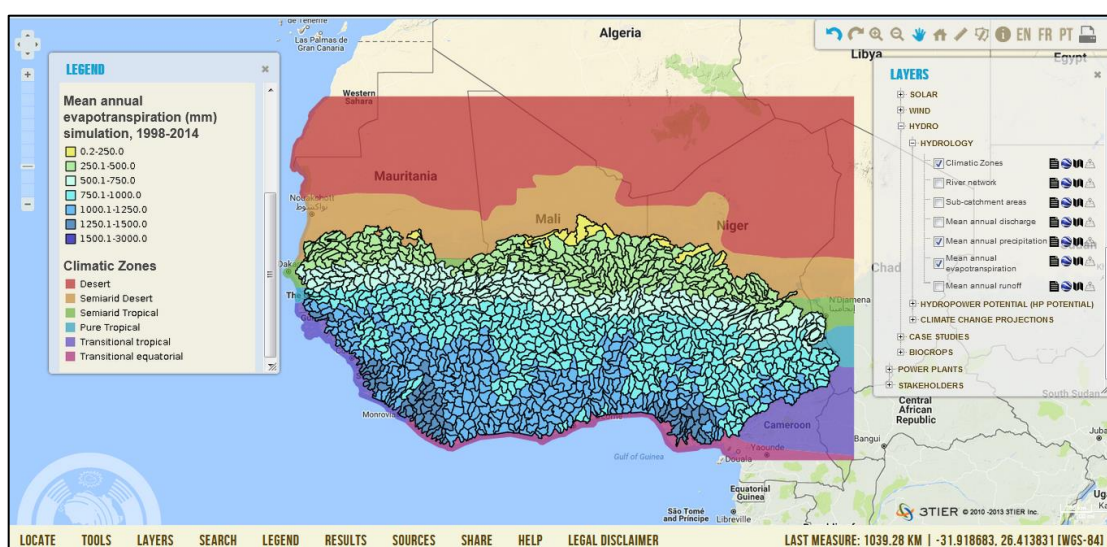


Figure 13: moving and placing the legend window in different locations

BOTTOM MENU BAR

Apart from the **TOOLS**, **LAYERS** and **LEGEND** menus that have been mentioned in previous sections and that can be enabled/disabled by clicking on their corresponding button in menu bar, the other menus work as follows:

Menu Icon	Description
LOCATE	To quickly find a location and automatically zoom on it. It can be done through 3 different means: (1) BY COUNTRY, by clicking on the button of one of the ECOWAS countries, the map will automatically zoom on the chosen country; (2) BY LON/LAT, it is possible to enter a longitude and latitude in order to zoom on a particular location. The longitude and latitude should be in decimal format and in WGS84 Coordinates Reference System.

After writing the coordinates, clicking on the zoom button, the map will automatically be centered on this location; (3) BY GEONAME, to enter a geographical name (village, city, country, etc.) in the blank field. The tool compares the typed geographical name to some online geographical names database that autocompletes the name searched while typing. Once the correct location is selected by the user, the map automatically zooms to this place.



Figure 14: the LOCATE window

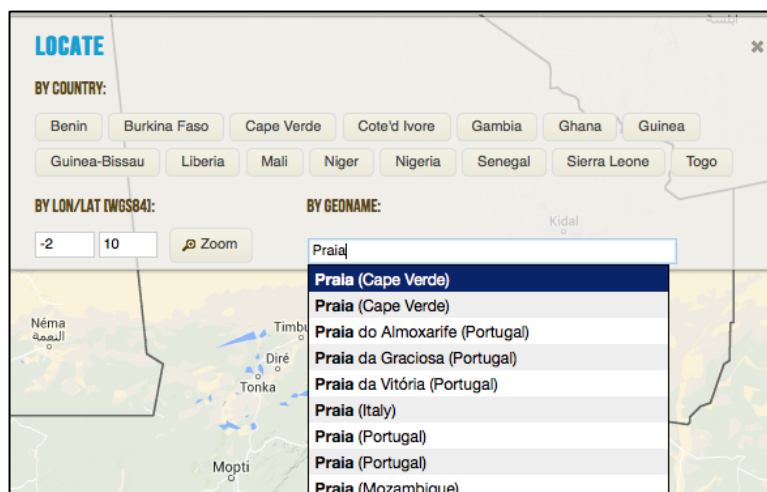


Figure 15: locate by geonames

SEARCH

To retrieve specific information on:
POWER PLANTS: the user can select the generator type, status, size and capacity.
STAKEHOLDERS: the user can select the stakeholders by type and REEE categories.

