

# The GLOWA Jordan River Atlas

## Manual

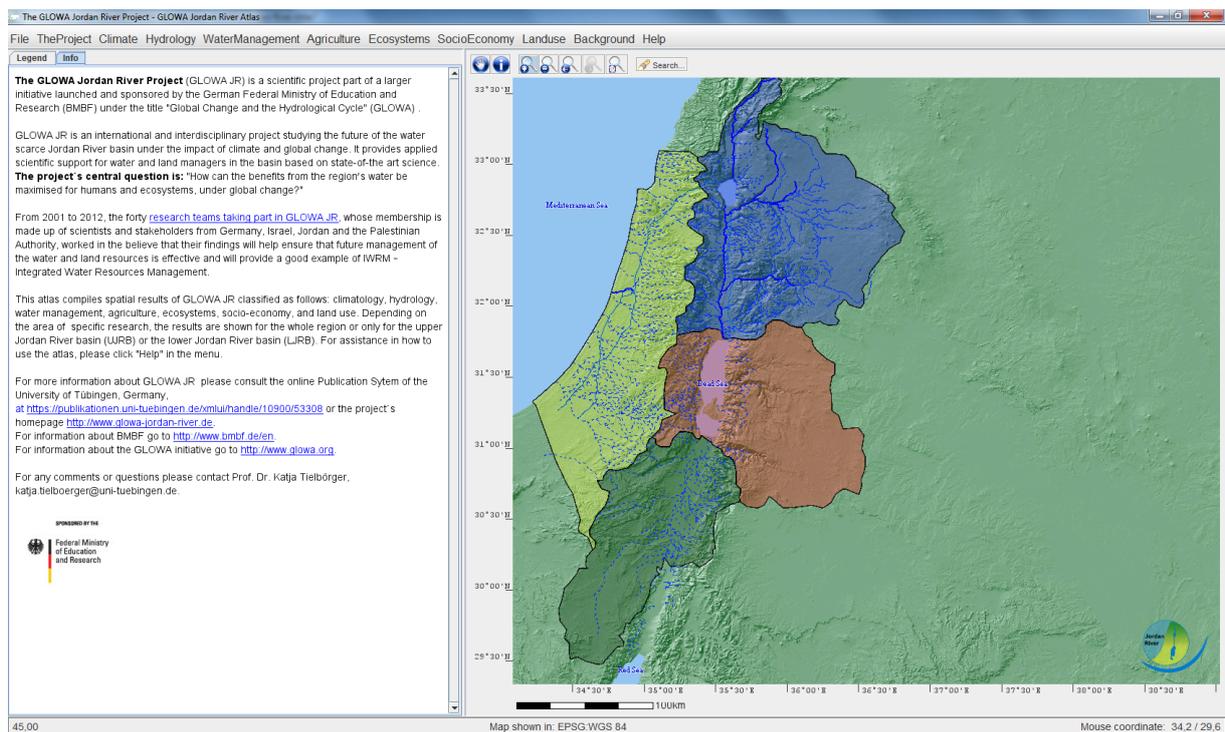


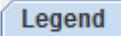
Figure 1 First layer of the GLOWA Jordan River Atlas.

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## Credits

This manual is based on the Atlas Viewer manual written by the developer of Geopublisher and its Atlas Viewer, Stefan Tzeggai (see <http://www.wikisquare.de> and <http://www.geopublishing.org>), and was later on extended by Andreas Braun and Cornelia Claus in order to provide help for all users of the GLOWA Jordan River Atlas (later on in this manual referred as “the atlas”).

# 1 Graphical user interface

The graphical user interface of the Atlas Viewer consists of three components: The *Main menu* at the top, the *Map display* on the right and the *Legend/Info* of the map on the left (see Figure 1).

## 1.1 Main menu and its structure

The *Main menu* is structured into the following parts (Figure 2):

1. File (see section 1.2)
2. Maps (see section 2)
  - 2.1. The Project
  - 2.2. Climate
  - 2.3. Hydrology
  - 2.4. Water Management
  - 2.5. Agriculture
  - 2.6. Ecosystems
  - 2.7. Socio Economy
  - 2.8. Land Use
3. Background (see section 1.3)
4. Help (see section 1.4)



Figure 2 The *Main menu* of the GLOWA JR Atlas.

## 1.2 The menu File - File

If you click on the *file* menu a window opens with the options showed in Figure 3.



Figure 3 The options of the *file* menu.

### 1.2.1 Save screenshot: Creating a map

The main function of the *File* menu is to quickly produce a map out of the currently visible map extent. It can be done via *Save screenshot* or pressing the *Print Screen* button on your keyboard. The following dialogue lets you choose one of the following (Figure 4):

- *Overall view*: Consists of the map and the legend/info tab on the left side.
- *Map extract with coordinates*: Consists of the map with the corresponding grid values at the map frame.
- *Only the map extract*.

After entering a destination and a name for the file the map is stored as an image file.

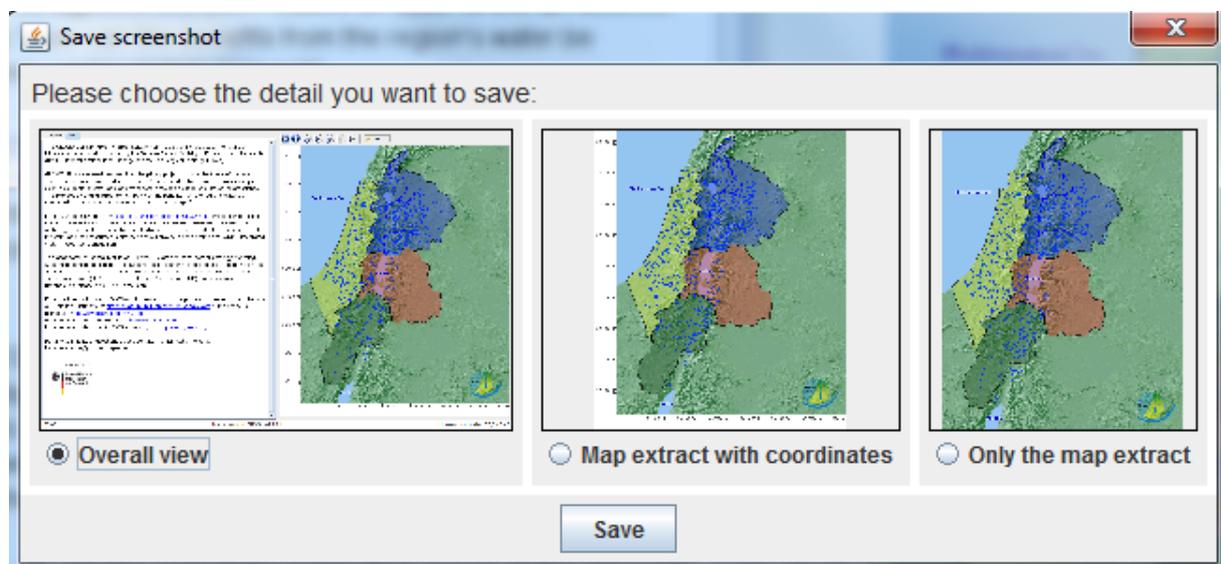


Figure 4 The *Save screenshot* window.

