User’s Guide to the SDI-T Geoportal

What is the SDI-T Geoportal?

The World Food Programme (WFP), as the global lead of the Logistics Cluster, is mandated to act as custodian of logistics and transport data standards on behalf of the humanitarian community. The Spatial Data Infrastructure for Transport (SDI-T) is part of the corporate WFP Spatial Data Infrastructure (SDI), a geospatial database project aimed at providing the humanitarian community with standardized spatial data for all themes related to logistics and transport.

A geoportal is a web platform used to find geospatial information and to access the geographic tools needed to display, edit, and analyze these data. The SDI-T Geoportal allows users with Internet access anywhere in the world to obtain transport data such as roads, airports, and ports from the SDI-T database. In addition, all GIS field staff can now update the database directly through the Geoportal, thus improving the workflow of collecting, updating, and sharing the latest relevant data.

Why should I use the Geoportal?

By adding your organisation’s data to the SDI-T, you help ensure that the database is relevant and up-to-date. Key logistics and transport data are often kept within individual organisations or stored locally on computer hard disks, making it impossible to maintain a dataset that reflects the contribution of staff in the field. The Geoportal makes it easy for anyone involved with transport or logistics to visualize their own data, share them with the Logistics Cluster and other logisticians, and find additional data from a variety of sources, including Google satellite imagery and Open Street Maps road data.
How do I access the Geoportal?

The Geoportal is located at http://geoportal.logcluster.org/ and works on all web browsers except Microsoft Internet Explorer. Please use the free login (username: public, password: public) to view and utilize publicly available data. For a login with editing rights or for more information about Geoportal, please email christophe.bois@wfp.org and maps@logcluster.org.

How do I use the Geoportal?

Geoportal users have access to transport and logistics data in the SDI-T database, as well as a variety of functions and tools. Let’s begin by learning about data visualization.

Data visualization

Once you log into the Geoportal, you will see the following screen:

Start by selecting your area of interest using the zoom, go to, or search features.

1. **Zoom** feature: Use to zoom in and out on the centre screen

   Tip: You can also zoom by using the scroll button on your mouse or by pressing the shift key and using your mouse to draw a square over the area of interest.

   Tip: Clicking with your mouse on the centre screen and moving it will change the area that is displayed but not the level of zoom.

2. **Go to** feature: Use to zoom directly to a chosen country

3. **Search** feature: Use to search both countries and cities of interest

   Tip: The results of your search will pop up on the right hand side of the window, under the tab Search Result.
From here, you can choose which layers you would like to visualize.

4. **Base Layer** select feature: Use to select the background you want

   a. The *SDI* base layer shows country boundaries and cities/towns. It also automatically displays the road data from the SDI-T database.

   ![SDI Base Layer](image)

   b. The *Open Street Map* base layer shows country boundaries, cities/towns, and some administrative level boundaries. It also displays OSM street and road data.

   ![Open Street Map Base Layer](image)

   c. The *Google Physical* base layer shows terrain and vegetation.¹

   d. The *Google Street* base layer displays roads, as is shown on Google Maps.

   ![Google Street Base Layer](image)

   e. The *Google Hybrid* base layer shows a hybrid of satellite and roads, overlaying major streets and places on top of satellite imagery.

   ![Google Hybrid Base Layer](image)

   f. The *Google Satellite* base layer shows only Google’s satellite imagery.

   ![Google Satellite Base Layer](image)

   g. The *Yahoo Maps* base layer shows a hybrid of terrain and roads, overlaying major streets and places on top of elevation imagery.

   ![Yahoo Maps Base Layer](image)

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¹ Explanation of Google map types are as given by Google at [http://code.google.com/apis/maps/documentation/staticmaps/#MapTypes](http://code.google.com/apis/maps/documentation/staticmaps/#MapTypes).
5. **Layer** select feature: Use to select the SDI-T data you want to see

   Tip: For all the layers, clicking on a displayed feature in the centre screen will bring up data about that feature on the right side of the window, under the *Data* tab. For example, clicking on a stretch of road will show you information the SDI-T has about that road, including road name and surface type.

   a. The *Practicability* layer highlights in purple all the roads for which the SDI-T database has ‘current road practicability’ information. This tells you what types of vehicles can travel on a chosen road.

