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| **[Guide to BaSIC MAP PRODUCTION]** |
| American Red Cross International Services  http://americanredcross.github.io |

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# Introduction

The Geographic Information Systems (GIS) office at American Red Cross is deeply involved in international disaster response and disaster preparedness programs throughout the world. Accurate and quality surveys to establish baseline and monitoring data allows Red Cross chapters around the world better implement programs. GIS specialists are able to use collected data for map production and advanced analysis. It is likely that volunteers and field staff will be increasingly requested to participate in geospatial data collection. Those people responsible for the data collection should also be able to use it directly instead of having to make all requests through GIS specialists.

This guide provides a simple method for non-technical users to make their own data visualizations and maps. More information and resources can be found at [http://americanredcross.github.io](http://americanredcross.github.io/).

# Technology Used

## CaerusGeo

CaerusGeo (<http://caerusgeo.com>) drastically simplifies GIS data collection for Red Cross projects. Volunteers and staff can create GIS data with nothing more than pen and paper. Users draw important features on paper and note additional attributes on an accompanying spreadsheet; when Red Cross staff later enter data through the simple web interface, it's automatically transformed into usable digital data. The CaerusGeo website provides data visualization but importantly also facilitates data export. In this guide we will cover using data export to combine information from multiple surveys.

## geojson.io

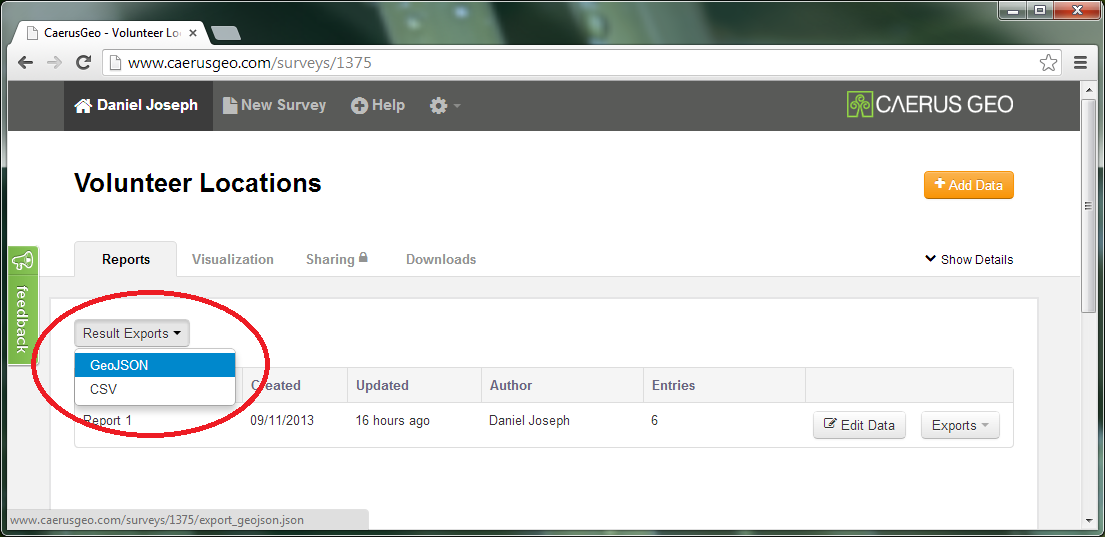
geojson.io (<http://geojson.io>) is a fast, simple, online tool to edit map data.