### 1.2.2 Download whole atlas (disabled)

This option is disabled since the GLOWA JR Atlas will not be available through the web start. If an atlas is accessed with the web start  **Launch**, you can select *Download whole atlas* in order to store it on your personal hard drive. Once downloaded no further online access is needed to view the maps.

### 1.2.3 Change language (disabled)

This option is disabled since the atlas is at the moment just available in English.

### 1.2.4 Open popup-window

By selecting submenu *Open popup-window* you can take a look at the first window that opens when opening the atlas (Figure 5).

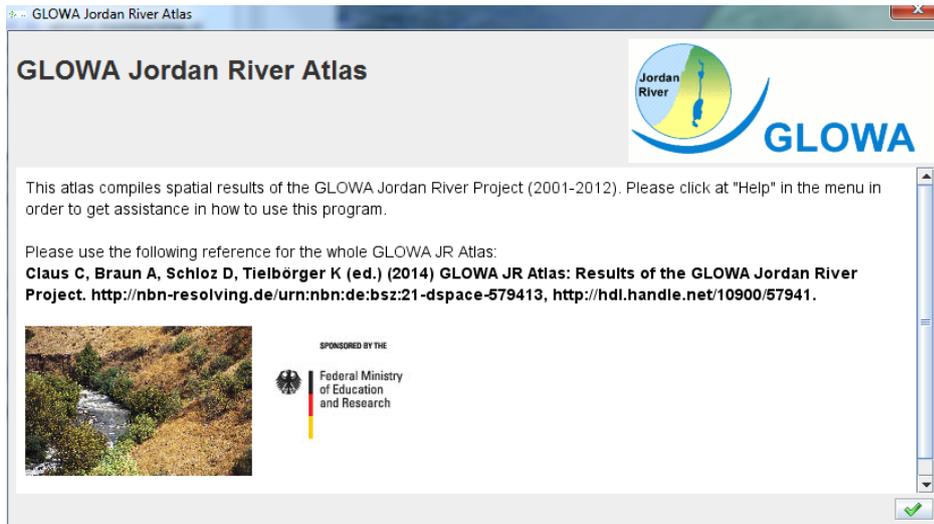


Figure 5 The GLOWA Jordan River Atlas popup-window.

### 1.2.5 Terms of use window

By selecting this button you open the *Terms of use*. Please accept them if you use data of the atlas (Figure 6).

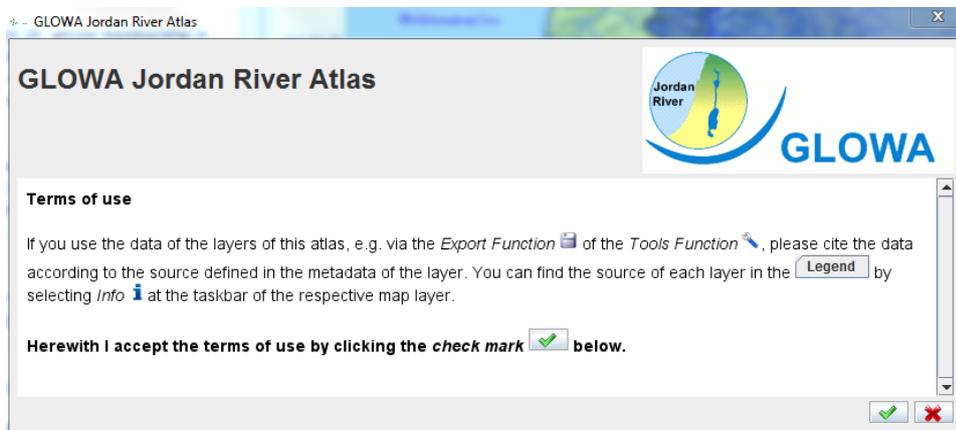


Figure 6 The Terms of use of the GLOWA Jordan River Atlas.

### 1.2.6 Exit

By selecting submenu *Exit* the user can end the Atlas Viewer. Attention: All changes made by the user will not be saved! After rebooting, the original settings will be used.

## 1.3 The menu Background - Background

The *menu Background* allows the user to add further layers with background information into the current map view (see Figure 7). These layers have predefined styles so that the

user can directly create a map. See section 3.5.1 on how to change the look of these layers and on how to label them.

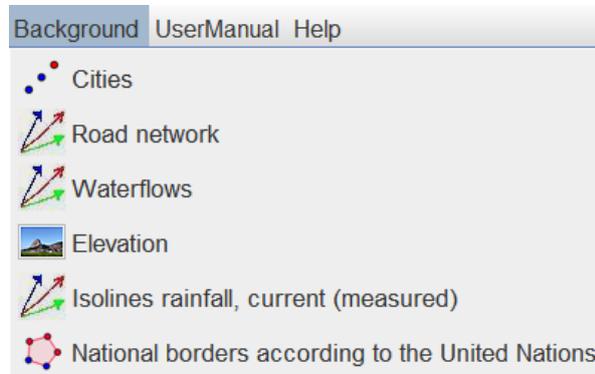


Figure 7 The layers below the menu *Background*.

**Please note:** Because of the large amount of data within the background layers, it depends on the scale of your map, how much is visible in the current extent. This means, that more units may occur if you zoom in. To get quick information on the units, please use the *Info* symbol  (see section 3.3.1).

#### 1.4 The menu *Help* - **Help**

The menu *Help* provides this user's manual. Apart, the user can activate or deactivate the setting *Draw "softer" maps* (see Figure 8).

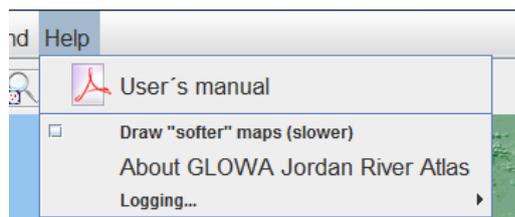


Figure 8 The menu *Help*

It is preferable to deactivate the setting *Draw "softer" maps* in order to be able to identify the modelling grids, e.g. in the maps under the menu *Climate*. By activating *Draw "softer" maps*, the maps will be processed with anti-aliasing algorithm which apart causes a slower display of the maps (see Figure 9).

