

Instructions

1. Examine the data in folder species. What is the data structure?
2. Open the software DIVA GIS
3. Load the climatic data
4. Load the shapefile world_adm0.shp
5. Press create shapefile and choose the file Testudo.csv (*Testudo graeca*)
6. Now that we see the known species distribution we would like to know where else this species could occur. Select Modelling -> Bioclim
7. On tab predict provide a file name and location for the output and press apply. What do you see?
8. Run the model at least 3 times with ticked climate change, each time increasing only the temperature (+1, +2, +3 °C). Does the distribution range decrease or increase?
9. Press Modelling -> Bioclim and choose the tab envelope (annual mean temperature και annual precipitation as factors). Apply. What do you see?
10. Repeat the above steps (current and future distribution) with the species *Achillea holosericea*.
Does the distribution range decrease or increase?
11. Find the suitable Mediterranean areas for olive cultivation using the function ecocrop.
12. Does the suitability area change when the CO₂ concentration in the atmosphere doubles?