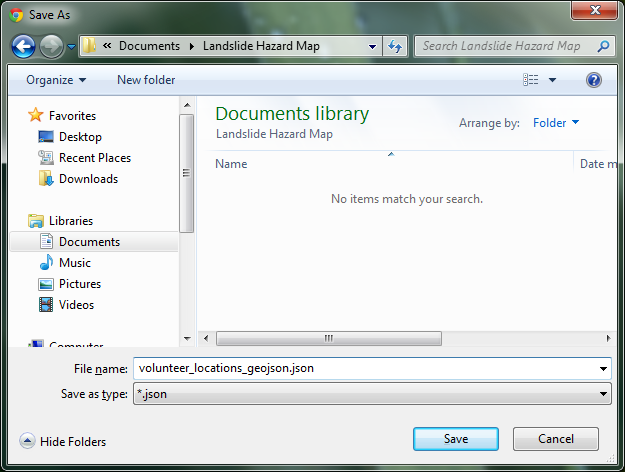
## Inkscape

Inkscape is an open source graphics editor. We will use it to create our map by adding a title, legend, custom markers, and other features. Download the program. Go to <http://inkscape.org/download/> and under ‘Official Release Packages’ choose appropriate file. You will probably want the Windows installer. Follow the instructions to install the program to your computer.

# C:\Users\GIS3\Documents\GitHub\Guides\SimplestMapProduction\img\CaerusGeo_VolunteerLocations.pngData Export from CaerusGeo

This guide assumes that you have already completed survey(s) using CaerusGeo. In this survey we will use fake data for volunteer locations, emergency shelter locations, and landslide hazard zones. For each survey with data you want to include on your map:

* Navigate to the ‘Reports’ tab
* Click ‘Result Exports’
* Choose the GeoJSON option
* Save the file to your computer



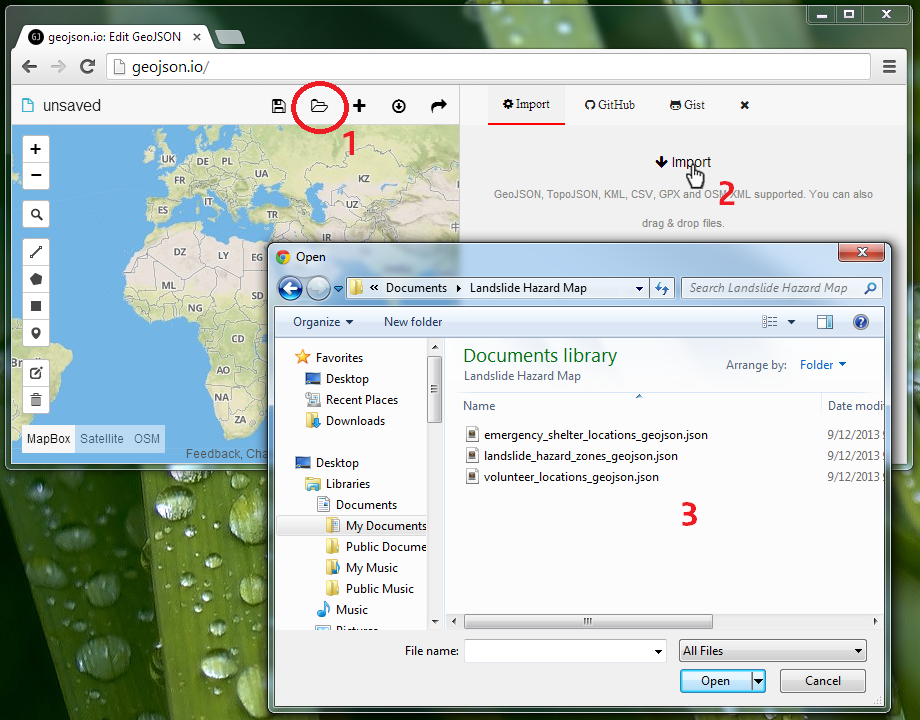
**Note:** The survey name is used for the file name and should be descriptive. You can change the file name if necessary, but don’t change the file type. It is a good idea to make a new folder for a map project and to save all your data files to it.