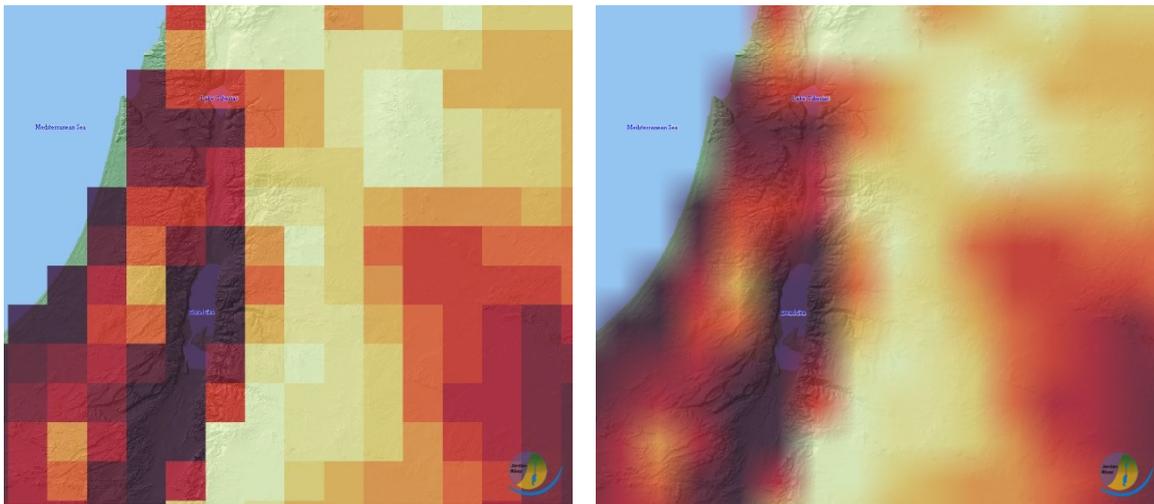


Figure 9 The map on the left with deactivated setting *Draw “softer” maps*; map on the right with activated setting *Draw “softer” maps* of the menu *Help*.

The submenu *About GLOWA Jordan River Atlas* summarizes the aim of the atlas as well as further information and contact details (Figure 10).

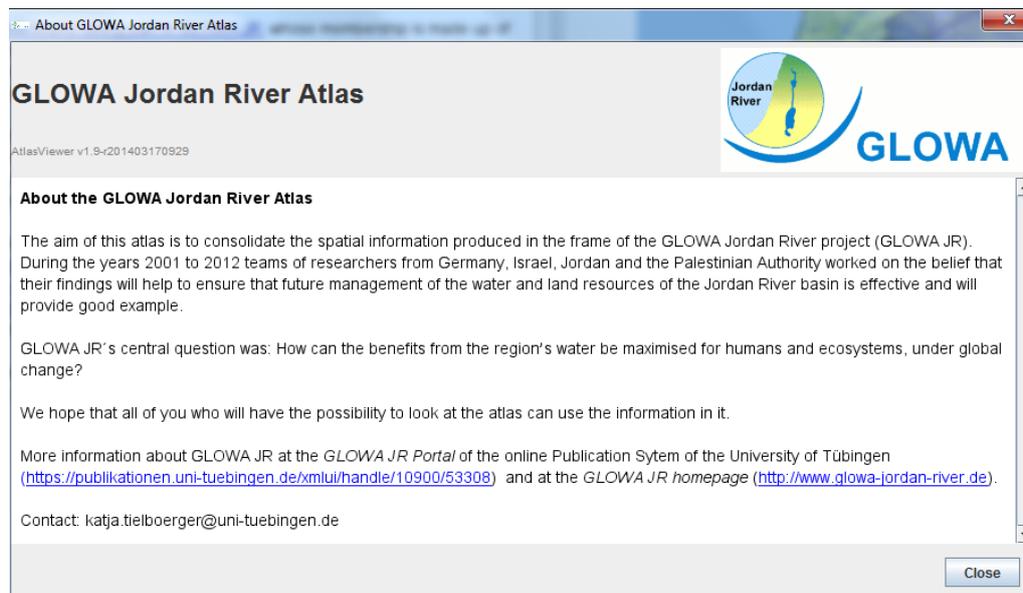


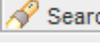
Figure 10 The submenu *About GLOWA Jordan River Atlas*.

The submenu *Logging* considers the creation of a log file *atlas.log* where errors, warnings and other information are stored in a file.

## 2 Map display

Within the map display (Figure 11) the tools described in Table 1 can be used in order to look at the data.

Table 1 The tools of the *map display*.

	Pan	Moves the map according to mouse movement
	Info	Returns the selected raster cell's or shape's attributes
	Zoom in	Magnifies the selected area
	Zoom out	Demagnifies the selected area
	Last view	Switches back to the previously viewed area
	Next view	Switches forward to the previously viewed area
	Default view	Shows the default view of the map
	Search	Searches for layer names, datasets and attributes*

\* Note, that the *Search* tool only finds names of labeled objects in the map. A description on how to label objects is given in section 3.2.1.

If you want to search within whole datasets, open the corresponding attribute table (3.3.2) or use a filter (3.5.3).

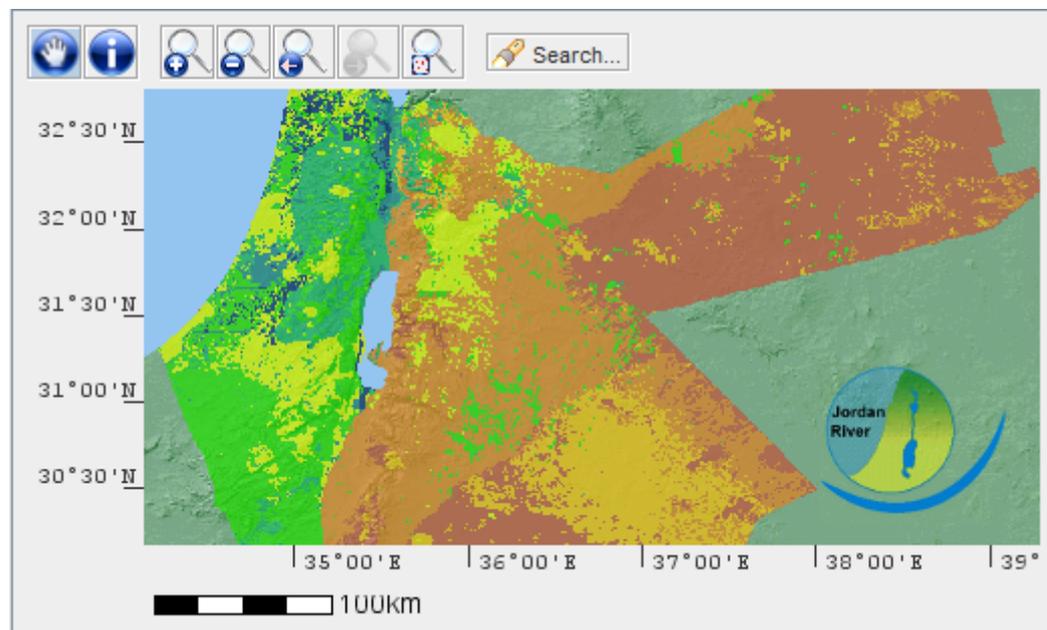


Figure 11 Example of the *map display*.

### 3 Layer information

#### 3.1 The *Info* tab -

When opening a map the *Info* tab automatically opens (see Figure 12). It describes the map with its respective layers. It provides a key message, as well as indications about where to find information on the source of the map layers, on how to cite the layers, information about the contact persons as well as about the data availability. It also provides links to further information.