Figure 16: the search menu

This selection queries the ECOWREX database and returns results in the RESULTS AREA window as a table with records matching the search criteria. The user can then click on a record to see the complete detailed information on the power plant or stakeholder chosen. It also allows clicking on a corresponding “zoom” button that will locate it on the map.

Country	Name	Type	Initiatives	REEE Categories	Size	Status	Capacity	Zoom
Burkina Faso	Bagre	Small Hydro		Hydropower, Small Hydropower	Small	Operational	14.4	
Burkina Faso	Kompienga	Small Hydro		Small Hydropower, Hydropower	Small	Operational	12	
Burkina Faso	Niofila	Small Hydro		Small Hydropower, Hydropower	Small	Operational	1.68	
Burkina Faso	Samandeni	Small Hydro		Hydropower, Small Hydropower	Small	Planned	2.50	
Burkina Faso	Tourmi	Small Hydro		Micro and Pico Hydropower systems, Hydropower	Small	Operational	0.6	
Cote d'Ivoire	AYAME 1	Small Hydro		Small Hydropower, Hydropower	Small	Operational	20	

Figure 17: table of results after a search query

RESULTS

To enable/disable the RESULTS AREA window that:

- Returns results of a search query, or;
- Gives information about all the active layers and presents information about the layer when using the INFORMATION tool.

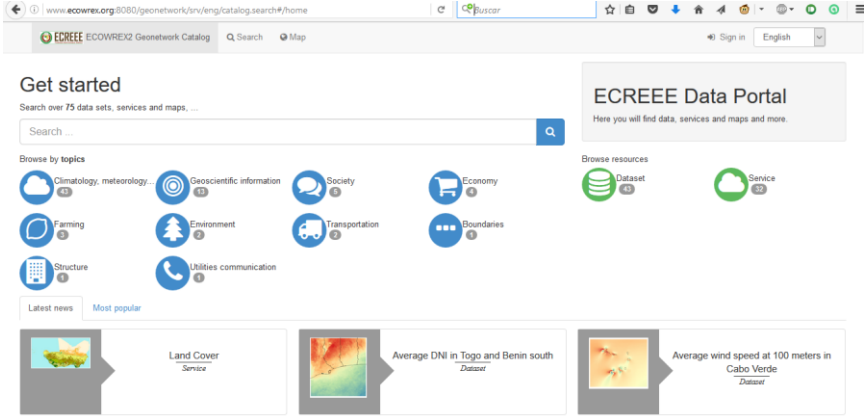
This window can be scrolled down to get all the information.

Show data from layer: Climatic Zones

CLIMATIC_ZONES_WESTAFRICA

- clz_id: 1
- name_eng: Desert
- name_fr: Desertique
- ppt_y_mm: 58.0
- temp_y_c: 27.1
- etp_y_mm: 2208.0

Figure 18: the results window containing information on active layers

<div data-bbox="280 197 416 246" data-label="Section-Header"> SOURCES </div>	<p>To go to the ECOWREX metadata catalog that contains all the metadata about all spatial layers</p>  <p>Figure 19: screen capture of the ECOWREX metadata catalog in Geonetwork</p>
<div data-bbox="300 795 400 844" data-label="Section-Header"> SHARE </div>	<p>To retrieve a map composition done by the user for further use. Two possibilities are given to retrieve the map composition: (1) Embedding a map composition in an external website: the external website's administrator simply needs to copy the code appearing in the "embedding widget" section of the window and paste it as an iframe in the external website. The dynamic map composition will then appear in the external website; (2) Bookmarking a map composition for further use with the same layers composition and zoom level.</p>