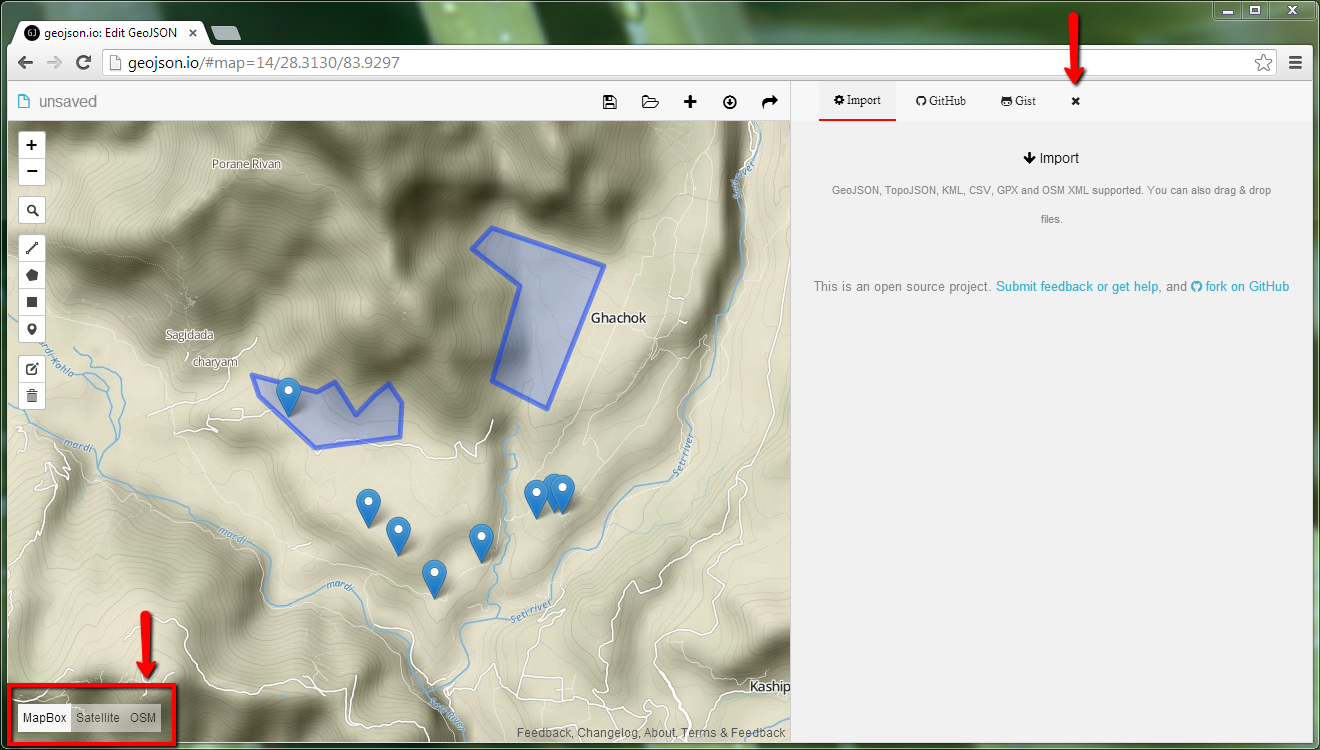
# Viewing Data on geojson.io

Open up your web browser and navigate to <http://geojson.io>

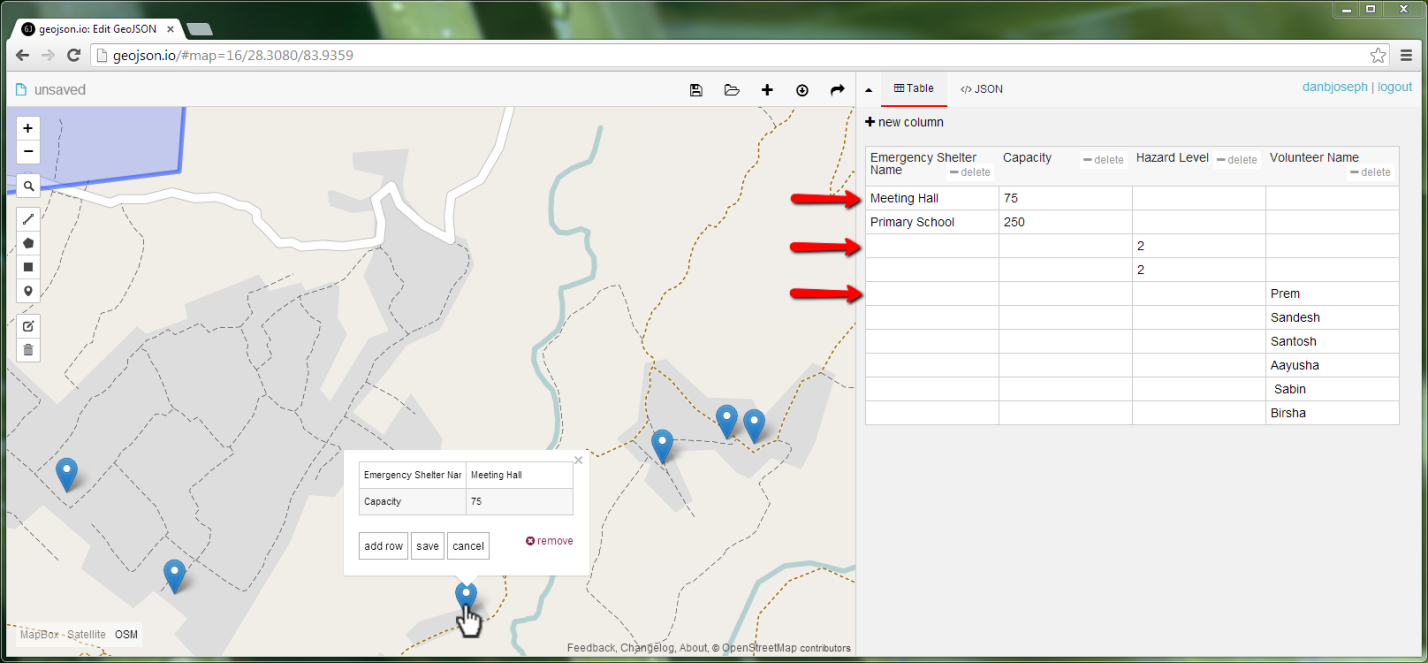
1. Click the file folder for the ‘Open’ data options
2. Click the Import option
3. Browse to the project data files downloaded from CaerusGeo and open one

Repeat the above steps for each data file you want to add to your map.





* Click the small ‘x’ above the import section to display the Table information for your data
  + The answer fields and feature attributes will display
* Change the background layer using the three options in the lower-left corner of the map



* ‘MapBox’ and ‘OSM’ are based on the same data and look most like a traditional paper map but will display slightly different selections of the data and with different symbology
* ‘Satellite’ will have most roads marked on top of a satellite imagery layer
* Each data feature will display in the Table as a single row

# Taking a Screen Grab in geojson.io

You want to capture an image of your map that you can open in Inkscape, a graphics editing program.

* Maximize your web browser window so that it fills your entire screen



* Click the up arrow above the Table information to collapse the side menu and view only the map



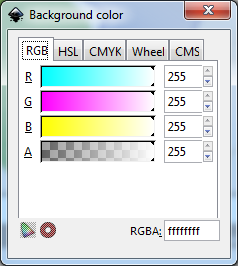
* Adjust the map view so the entire area for your map is visible on the screen
  + Zoom using the + and – buttons in the top left of the map, double-left-click the map, or use the scroll wheel on your mouse
  + Left click, hold, and drag to pan the map
* Press the ‘Print Screen’ key on your keyboard to copy the screen image to the computer’s memory



