

# Navigation in the Ecological Space

## 1 – Assessing Diversity and Species Composition

### Terms

- 26<sup>th</sup> – 27<sup>th</sup> January 2024
  - 09:00 – 12:00 Morning Session
  - 13:30 – 16:30 Afternoon Session

Online.

### Trainers

- Miguel Alvarez
- Ildikó Orbán

### Description

Plant species composition as a response to environmental factors and anthropogenic disturbance is a central principle in vegetation science and biogeography. Poor resource availability and time constraints can limit data collection, sampling and laboratory analysis, so several research projects will rely on this principle and draw conclusions based on species composition alone.

This workshop will provide an introduction to species composition assessment, including diversity and dissimilarity metrics. We will also review the basics of data management, data structures and exploratory assessments. Finally, we will introduce the basics of multivariate analysis, focusing on indirect ordinations (multidimensional scaling, correspondence analysis and principal component analysis).

Data analysis will be carried out using the statistical programming language [R](#), exploiting its capabilities for explanatory evaluation and reproducible analysis. Only basic knowledge and little experience in programming with R is required.

## **Workshop Modality**

The workshop will be conducted in the Life Coding modality and will include impulse talks, exercises and coaching. Teaching material will be provided in digital form. Each participant will use their own laptop and will be responsible for installing the necessary software (instructions will be distributed to registered participants).