Figure 12 The *Info* tab

#### 3.2 The *Legend* tab - and layer functions -

The legend manages order and visualization of each map layer within the current map display (Figure 13). The illustration of the layers is the same as within the legend (from top to bottom). The order of a map layer can be modified with the mouse by 'Drag and Drop'.

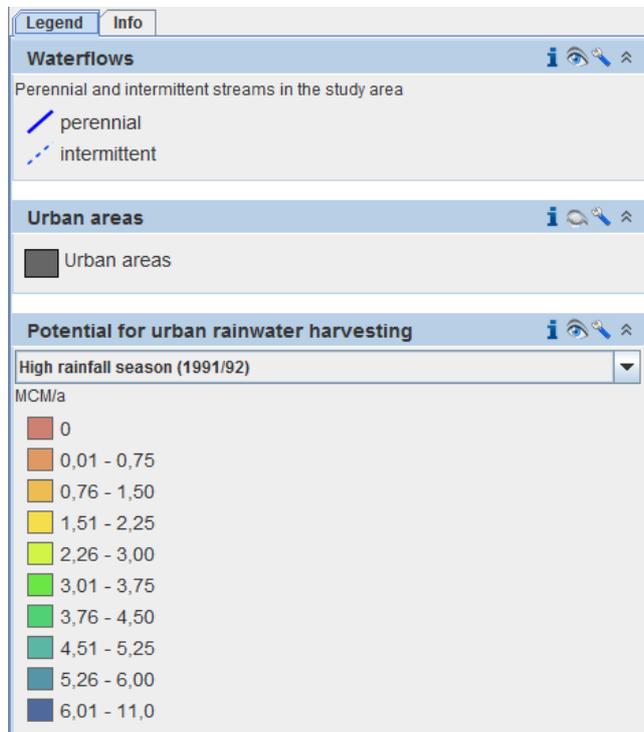
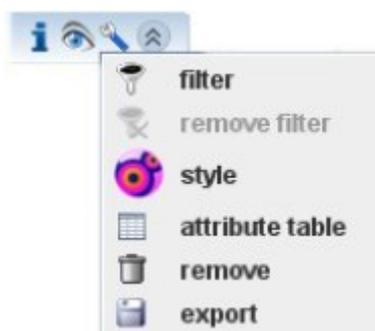


Figure 13 Example of a legend.

In Table 2 the available layer functions at the taskbar of each layer are listed. Figure 14 shows the specific *tool* functions.

**Table 2 The layer functions.**

	Metadata	Shows information about the layer's source, owner and citation methodology, author, time of creation
	Visibility	When open, layer is visible. Change by clicking
	Tools	Enables different layer options, see section 3.2.1 (Figure 14)
	Extend	Shows and hides the layer legend



**Figure 14 The specific tool functions: filter, remove filter, style, attribute table and remove layer.** For some layers the export of the data set is also given.

### 3.2.1 Layer tools function -

**Table 3 The layer tools function.**

	Filter	Helps displaying only desired information, see section 3.5.3
	Remove Filter	Shows all of the available layer information only available if a filter has been applied
	Style	Opens a new menu to change the style (e.g. colour) of the layer.
	Attribute Table	Shows all of the layer's attribute information, see section 3.3.2
	Remove	Removes the layer from the current map
	Export	Stores the selected dataset on the local hard drive only available if allowed by the author of the data

### 3.2.2 Layer views

Many layers contain more information than visible at first sight. In most of the cases there are temporal differences, varying methods or comparable scenarios. These sets of infor-

mation are called “views”. If there are more than two selectable views a drop down menu helps changing each layer’s view. For example in Figure 15 four views can be viewed.

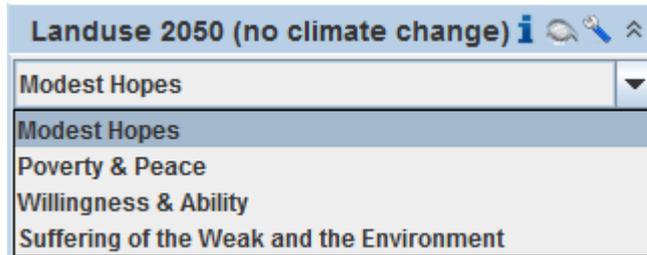


Figure 15 Drop down menu displaying the different styles of one layer.

Each raster cell or vector feature contains different information in the corresponding views.

They can be viewed by clicking the *info* symbol .

### 3.3 Layer values

#### 3.3.1 Info symbol -

By clicking on the *info* button  in the toolbar (see section 2) the mouse cursor changes into a cross  with an **i**. By clicking on a raster cell or vector feature a new window opens which contains information about the selected location or area (Figure 16). This set of information is stored in the attribute table (see section 3.3.2) and can differ between the datasets. If a raster dataset has more views (see section 3.2.2), all of them are showed in this window.

