

# Simulation workflow examples

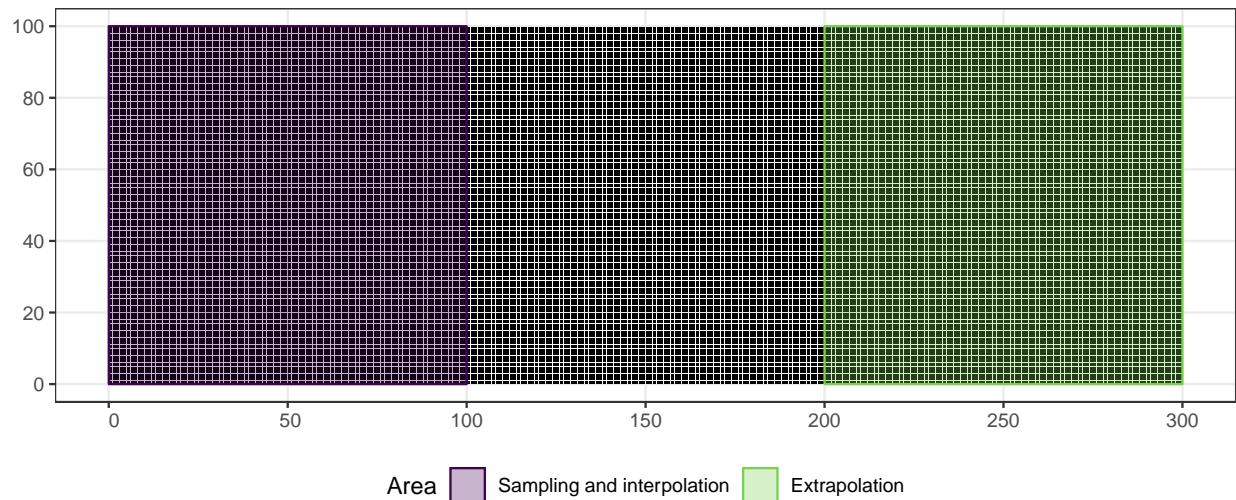
Carles Milà

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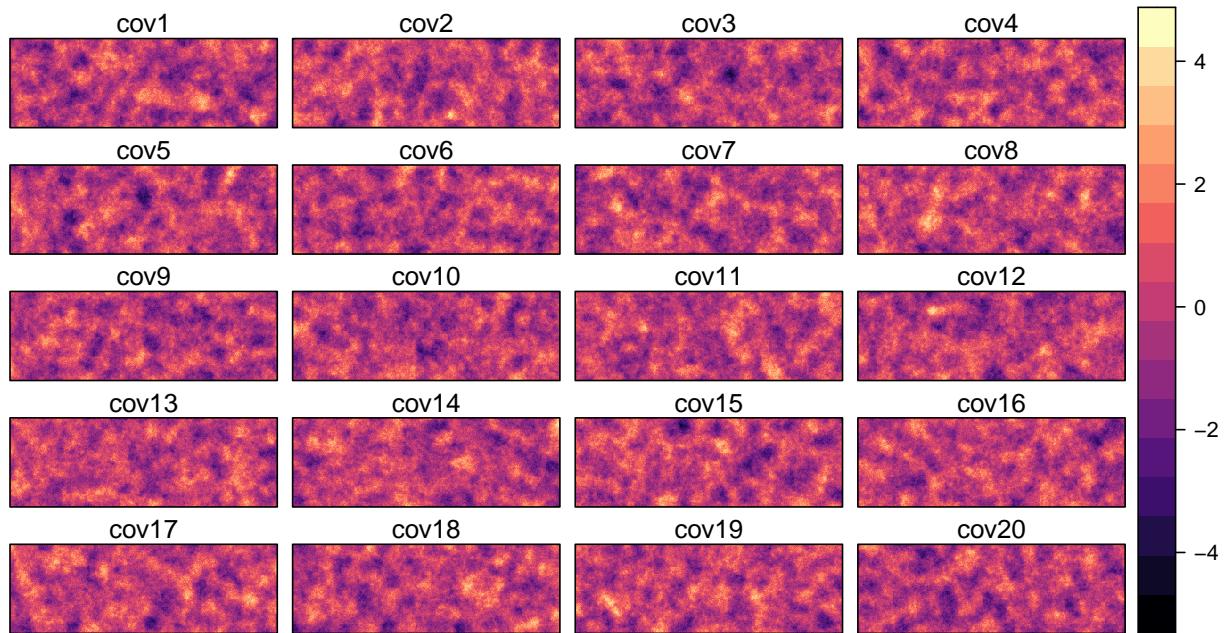
This document contains the code to run the examples and figures of sections 2.2 and 2.3 of the manuscript, where the two simulation studies are presented; as well as supporting figure S1, where the variograms used for the covariates field simulation (simulation 1) and an example realisation of each of them are shown.