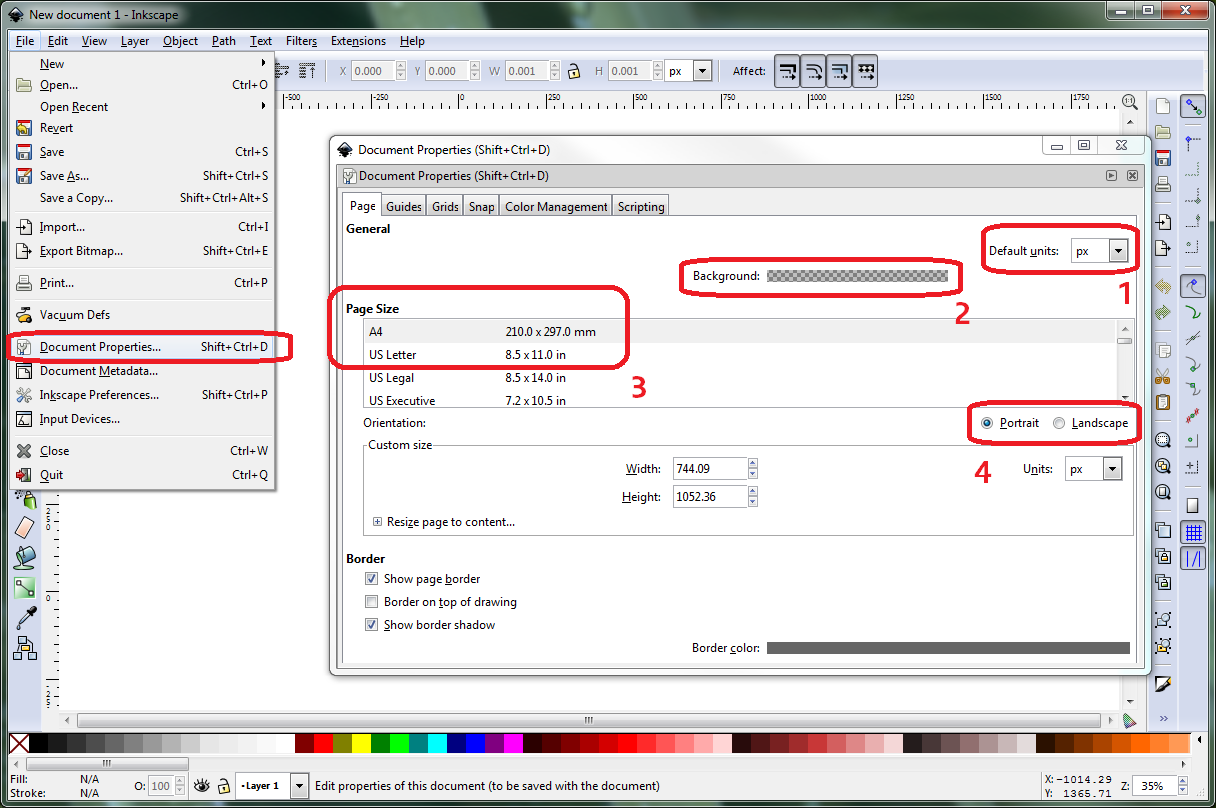
# Making a Map in Inkscape

## Set Document Properties

* Open Inkscape
* From the ‘File’ menu select ‘Document Properties’ to open an options box
* Set the ‘Default units’ (1) to either ‘in’ for inches or ‘cm’ for centimeters
  + This will change the units of the rulers along the top and left side of the screen
* Click the checkered bar next to ‘Background’ (2) and set the background color to white by changing all four values to 255



* Choose a ‘Page Size’ (3) according to what size you will be printing your map
* Choose either ‘Portrait’ or ‘Landscape’ for ‘Orientation’ (4)
* Close the options box