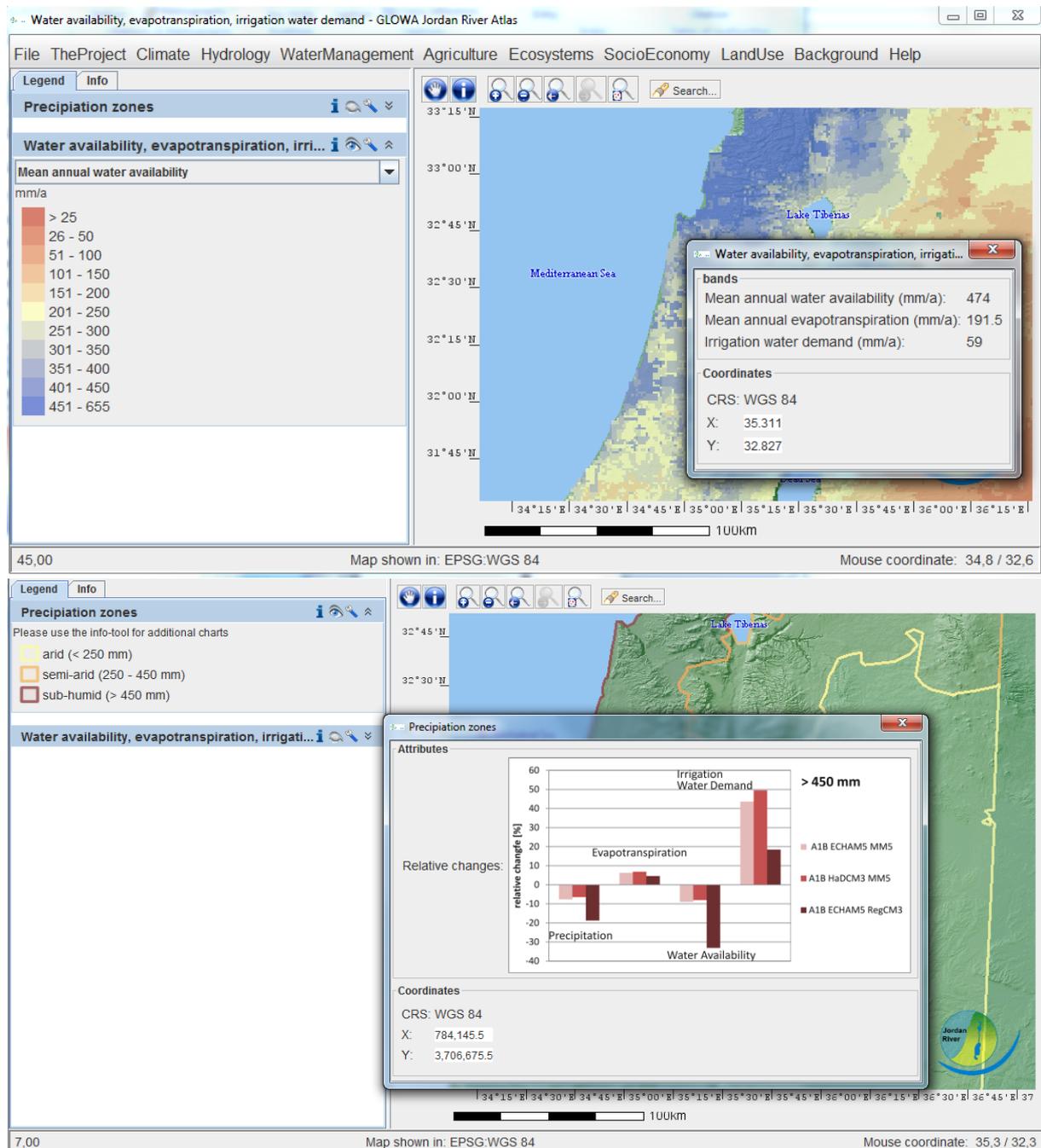


Figure 16 Example of a window containing information about the selected raster cell after clicking on it with the *info* button.

### 3.3.2 Attribute table -

Vector features (points, lines, polygons) store additional information (numbers or text) in an additional table which is internally linked to the geometrical data (Figure 17). This allows the user to work with the data according to their type of information. The attributes can be viewed by using the *attribute table function*  within the *tools function*  of the taskbar of the layer (Figure 14). Note that raster files do not have attribute tables, they only have cells containing the corresponding numbers.

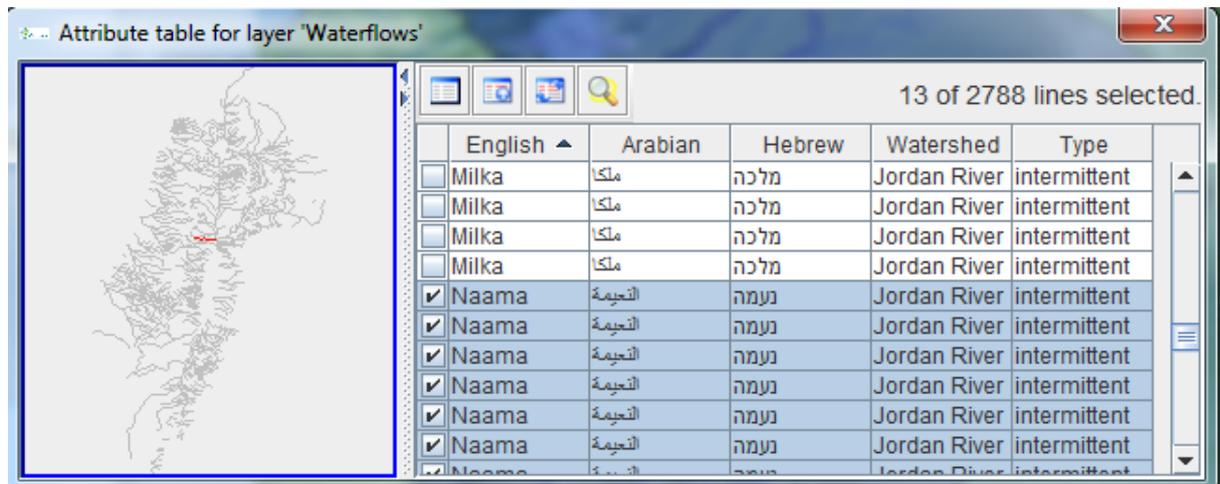


Figure 17 Example of an attribute table with selected attributes.

### 3.4 Layer metadata-

The user obtains metadata about the map layer by selecting *Info*  at the taskbar of a layer (see 3.2). The metadata contains details about the data set title, the authors, the year of production, the source, the way of citing the data, the contact persons, the availability of the data and the methodology of creating the data.

### 3.5 Layer Options

#### 3.5.1 Change style - and label datasets

By selecting the *style button*  of the *tools function*  of the taskbar of the layer a window opens (see Figure 18).

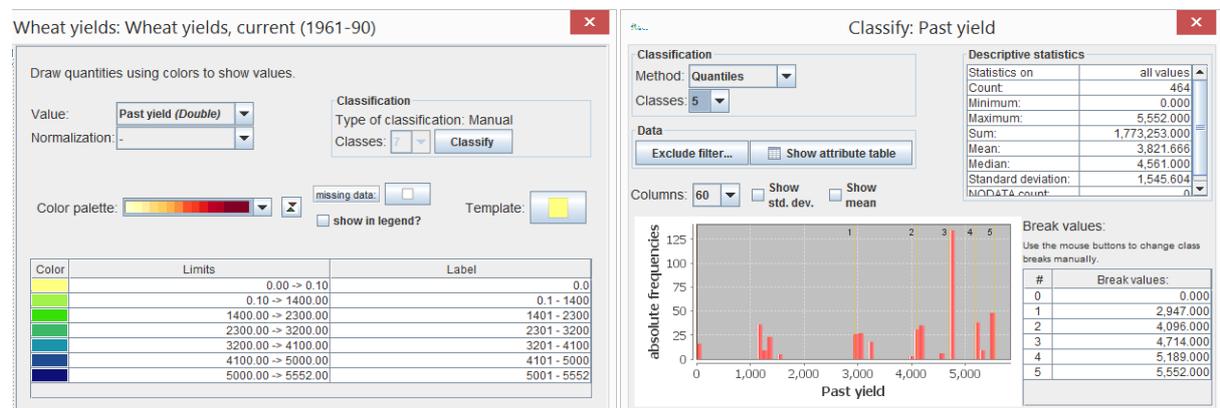
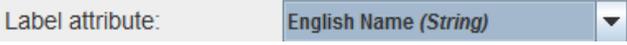


Figure 18 The style window, that allows the atlas user to change the style of the layers. The window above is for polygon layers the below for raster layers.

This option is very powerful when it comes to mapping. The user can not only change the colors of the displayed data (manually or by predefined color scales), it is also possible to

change the classification thresholds which divide the data in various classes. By clicking *Classify* the breaks dividing the available range of displayed data can be changed.

Here is a description on how to label vector datasets within the *style* window, which is especially useful for points, lines and polygons. After selecting *Style*  click *Add new* (left hand side)  choose *Labels* and confirm. Select the attribute which's field shall label the objects . Confirm by clicking . See Figure 19.

