

Introduction to SDMs:

Theory and practice in R

Bob Muscarella

Sapienza University, Roma

June 9-11

[SDM Course](#) [Course schedule](#) [R exercises](#) [Resources](#)

Intro to SDMs

This short course will include:

- Lectures, readings, and discussions covering basic theory and concepts behind species distribution models (SDMs) and ecological niche models (ENMs)
- Practical experience in acquiring and cleaning species occurrence data, as well as designing, building and evaluating SDM and ENM using a variety of R packages
- Students will gain perspective on the potential applications, strengths, and limitations of SDMs/ENMs

Course participants should have a general understanding of R programming. Participants are welcome (but not required) to join the course with their own data / project ideas. A pre-course reading list and R exercise will be provided after course registration is completed. Questions about the course should be sent to Bob Muscarella robert.muscarella@ebc.uu.se.

[Return to the Muscarella Group homepage](#)

[Visit the Github repository for this course](#)

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(A) RM=2; FC=LQH

Default
(B) RM=1; FC=LQH

(C) RM=4; FC=LQHP

(D) RM=1; FC=LQH

Course website: <https://bobmuscarella.github.io/SDM-course/index.html>

Who am I?

- Associate professor in Plant Ecology & Evolution at Uppsala University
- Tropical forest ecologist, (functional) diversity, forest dynamics, natural and anthropogenic disturbance
- Interest in applying SDMs to understand broader context of diversity patterns, and how species respond to environmental conditions
- Interest in methodological development of SDMs (ENMeval R package)

Course overview

- 3 day short course with emphasis on practical exercises
- General understanding of main concepts + hands-on experience
- Use these days as a spring board for continued learning

Like
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Learning objectives

- Familiar with basic theory, concepts, and terminology of SDMs / ENMs
- Design, build and evaluate SDMs / ENMs in R
- Understand the strengths and limitations of SDMs / ENMs
- Use SDMs/ENMs to describe and predict species distributions in space + time



Introductions (~ 2 min each)

- Name?
- Department?
- Year of studies?
- Research project?
- Prior experience with R and SDMs?
- What do you hope to gain from this course?
- Anything else?



A close-up photograph of a silver espresso machine. Two clear glass cups with handles are positioned on the machine's drip tray, each containing a shot of espresso with a thick, golden-brown crema. The machine's spout and various knobs are visible in the background, slightly out of focus. The text 'pausa caffè' is overlaid in a bold, orange font in the upper right quadrant.

**pausa
caffè**