What are you mapping?

* I am making an interactive choropleth map displaying crop calendars created by me and my coworkers at GlobalAgRisk. I currently have the data for 24 countries, but I think I want to focus on a country with bimodal planting seasons in order to show variation in the map (Tanzania or Ethiopia would probably be best). The name for the tool is Monthly Agricultural Insurance Calendar, or MAgIC—should be easy enough to spin up a fun title out of that!

Why are you making this map?

* This map is intended to help farmers in developing regions choose insurance plans against weather events, particularly droughts. At my job, we are currently creating a crop calendar tool to help determine which times of the year are most vulnerable to drought/extreme weather events within various countries’ administrative units. Once these time periods are established, farmers are able to look at these “crop calendars” to determine which times of the year they want to insure (this crop calendar will be a calendar comprised of months January through December for each administrative unit in our countries of interest—each month will have a corresponding value that corresponds to vulnerability to drought). This food security tool will hopefully help farmers better determine when they are most susceptible to crop failures so that they can protect themselves against them.

I am making this map because it is relevant to my full-time job outside of school. This tool could be used by farmers themselves, but also insurers. We are trying to find the most effective way to help struggling farmers in developing countries, so it’s in our best interest to have all of our data easily displayed. With this tool, farmers and insurers alike will be able to see every administrative unit (regions/provinces) and its corresponding crop calendar weight for each month of the year in the form of a series of 12 choropleth maps.

We expect that users will be all over the board. Farmers themselves may wish to use the tool, but again, insurers will also be using it. It needs to be usable for novice and advanced users alike. Users will need to be able to user a slider to view the temporal aspect of the data, as well as hover over the admin unit to display a pop-up of the calendar weight. Clicking each admin unit will trigger a separate info window with relevant information (top crops in each region, bimodal system, etc.).

Data/Technology Stack:

* My data has already been harvested! I can continue to manipulate it in various ways should I need to alter my topic any. Data was harvested from EarthStat (<http://www.earthstat.org/data-download/>).
  + Data was already processed through QGIS and R. EarthStat provided raster files of production; I used R to perform zonal statistics on these raster files for my administrative units.
  + Files will be stored as CSVs and GeoJSON (my administrative shapefiles)
  + I anticipate using Leaflet, Omnivore, and SimpleStatistics packages
  + HTML and CSS will also be used to style the map
  + Map will be hosted through GitHub (or somewhere else if my boss actually wants to use this thing!)

Thematic Representation:

* The maps will be displayed as choropleth maps with a slider to scroll through each month of the year and its corresponding crop calendar value (a weight showing the proportion of harvesting that occurs within each admin unit).

Content Requirements/Anticipated User Interaction:

* Data layers tiled on a basemap
* Ability to zoom manually and dynamically
* Popups that show crop calendar weights when hovering over admin units
* Info window that displays relevant information when each admin unit is clicked on (top crops for the region, if it’s a bimodal or unimodal planting system, the full crop calendar, etc.)
* UI slider will allow the user to slide from January-December
* Legend will update dynamically