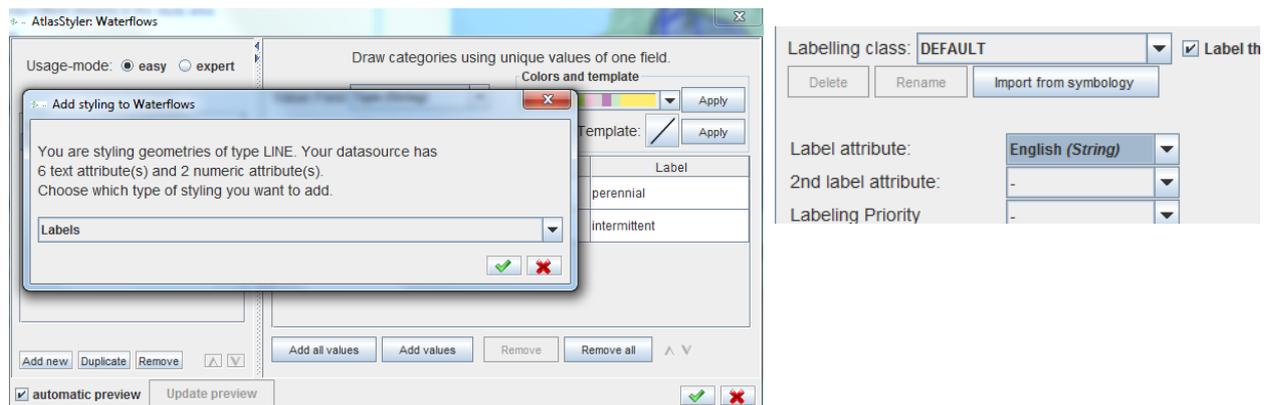


Figure 19 Label datasets within the style window.

### 3.5.2 Selection tools - and

When opening the attribute table of vector features (see section 3.3.2) the four tools described in Table 4 are added to the map display. The attribute table has the four tools described in

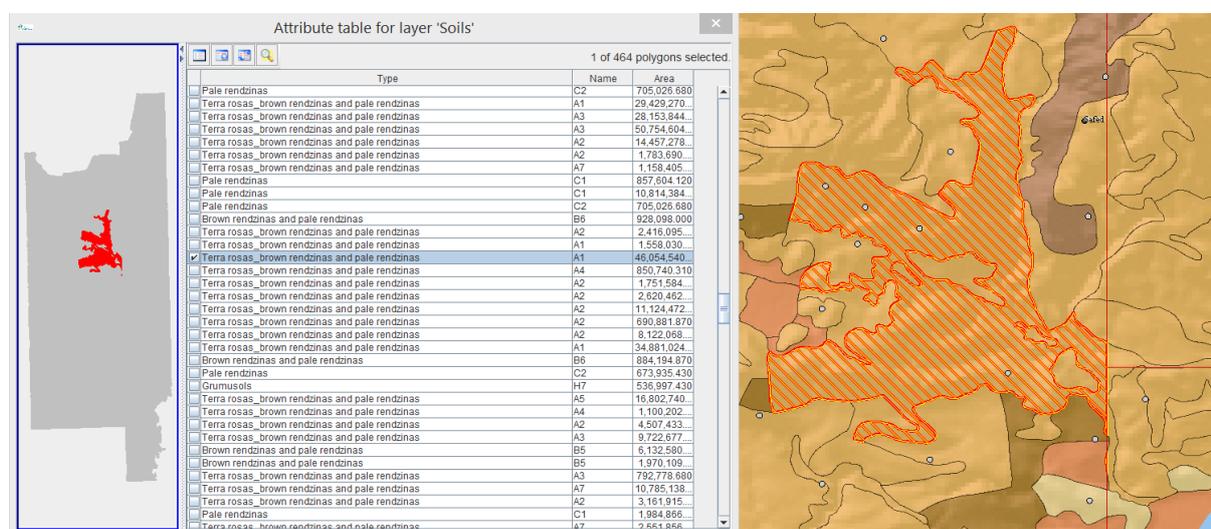
Table 5 (see also Figure 17, Figure 20).

**Table 4 Selection tools of the map display when opening an attribute table.**

	Select	Selects features by dragging a rectangle and marks them either at the map display as well as at the attribute table
	Add	Adds features to the current selection by dragging a rectangle and marks them either at the map display as well as at the attribute table
	Remove	Removes selected features from the current selection either at the map display by dragging a rectangle as well as at the attribute table
	Clear	Clears all selections either at the map display as well as at the attribute table

**Table 5 Selection tools of the attribute table**

	Clear	Clears all selections either at the map display as well as at the attribute table
	Move to the top	Moves selected features to the top of the attribute table
	Invert selection	Deselects the selected features and selects those features that were not selected
	Zoom to selection	Zooms within the map display to the selected features



**Figure 20 Ways of displaying selected items: On the left side of the attribute table in red. The corresponding part in the map is hatched with red lines.**

### 3.5.3 Filter -

The filter  allows reducing the displayed map content according to defined rules. The filter is individually defined and applied in the filter window (Figure 21). After the use of a filter, only the filtered objects will be visualised.

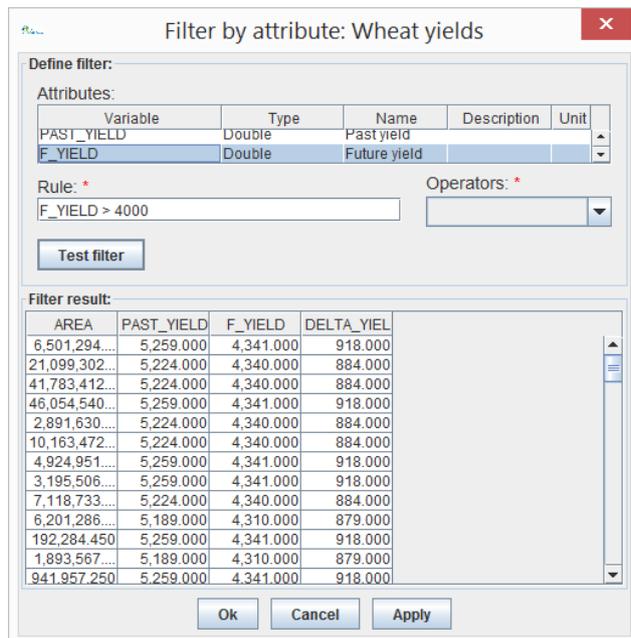


Figure 21 The filter window

In the attribute table all possible variables of the layer on which a filter can be based are displayed (including property). The filter can be defined below *Rule* (see Figure 21): through a double click on a variable, it is taken in the formula field. Now the user chooses the wished operator from the list of *Operators*. It is up to the user to define its own operator or one of the list. Finally, a value or a range of values must be defined. The value can be a name (file type: string) or a number (file types: Integer, double, long). If the filter is based on names, it must be put in inverted comma ('...').

After defining a filter, the user can check the validity of the rule. If the filter is correct, the preview image as well as the table will change. If there is any error in the filter, an error message will appear and the preview image will disappear (and also the table in the current version). Thus, the rule must be adjusted. If the filter is correct, it can be applied by clicking on *Apply* (see Figure 22).