## Simulation 1: Random Fields

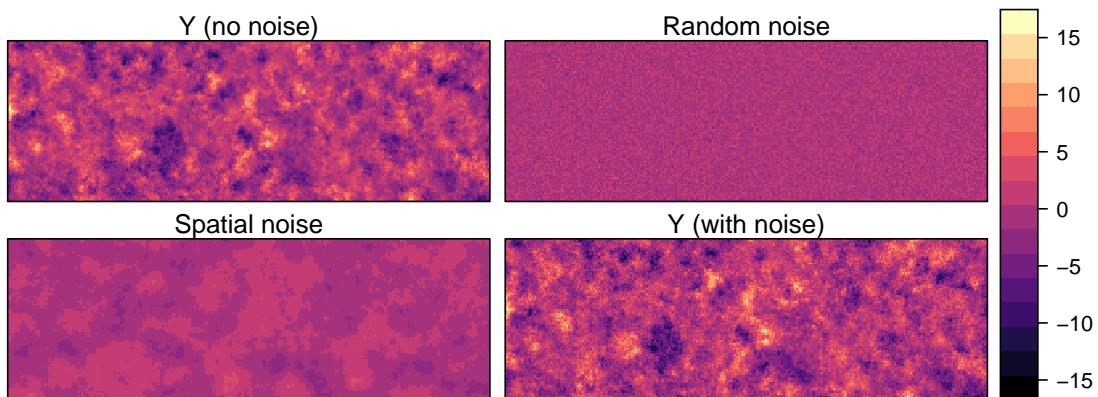
### 1. Grid creation



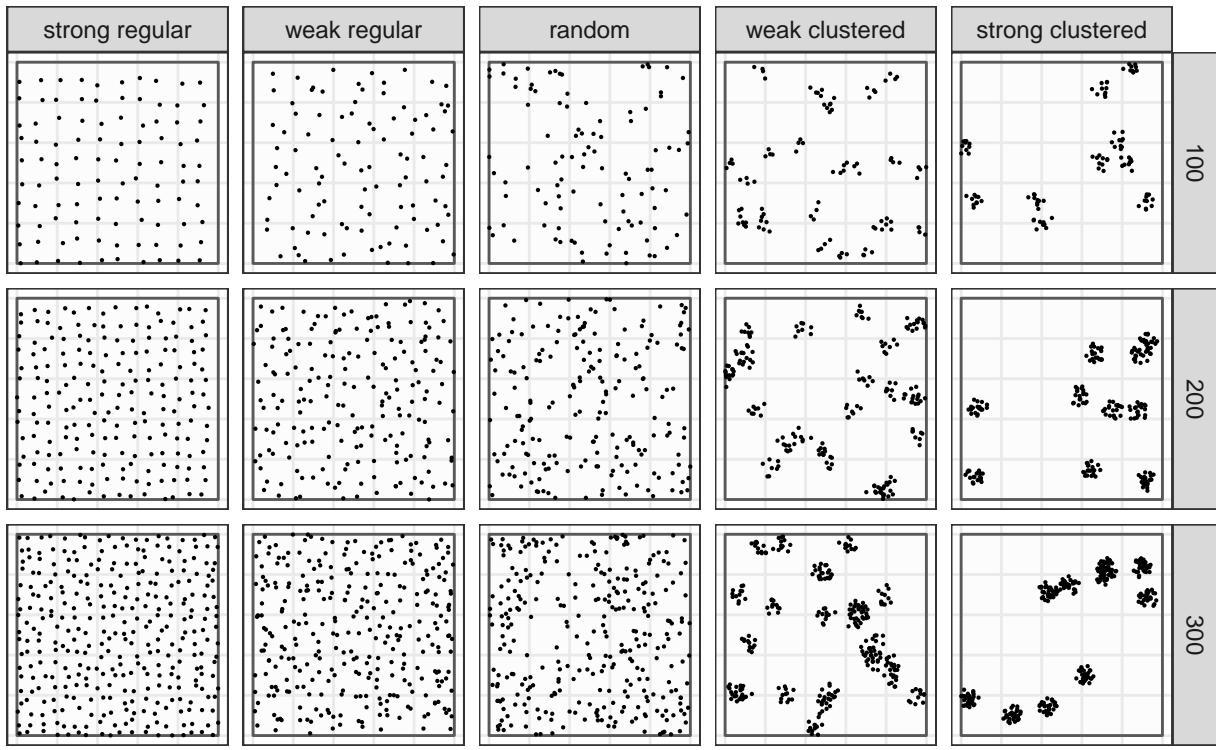
## 2. Covariate fields simulation



## 3. Outcome creation



#### 4. Sample simulation

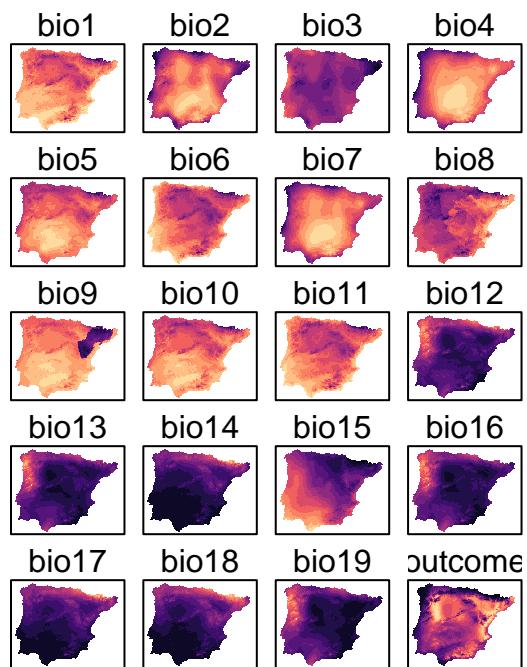


