Configuring maps

Step by step

Why is this useful?

Maps are an essential step for configuring a disaster loss database using DesInventar. As the rationale behind this disaster loss tracking system is that disasters have a temporal and a spatial footprint, maps are a core part of the tool, as they allow to register data at different geographic scales. When opening a new datacard for registering a disaster, the system will automatically refer to the names and codes that have been configured in the maps.

While the system accepts DesInventar maps, the most common format used and accepted is Shapefile (.shp) format, that can be configured using GIS software such as ArcGIS or QGIS, among many others.

It is important to highlight that **the shapefiles need to be pre-configured with <u>names</u> and <u>codes</u>**, as this will allow the system to identify each region and the data to be entered on each geographical scale (this is Level 0, Level 1 and Level 2 of geographical disaggregation). This configuration of names and codes requires some thinking, as the system needs to read the code of all administrative divisions vis-à-vis their superior and inferior administrative levels. For example, the Municipality (Level 2) of **Y**, is part of the District (Level 1) of **YY**, and the Province of **YYY** (Level 0). But if both Level 2 and Level 1 (Y and YY) are attributed to Level **YXX** instead of **YYY**, the system will not be able to read, and therefore, to display the maps.

Maps require some technical capacity for a successful configuration. If you have any inquiries regarding the pre-configuration of the maps, do not hesitate to contact UNISDR for support.

Once the maps are pre-configured to be compatible with the system, you can proceed to add them as part of the database.

Step 1: Save your maps in your (C:\) drive

Same as you did with your database, your maps need to be saved in your C: drive, so the system can identify where to find them. It is normally the case that the databases are saved in the following folder, which you need to create: **C:\Database.** But feel free to save wherever you want your database and maps, as far as you remember the path.
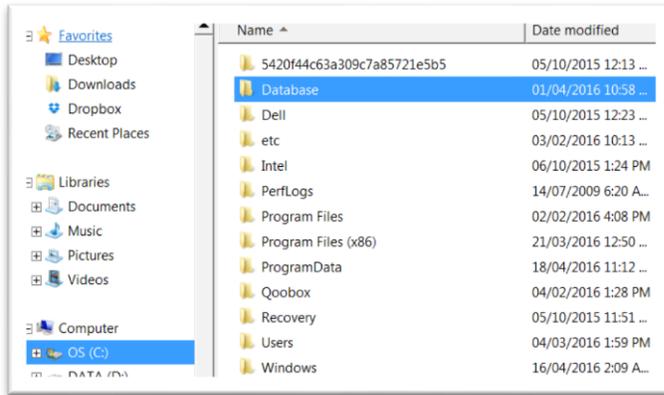
Do not forget to save in the folder your shapefiles including .dbf and the additional formats that support the reading of the shapefiles (including attribute tables containing the names and the codes).
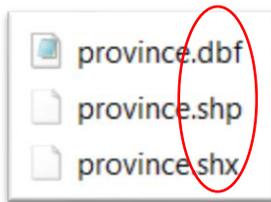
Step 2: Upload the maps