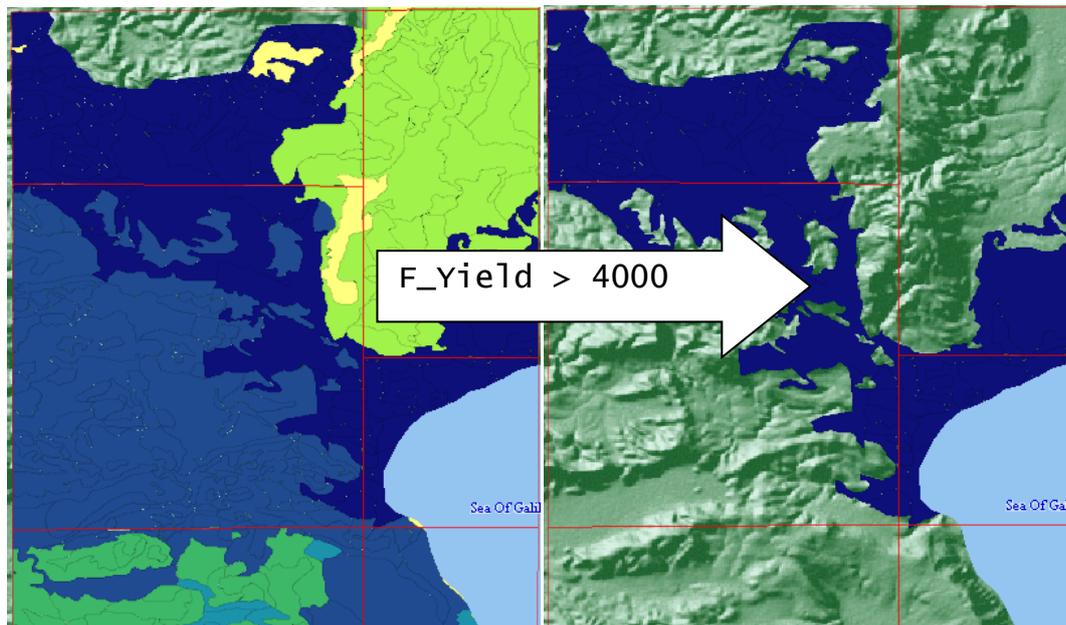


Figure 22 Map before and after using the filter tool (see Figure 21).

### 3.5.4 Export -

Some of the datasets can be downloaded for the use in Geographic Information Systems (GIS). Vector data is provided in the ESRI Shapefile format, raster data in TIF format.

If a dataset is downloadable depends on the authorization of the owner. Data can be downloaded if the entry *Export*  is available in the tools function  (see Figure 14). After accepting the terms and conditions a folder on your local hard drive can be selected where the geodata is stored.

**Important:** It depends on the author of the data in which coordinate system the data is projected and which preferences (attribute names, NoData value etc.) are chosen for each dataset. Therefore, these settings can differ between the various datasets. It is assumed that you have basic knowledge in GIS when downloading and using the data. Otherwise we suggest modifying the data according to your needs directly in the atlas application for the creation of maps.

## 4 Troubleshooting / FAQs

In the following, we provide answers to the most upcoming questions during our test phase. We hope you will find the right solution in one of the following topics.

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### 4.1 The atlas does not work. What can I do?

#### 4.1.1 Make sure Java is installed on your computer

Although the atlas is supposed to automatically check if your computer has the Java environment and downloads it in case it is not there, errors can occur according to your personal configuration.

If you want to check if you have Java, please visit the following page.

<https://www.java.com/en/download/installed.jsp>

and klick "Agree and Continue".



If you don't have the latest version of Java you will be redirected to the installation page. Please go through these instructions to install Java.

If you want to install Java without checking, please visit the following page and select the package according to your operating system:

<http://java.com/en/download/manual.jsp>

#### **4.1.2 Delete your Java cache**

This removes temporary files of your Java Environment and solves most of the problems based on newly used Java applications. However, the solution depends on your operating system.

##### Windows:

- a) Click Start > Control Panel.
- b) Locate and double click the Java icon in the Control Panel.
- c) Click Settings under Temporary Internet Files.
- d) Click Delete Files.
- e) Select all boxes and click OK on Delete Temporary Files window.
- f) Click OK on Temporary Files Settings window.
- g) Click OK to close the Java Control Panel.

##### Mac OS X

- a) Double click your Mac hard drive.
- b) Double click Applications.
- c) Double click Utilities.
- d) Double click Java Preferences.
- e) Click the Network tab.
- f) Click the Delete Files... button.
- g) You are prompted to delete your temporary files for Java. Make sure all boxes are selected with check marks. Click OK.
- h) Close the Java Preferences window.

#### **4.1.3 Delete your Java Web Browser Cache**

Depending on your web browser try one of the following instructions.

##### Firefox

- a) Click Tools from the Firefox menubar.
- b) Click Options.
- c) Under the Advanced options, click the Network tab.
- d) Clear cache under Cached Web Content.

### Internet Explorer

Deleting web cache in Internet Explorer (IE) varies based on your IE and Windows version. The options to remove cached web pages are found under Tools (Internet Options or Safety) then Browsing History in IE.

### Chrome

- a) Click the Customize icon on browser tool bar.
- b) Select Settings, then Show advanced settings.
- c) Under Privacy, select Clear browsing data.
- d) In the dialog that appears, select the checkboxes for the types of information that you want to remove. Use the menu at the top to select the amount of data that you want to delete. Select beginning of time to delete everything.
- e) Click Clear browsing data.

## **4.1.4 Activate Java plugins in your browser**

### Internet Explorer

Click Tools and then Internet Options

- a) Select the Security tab, and select the Custom Level button.
- b) Scroll down to Scripting of Java applets.
- c) Make sure the Enable radio button is checked.
- d) Click OK to save your preference.

### Chrome

- a) Enter `about:plugins` in the search field.
- b) In the Plug-ins list, look for Java and check whether Java is enabled (if the Disable link appears, Java is already enabled).
- c) Click on the Enable link (if available).
- d) (Optional) Check the Always allowed box to stop additional Chrome warnings when running Java content.

### Firefox

- a) Open the Firefox browser or restart it, if it is already running.
- b) From the Firefox menu, select Tools, then click the Add-ons option.
- c) In the Add-ons Manager window, select Plugins.
- d) Click Java (TM) Platform plugin (Windows) or Java Applet Plug-in (Mac OS X) to select it.

- e) Check that the option selected is Ask to Activate or Always Activate or on older Firefox versions, click on the Enable button (if the button says Disable, Java is already enabled)

### Safari

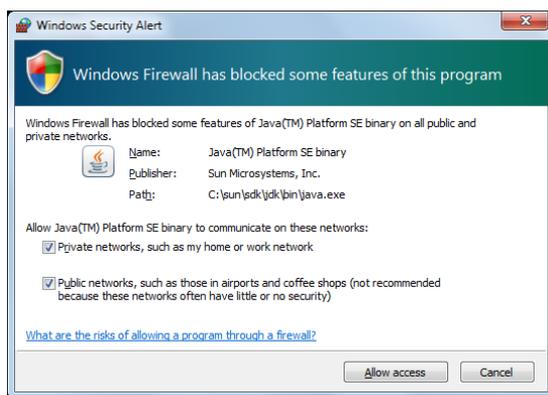
- a) Click on Safari and select Preferences.
- b) Choose the Security option.
- c) Select Allow Plug-ins, then click on Manage Website Settings.
- d) Click on the Java item, select an option (Ask, Allow or Allow Always) from the pull-down list When visiting other websites.
- e) Click Done, then close the Safari Preferences window.