#### 5. Model fit and evaluation

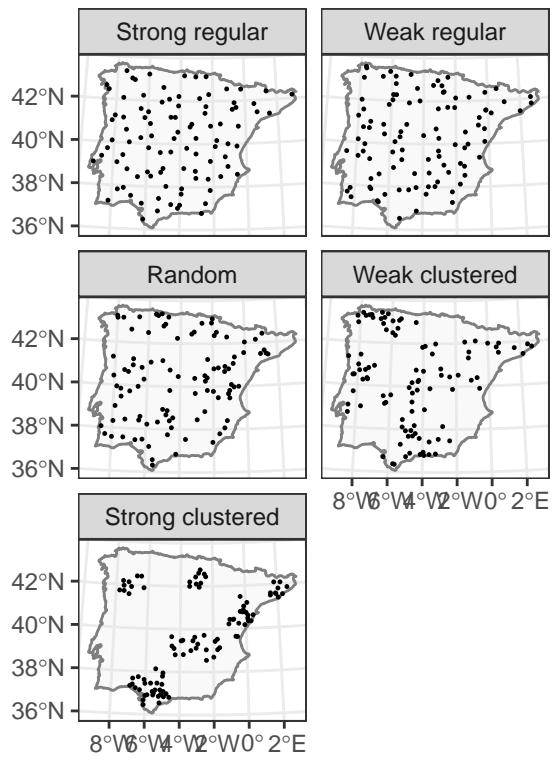
method	RMSE	MAE	R2
LOO	2.92	2.20	0.43
bLOO	3.55	2.62	0.09
NDMinter	2.95	2.20	0.41
NDMextra	3.58	2.65	0.07
inter	2.62	2.01	0.41
extra	3.00	2.35	0.12

## Simulation 2: Virtual species

**A**



**B**



## Appendix: variograms and example realisations of simulation 1