Once you have set up your database into the system, select your region in the Region Tab:
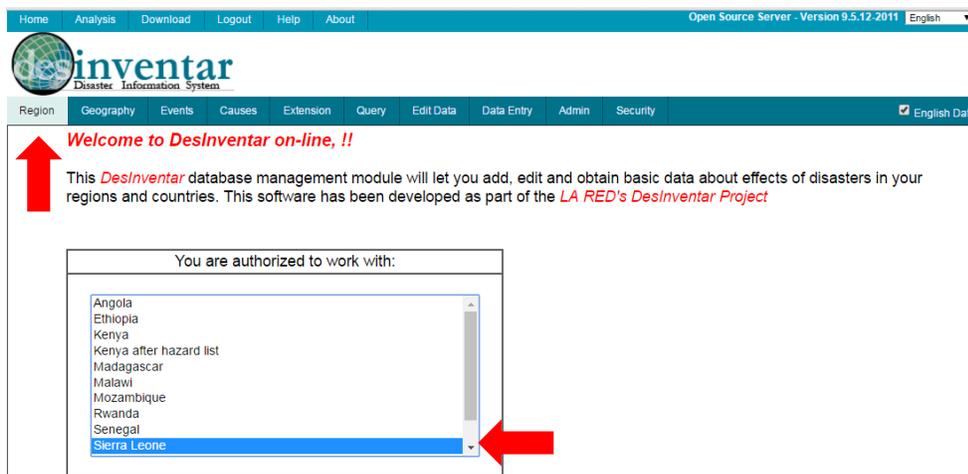
Then, go to the Geography Tab, and click in the "Manage Maps" button:
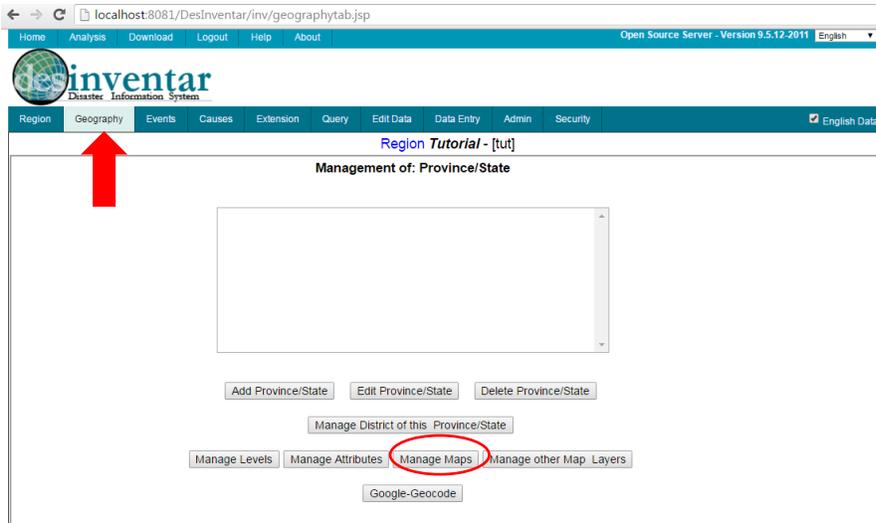
A new window will appear. It looks like this:
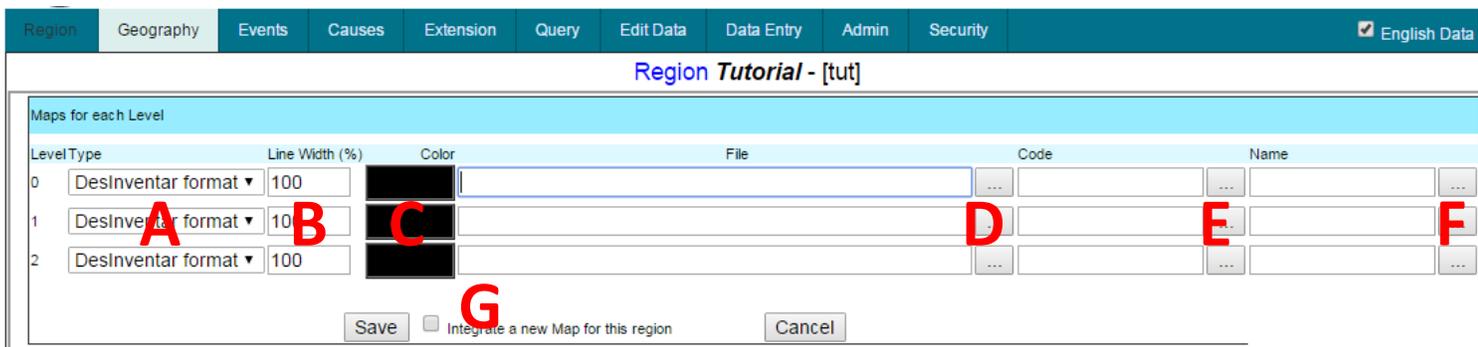
Here, you will be able to upload and customize your maps. You can configure the maps for each Level (0, 1 and 2). Follow the next steps for the explanation of each of the sections:

A. This drop-down menu allows you to select the type of map. If you are not using DesInventar format, change by Shapefile format.

B. Here, you will be able to configure the line width (for display purposes). If you prefer the line of Level 2 to look thinner than Level 1, reduce the %.

C. Here, you will be able to choose the colour of your line, per level. It is often the case that people use grey scale (Level 0 darker and Level 2, clearer), for display purposes.

