NZPPS professional development 2014

Introduction to R

Setting up R-studio and R

We will be using R-studio and R statistical software during the course and we recommend that you pre-load this software onto your computers via your IT departments.

The R statistical software can be downloaded directly from CRAN: http://cran.r-project.org/bin/windows/base/ (for windows) you can also download from the same site for Linux or Mac: http://cran.r-project.org/.

R-studio is a graphical user interface (makes R pretty and more like a windows based programme) for R and can be downloaded here: http://www.rstudio.com/products/rstudio/download/

It is not essential that you use R within R-studio but the instructions will be more help if you do.

Running the examples

You need to have (preferably the latest) version of R-Studio and R loaded on your computer (instructions above). If you want to do all of the spatial stuff you will need Google Earth on your computer too.

Then you need to build a new folder in your C: drive called C:/temp and save the datafile (R_data_2014.csv) there.

Then you open the R-script and have fun.

Note that the second part of the R-script demonstrating spatial applications requires the importation of a large number of packages from CRAN (the R repository) and will take a while to load. I suggest that when you get to line 313 which is where we ask R-studio to load the packages you pop off for a cup of tea or check your emails. Do NOT try to continue running code while it loads the packages, as you might break it.

Another warning, when you get to line 455-459 in the R-script you will have to give it a moment to open Google Earth, again I suggest you wait for a minute before continuing to run code. Nicolas is a pretty clever guy and it is worth the wait.

If you want to do any of the really cool spatial stuff you may need to download two additional spatial freeware programmes (FWTools and SAGA GIS) but you can get away with most of it without them.

When you get to lines 594-603 you need to stop and hit return a few times in the console window so that the volcano will spin around. Failure to do so will mean the next bits of code will not work.

You also need to give a wee break after line 616 in the code to open a new window and watch your volcano spin on its own as a movie file.

In the final code section you need to be aware of the need to hit RETURN in the console window if you want to see your graphs. They are pretty cool.