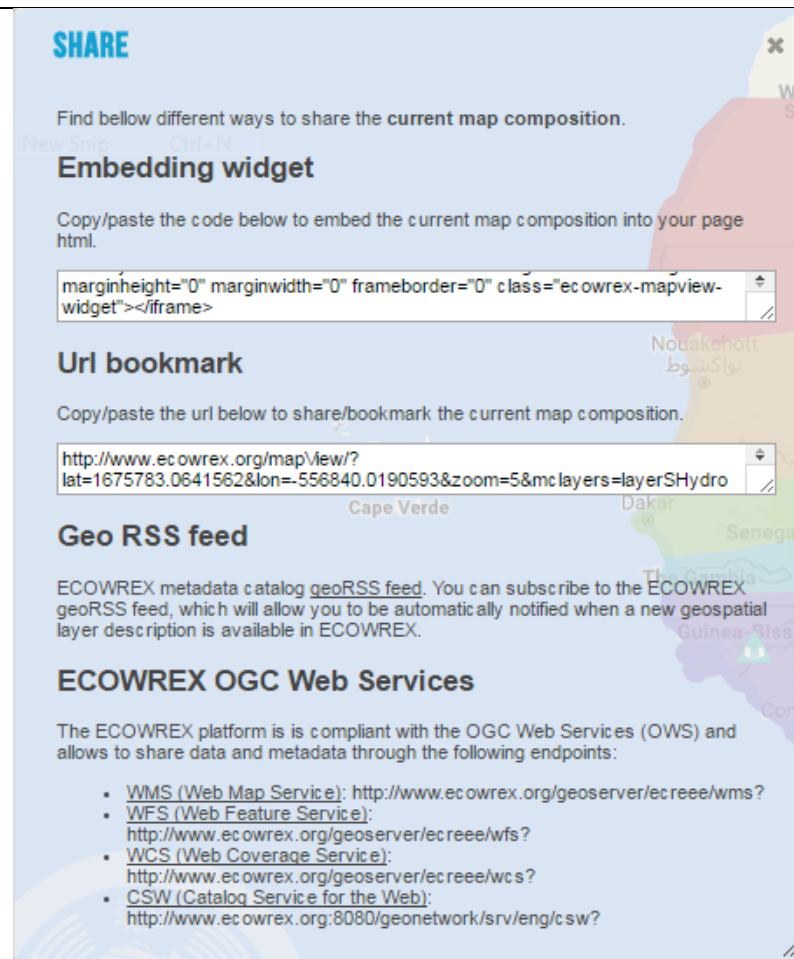


Figure 20: the share menu allowing to embed or bookmark a map composition, or to access data through web services

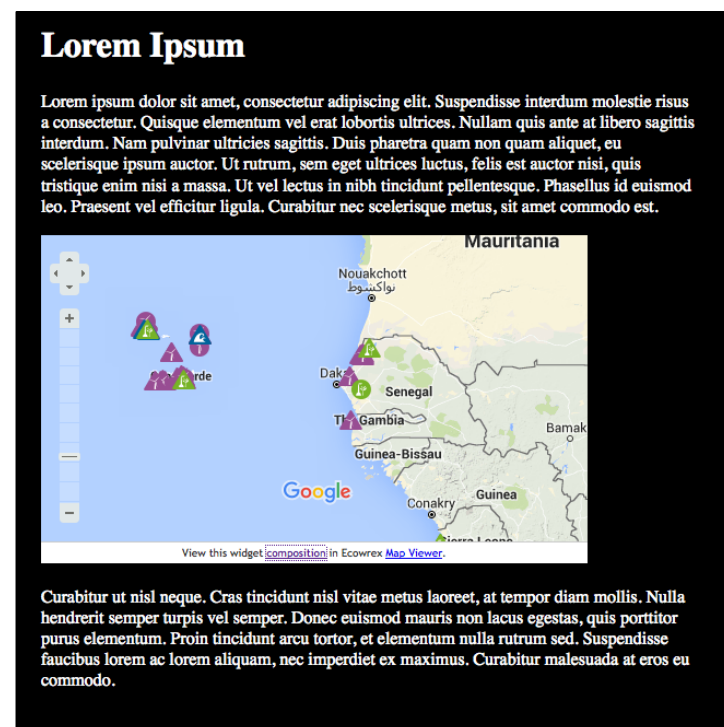





Figure 21: example of ECOWREX map embedding in an external application

	<p>Besides, a Geo RSS feed allows subscribed users to always be updated about new available layers in ECOWREX. In order to subscribe to this RSS feed, the user simply needs to click on the “Geo RSS feed” link available at the bottom of the “share” window. A new page will open where the user can select in the dropdown box a client application for reading this feed on his/her computer (web browser, email program) and submit.</p> <p>Finally, the ECOWREX OGC web services (WMS, WFS, WCS and CSW) addresses are provided in this same window for use in various clients (ex: QGIS).</p>
	To give access to the .pdf version of this help document
	To display the legal mention about the layers available in the ECOWREX platform.

METADATA

Metadata is the description of data. This description is crucial to know how the data was created, what is its quality and how to obtain it. The metadata developed for ECOWREX layers is stored in a metadata catalogue called “Geonetwork”. This

metadata can be accessed individually per layer by: (1) clicking on the  icon next to each layer; (2) clicking on the SOURCES option in the menu at the bottom of the page, and (3) It is also possible to access the whole metadata catalog at the address <http://www.ecowrex.org:8080/geonetwork>.