### Opera 4.x and Up

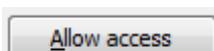
1. Opera for Windows does not use Java, but an embedded version already inside the Opera Web browser.
2. Opera for other platforms *may* supports Java. Please consult your Opera platform documentation.
3. For further information, please review the following Opera Support article: [Support for Java software in Opera](#)

## **4.1.5 Allow the Geopublisher application in your Windows firewall**

On Windows you need to allow your Geopublisher application to pass the installed Windows firewall. When starting the atlas a window like shown below can occur.

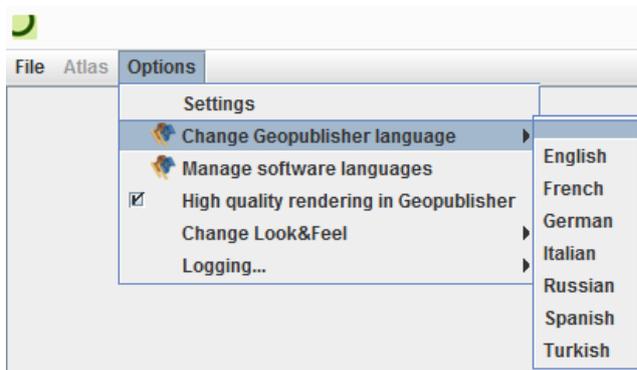


Make sure you click "Allow access" allow Java to use your network connection.



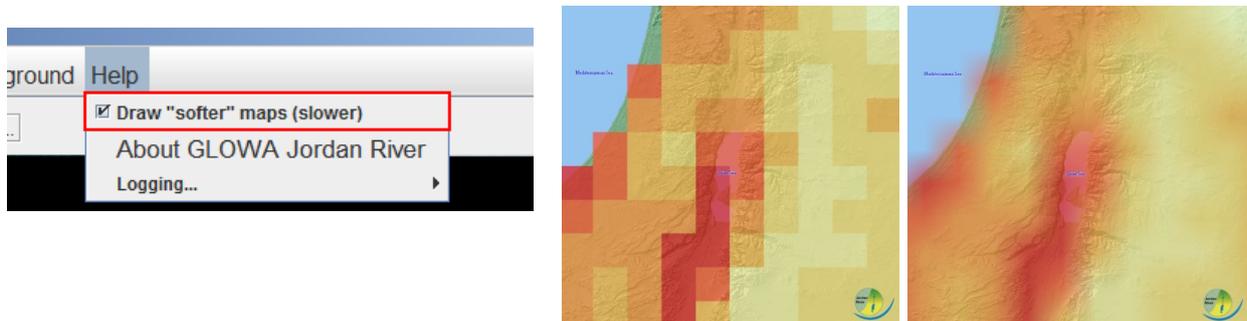
## 4.2 Are there any other languages besides English supported?

The GLOWA Jordan River Atlas is a part of the international research project. You can change the language under Options > Change Geopublisher language. As the languages of the user interface are provided by the development team, no further languages are supported.



## 4.3 The raster files in my atlas are blurred

If some of the datasets have fuzzy edges like in the image below, the so called Anti-Aliasing function is active. This means that, instead of displaying hard barriers, your graphic board tries to smoothen the value patterns of a raster dataset in order to produce more continuous colors. However, especially with rasters of coarse resolution (such as climate models), this effect is not wanted. You can switch between the two modes under Help > Draw softer maps.



## 4.4 I can't zoom to a certain region

Every layer in the atlas has a specific frame, within it is valid. Therefore, maximum extents have been defined for every. There is no valid data outside these extents. If you want to navigate to the edge of a dataset it is more helpful to use the pan-tool: 

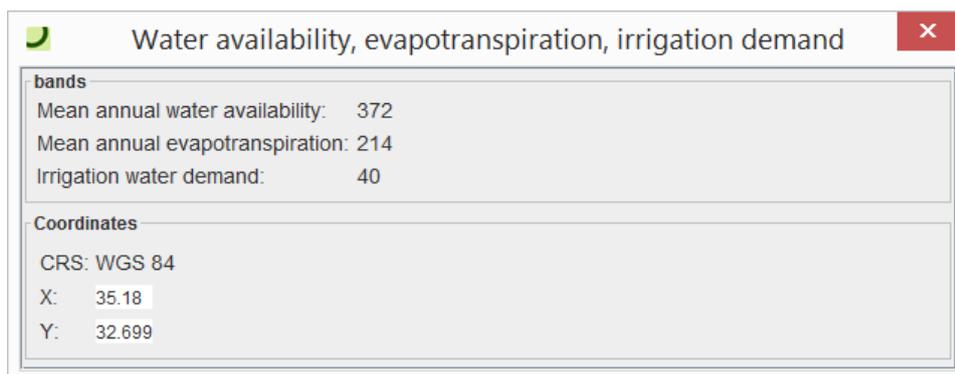
#### 4.5 I have downloaded some geodata: How can I open them?

We expect the user of the export function to have a basic knowledge of GIS data. As a free and open source GIS software QGIS is suggested if you want to open and work with the data. It can be found at <http://www.qgis.org>.



#### 4.6 I exported some raster data from the atlas. What do they display?

Most of the raster data in the atlas contain various styles (see section 3.2.1). This means they contain more than just one layer of information. This is called a layer stack and can be understood as a pile of maps covering the same extent and spatial resolution. In case of this atlas layer stacks can be exported in TIF format. The amount of layers and their order corresponds to their arrangement within the atlas (here called *bands*, see image below). Please use the info tool (see section 2) to get information about the order of the different layer:



#### 4.7 How was the map/dataset created? What are the sources?

To get information about the methods used for the creation of our datasets, please have a look at the *Info* tab (see section 3.1). Here, the scientific background is demonstrated including the used sources, methods and further reading. These cover all the datasets in the current map. If you want to get more information about a specific dataset, please switch to the *Legend* tab (see section 3.2) and select the *Info* symbol  behind the corresponding entry to get more information.

#### 4.8 I want to refer on the results displayed in the atlas. How shall I cite?

If you want to refer on one of the datasets in your own publication we kindly ask you to use the correct citation. To get information on how to cite, please switch to the *Legend* tab (see section 3.2) and select the *Info* symbol  behind the corresponding dataset. There you will find two entries, *Citation* and *Source*.

#### **4.9 I have questions on the data. How can I contact responsible persons?**

If you have questions on datasets, please switch to the *Legend* tab (see section 3.2) and select the *Info* symbol  behind the corresponding dataset. There you will find the entry *Contact*, providing information on responsible persons and how to contact them.