D. By clicking this button, you will be able to browse your map file for each layer. Remember, that in **Step 1**, you saved your database and maps on the **C:\Database** folder. Choose it. By doing this, you are informing the system where to find your map for each layer. Remember that Level 0 refers to the higher level of disaggregation (Province or equivalent), and Level 2, the lowest level of disaggregation (Municipality or equivalent). Browse, find, and save.
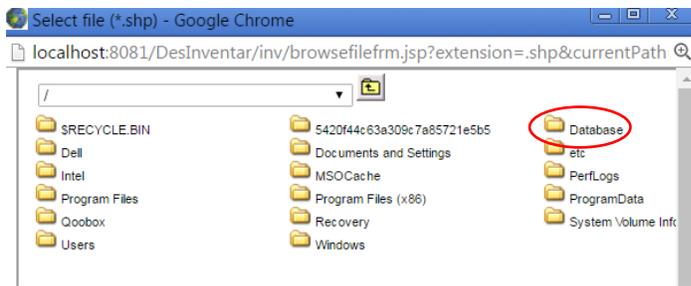
E. As mentioned in the introductory remarks under the "**Why is this useful?**" section, you need to pre-configure your map layers with **names** and **codes** in order to make them compatible with the system. By clicking this button, you will be able to select the column of the attribute table containing the codes. The system will automatically refer to those columns and codes for displaying your map.

F. Following point **E**, here you can choose the column containing the names in the Attribute Table that are going to be displayed by the system.

G. Once you have completed all the steps, don't forget to **click in the check-box and integrate your map**. Then, Save.

To make sure that you have successfully uploaded your maps, you will see that the codes and names of your administrative divisions will be displayed in the screen:
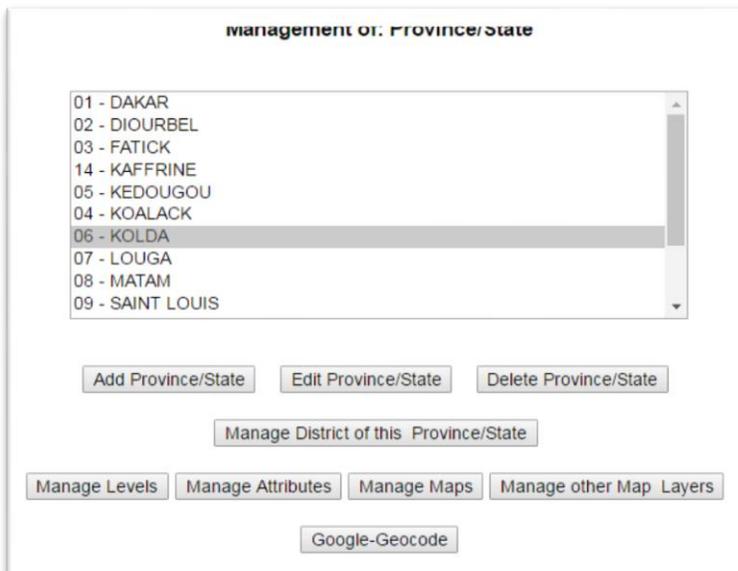
Step 3: Configure your maps

Below, find a brief explanation of the options of each button:
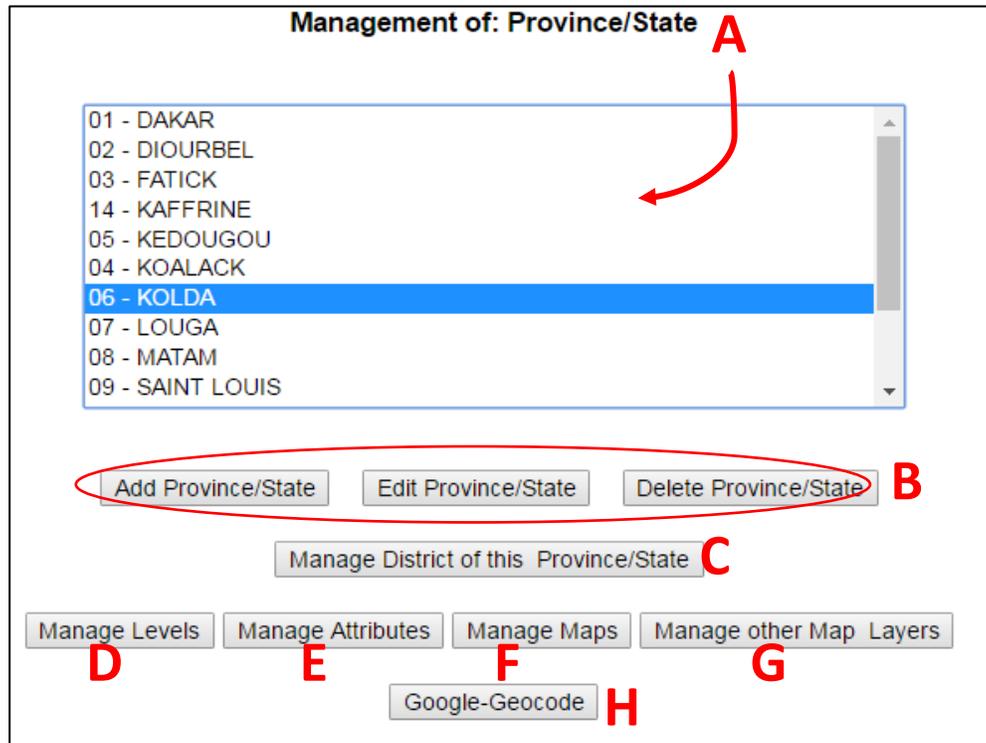
A. As you can see, the system automatically displays Level 0 (Province or equivalent) with its codes and names.

