This folder contains scripts used to create maps of mycorrhizal vegetation published in the manuscript of Soudzilovskaia et al.“Global mycorrhizal plant distribution linked to terrestrial carbon stocks” Nature Communications (2019); and the source files containing data used to create the maps.

All the data necessary to run the scripts is either also located in this folder, or, in case if of large publically available datasets, a link to download is provided in the script text. These data are:

1. csv versions of the tables, containing data of mycorrhizal vegetation biomass, current and potential (without croplands), on mainland (continents) and islands;
2. map of continents (zipped);

map of Bailey ecoregions;

ECA landcover map (https://www.esa-landcover-cci.org/);

FAO Global administrative units map (<http://www.fao.org/geonetwork/srv/en/>)

Scripts to generate the maps of mycorrhizal vegetation, should be run in the following order:

1. *1building\_continent\_myco\_maps.R* – script generating maps of current and past mycorrhizal vegetation across continents, based on “.csv” tables describing mycorrhizal vegetation per Bailey ecoregion, per continent and per landcover (Cross\_table\_final\_continents\_current.csv and Cross\_table\_final\_continents\_without\_croplands.csv).

The script makes use of the set of shape files of continents (‘continents\_nz’). This set should be unzipped before running the script.

*2)* *2creating\_maps\_of\_islands.R*– script generating the islands shapefile, using the file “islands.csv” – the list of islands included into the maps.

*3)* *3assigning\_mycorrhizal\_data\_to\_islands.R*– script creating the raster maps of mycorrhizaal vegetation on islandsbased on “.csv” tables describing mycorrhizal vegetation per Bailey region, per continent and per landcover.

(Data\_islands\_current\_state.csv and Data\_islands\_without\_croplands.csv)

*4)* *4merging\_maps\_of\_islands\_and\_continents.R*– script merging the islands and continent mycorrhizal maps

5) Optionally maps of difference between current distribution of mycorrhizal vegetation and a potential distribution of mycorrhizal vegetation in a cropland-free world, could be created. The script *5creating\_maps\_of\_mycorrhizal\_loss\_through\_agriculture.*R should be used to do this. This script takes as input the maps of current distribution of mycorrhizal vegetation from maps in geotiff format located in the folder “Maps\_Myco\_veg\_current” and the maps of potential distribution of mycorrhizal vegetation in a cropland-free world vegetation maps in geotiff format located in the folder “Maps\_Myco\_veg\_without\_croplands”.