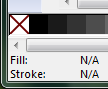


## Paste, Crop, and Resize Your Screen Grab

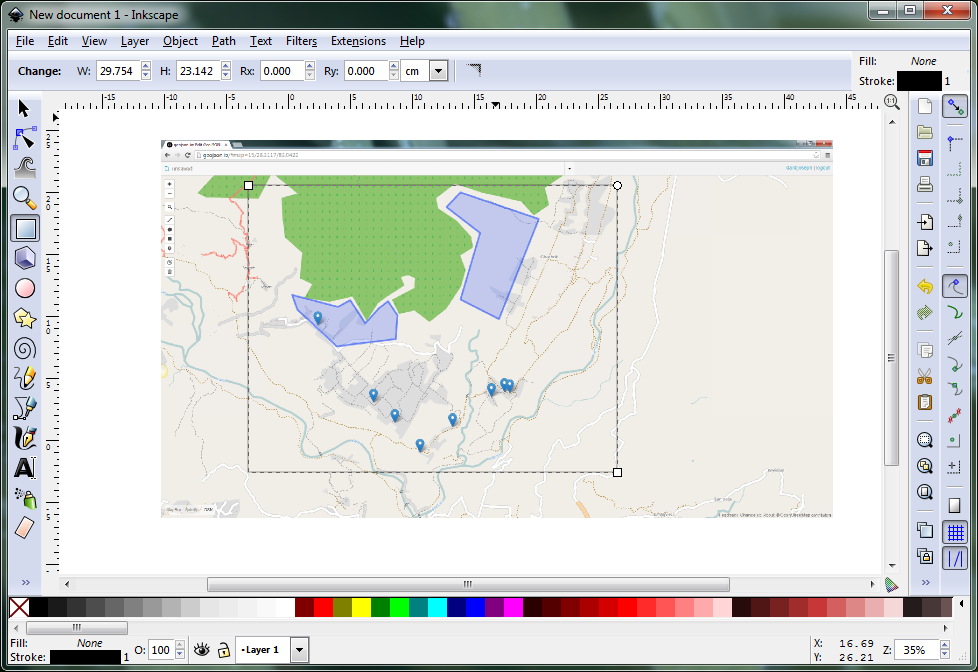
* You should have taken a screen grab from geojson.io before opening Inkscape
* Edit, Paste
* Left click, hold, and drag to center of screen
* Click the ‘Create rectangles and square’ button in the left side menu

C:\Users\GIS3\Documents\GitHub\Guides\SimplestMapProduction\img\inkscape_RectangleTool.png

* Click the red X in a white box in the lower left corner of the screen to create a rectangle with no background color



* Left click and hold on your pasted screen grab at the top left corner of the area you want to include on your map
* Drag to the bottom right corner of the area you want to include and release
  + There should be a rectangle around the area you want to include and a dotted line indicating that the rectangle is selected



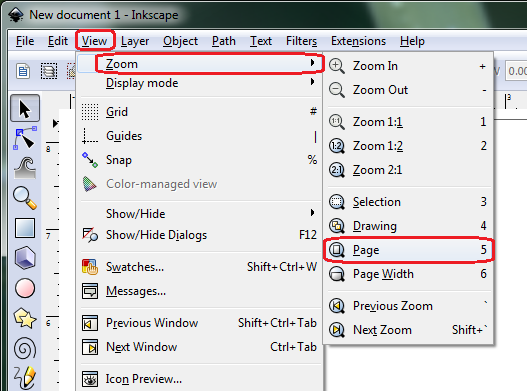
* Hold the Shift key and left click the pasted screen grab outside of the rectangle
  + Now there should be a dotted line along the rectangle border and around the outside of your screen grab
* From the ‘Object’ menu select ‘Clip’ and ‘Set’
  + Only the area of the screen grab that was inside of the rectangle should be displayed
* Click the ‘Select and transform objects’ button on the left side menu

