

Essentials of R

The 'Essentials of R' module makes use of the book '[Using R for Digital Soil Mapping](#)' written by Brandan Malone, Budiman Minasny and Alex McBratney of the University of Sydney.

Here we use Chapter 2 'R Literacy for Digital Soil Mapping' and Chapter 3 'Getting Spatial in R'. These two chapters are supplied with the training materials as well as the associated R scripts ('**Chapter 2.R**' and '**Chapter3.R**'). These scripts can be opened in RStudio and run from there, so you do **not** have to type in all code yourself. (Of course you can experiment with the code if you like. You are challenged to do so!) Please make sure you carefully follow the code. Run the code **line by line** and make sure you understand what happens. Forgetting to run a line may result in errors further down the code. Chapter 2 contains several exercises at the end of each section. You can try these if you feel up to it.

Chapter 2 is rather long. The most important sections of this chapter are **2.1 to 2.7**, try to finish at least these. You can do section 2.8 if you have time left. Section 2.9 contains some advanced stuff and can be skipped for now.

For Chapter 3, try to finish section 3.1 and read section 3.3. Section 3.2 shows how to create interactive maps in R. This is again fairly advanced and can be skipped for now.

In addition to the 'Using R for DSM' chapters, other R tutorials are supplied with the training materials. These tutorials are created by Dr. David Rossiter of Cornell University and cover a variety of subjects:

- 'Geostatistics with gstat/R'
- 'Introduction to R'
- 'Statistical Data Analysis'
- 'Using R with the Mercer & Hall Wheat Yield Dataset'

The tutorials can also be downloaded from his [website](#).

You are encouraged you to take a look at these.

Remember that the best source for R is the internet. There is a large number of (introductory) tutorials freely available, also on YouTube. In case you get stuck because of an error, do a Google search to lookup the error on the internet. You will not be the first to encounter the specific error (and will not be the last). A solution will be out there. Remember, learning R can be a bit of a struggle in the beginning, but R has a steep learning curve. Once you have mastered the basics, you will improve your scripting skills fast.

Enjoy learning R!