B. You can now add, edit and delete each one individually (However, if you have successfully pre-configured your shapefiles, you do not need to use this).

C. By clicking in "Manage District of this Province", you will be able to explore Level 1 (District or equivalent) of that province. You will see that the system will display only the districts contained in that province (see image below). In the example, the province of KOLDA (with Code=**06**), has three districts (with codes=**06**01, **06**02, **06**03), which reflects the pre-configuration of codes and names. At its turn, you will be able to configure Level 2 of that district. This will enable you to check and confirm that all of the regions are duly configured.
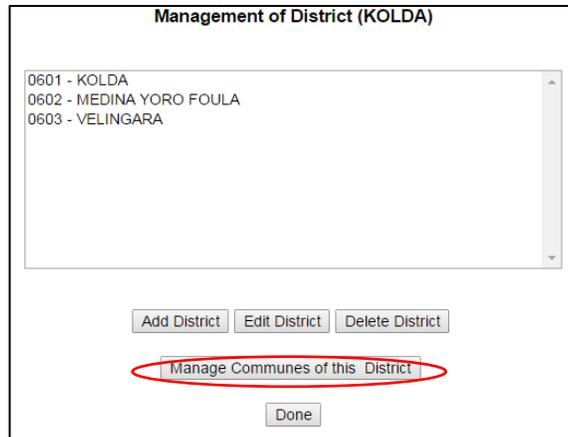
D. By clicking in the "Manage Levels" button, you will be able to configure your different levels of geographical disaggregation (see details below). **This is important, as the system has some default configurations that may not be compatible with your map pre-configuration, hampering the display**.

As you see, the system displays default names for the Levels (**1**). If the administrative divisions of your country have different names (for ex. *Department* instead of *Province*), feel free to rename them, as well as in your local language (if not English). You can also configure the Level names in English (**2**).

And last, you need to make sure that the code length is the same than the one you pre-configured in your shapefiles (**3**). **This last point is important. If the code length is different than the codes pre-configured in your shapefiles, the system will not be able to display your map (remember that in Step 2, you selected names and codes, therefore the lengths of the codes need to match)**. In the example of KOLDA province shown above, Code length was 2 (KOLDA=06, two digits) and its respective districts, the code length was 4 (e.g. VELINGARA=0603, four digits). You need to check and confirm your code lengths accordingly.

E. By clicking in the "Manage Attributes" button, you will be able to change the Attribute Table of your shapefiles. It is recommended not to use this option and rather do it in your GIS software, if necessary.

G. If you want to add other map layers such as rivers, roads, etc., you can do it by clicking in the button "Manage other map layers". This option is useful if you want to overlay disaster information with other information (e.g. road infrastructure, hydrology, etc). Please keep in mind that when going to the Analysis Module → Thematic Tab, you will not be able to deactivate the map layers. Instead, all map layers will appear, which may hamper a good visualization. But this option is useful if you are running specific analysis (e.g. River basins and flood impacts).

H. By clicking in the "Google Geocode" button, you can select your location in Google maps for displaying in the Analysis Module.

Once you have configured your maps, you can go to the Analysis tab, then "Thematic Tab", to make sure that your maps has been integrated in the system. If the map doesn't display, it may be because names, codes, and/or code lengths do not match.