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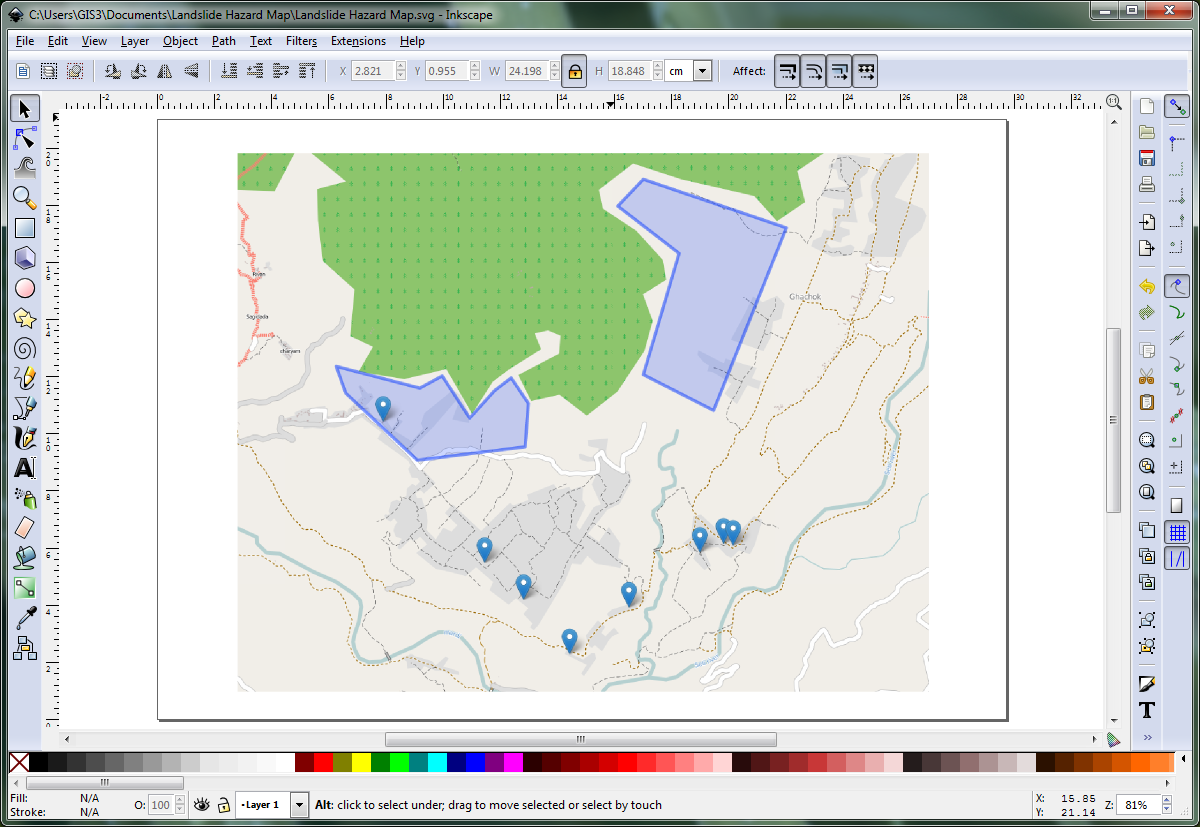
* From the top menu click the open lock button
  + It will change to a closed lock and when you change the size of the image the proportion will remain the same

C:\Users\GIS3\Documents\GitHub\Guides\SimplestMapProduction\img\inkscape_LockAspect.png C:\Users\GIS3\Documents\GitHub\Guides\SimplestMapProduction\img\inkscape_LockedAspect.png

* Resize the image to fit within the bounds of your page
  + Left click inside the image, hold, and drag to reposition the image
  + Left click any of the diagonal arrow icons at the corners, hold, and drag to enlarge or shrink the image
* Zoom to fit the page to you screen
* From the ‘View’ menu select ‘Zoom’ and ‘Page’



* It is a good idea to regularly save your work
  + From the ‘File’ menu select ‘Save’
  + Browse to your project folder
  + Change the ‘File name’ to something descriptive
  + Leave the file type as ‘Inkscape SVG (\*.svg)’



* You’re ready to start adding additional elements to your map!

## Adding a Title and Text

* Click the ‘Create and edit text objects’ in the left side menu

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* Left click on the page where you want you title text to start, a blinking position line should appear, type your title
* Left click the title, hold, and drag to reposition it on the page
* Double left click and select all the text then use the options in the top options bar to adjust the font family, size, weight (bold), and style (italic)

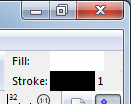
C:\Users\GIS3\Documents\GitHub\Guides\SimplestMapProduction\img\inkscape_FontOptions.png

* You can add other text to your map using the same steps as when adding a title
* To change the color of text use the bottom color bar

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## Adding a Legend

* Click the ‘Create rectangles and square’ button in the left side menu (the same one you used to crop your screen grab)
* Left click the bottom color bar to choose the fill color
* Hold Shift and left click the bottom bar to choose the stroke (border) color
* Look at the top right corner of the window to check your selection



* ! Make a box
* ! save icon to computer, drag from folder onto page in inkscape, choose embed, not link
* ! resize as needed, copy and paste your first one if using it multiple times (then you don’t have to keep resizing it
* ! color selector tool for square for area in legend
* ! Object -> Fill and Stroke... to adjust stroke width
* North arrow

good to add? data attribution… date…. map creator