   ![Image](image1.png)

   *In this example in Haiti, you can see the selected part of the road supports heavy trucks of less than 20MT.*

   b. The *Roads* layer overlays the roads in SDI-T on top of any chosen base layer. Once the roads are displayed, users can select a road and the *Data* tab will display its attributes.

   ![Image](image2.png)

   *Here, you can see the SDI-T roads superimposed onto the Google Physical base layer.*

   c. The *Warehouses* layer shows the locations of warehouses. When a warehouse is selected, the *Data* tab will display its name, operational status, and storage capacity.

   ![Image](image3.png)

   *In this example, you can see the warehouses located in northeastern Kenya. The info in the Data tab is associated with the selected warehouse in Lokichoggio.*

   d. The *Ports* layer displays all the ports noted in the SDI-T database, including sea ports, river ports, lake ports, and smaller anchoring sites. When a port is selected, the *Data* tab will display its name, type, and cargo handling capacity.

   e. The *Aerodromes* layer displays all the aerodromes noted in the SDI-T database, including airports, airfields, airstrips, and helicopter landing zones. When an aerodrome is selected, the *Data* tab will display its name, type, class, authority, and operational status.
f. The Bridges layer displays all the bridges noted in the SDI-T database. When a bridge is selected, the Data tab will display its name, type, surface material, practicability, and operational status.

g. The Obstacles layer displays all obstacles as noted in the SDI-T database. When an obstacle is selected, the Data tab will display current practicability and the type of obstacle, such as checkpoint, landslide, roadblock, flood, etc.

h. The Fuel Supply Points layer displays all fuel supply points as noted in the SDI-T database.

Printing Function (Map Export Function)

Once you have located the data you want, you may want to print it or export a PDF of it. Here is how:

1. Click on the Printing tab on the right side of the window. The orange print screen will appear. To move it, click any part of the screen and drag to desired location. To change the size of the orange print screen, adjust the Scale (see Step 4).

2. Under Layout, select the size and orientation of the page you want to print. Options include A4 portrait or landscape and A3 portrait or landscape.

3. Under DPI, select the print resolution you want. Options are 75, 150, or 300dpi. The print resolution most commonly used is 300dpi.

4. Under Scale, select the scale you want. This changes the size of the print screen.

5. Finally, click on the Print button. This will provide you with a PDF of the map you have just made to your specifications! (See example below.) Now you can print, send, or store the PDF of your map as you wish.
Geoportal Tools

The Geoportal has a set of geospatial tools built in. By clicking on the Tools tab on the right side of the window, three tools will appear: Convert Coordinate, Measure Line and Vector Export. Let’s explore each of these.

1. The **Convert Coordinate** tool is used to convert latitude and longitude coordinates from decimal degrees format to degree-minute-second format and vice versa.
   
   a. Click on Convert Coordinate button. The window pictured below will appear.
   
   ![Coordinate Converter](image)
   
   Tip: If you do not have the seconds for your degree-minute-second coordinates (UTM coordinate), you must put ‘0’ instead of leaving that field blank for the tool to work.
   
   b. Fill in the set of coordinates you have.
   
   c. Select the conversion you want to perform.
   
   d. Click ‘Convert’.

2. The **Measure Line** tool measures air distances between any two selected points.

   a. Click on Measure Line button. A ‘Measure Info’ box will appear in the top right corner of the centre screen.
   
   b. Click once to set the point where you want to begin measuring. A yellow circle will appear to mark your starting point.
c. Continue clicking only once on other points you want to include in your path.

d. Double click at the point where you want to end your measurements. The yellow circle will disappear and you will see the total distance in the ‘Measure Info’ box.

3. The **Vector Export** tool allows users to export data from the Geoportal. This is useful for those who are already familiar with GIS software or Google Earth.

   a. Click on **Vector Export** button. The window pictured below will appear.

   b. Select the country you desire.

   c. Select the layer you want. Options include roads, bridges, obstacles, warehouses, aerodromes, ports, and fuel supply points.

   d. Select the data format you want. Options include CSV, GML, GeoJson, ESRI Shapefile, and KML. (Note: A KML file can be opened in Google Earth. All other formats require GIS programs to display the data geographically.)

   e. Click ‘Export’ and you will be asked to save a zip file with the data you want.