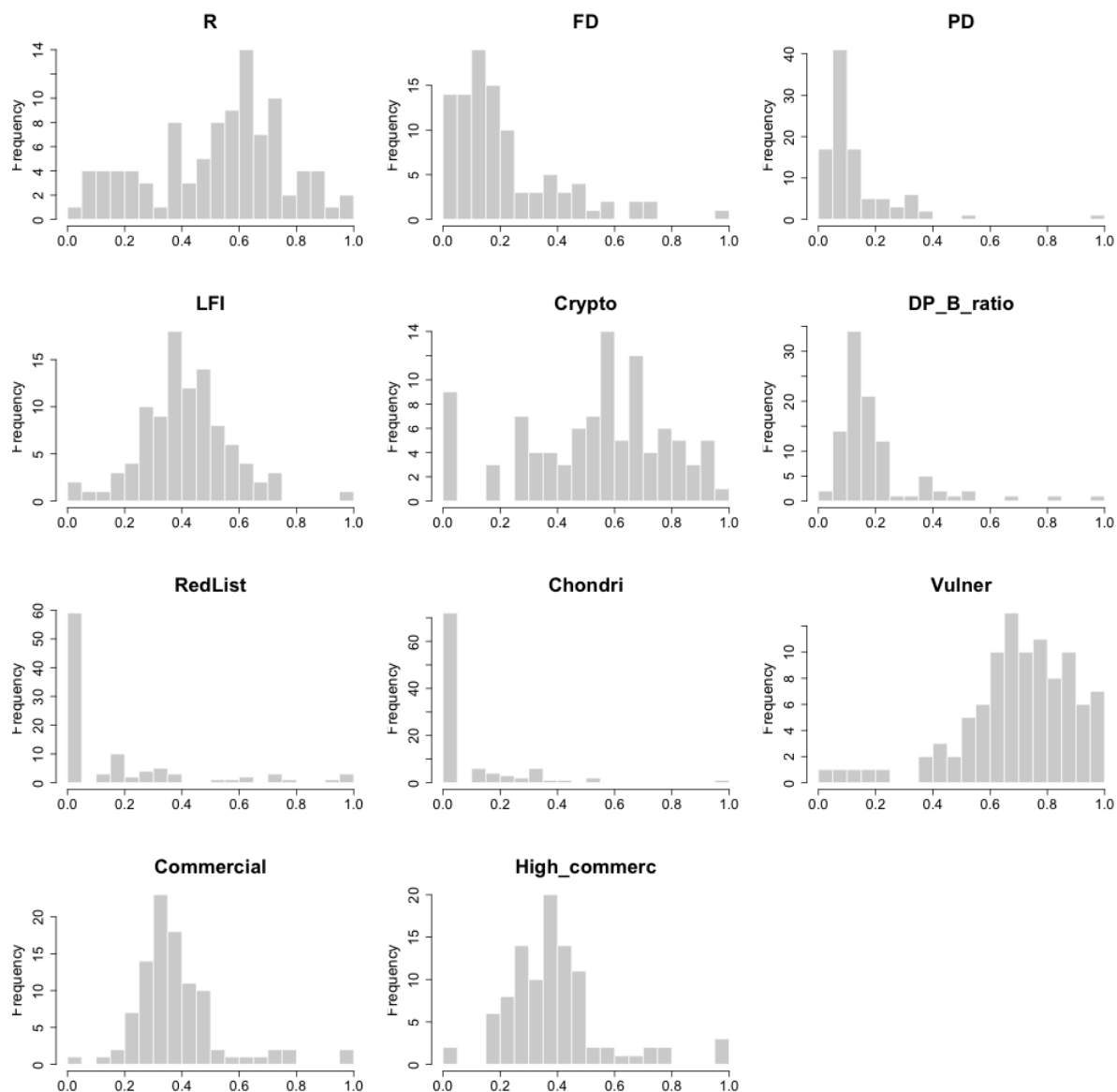


## SUPPLEMENTARY FIGURES FOR

### Benchmarking eleven biodiversity indicators based on environmental DNA surveys: more diverse functional traits and evolutionary lineages inside marine reserves

By Dalongeville A, Boulanger E, Marques V, Charbonnel E, Hartmann V, Santoni MC, Deter J, Valentini A, Lenfant P, Boissery P, Dejean T, Velez L, Pichot F, Sanchez L, Arnal V, Bockel T, Delaruelle G, Holon F, Milhau T, Roman L, Manel S & Mouillot D



**Figure S1:** histograms showing the distribution of the 11 biodiversity indicators scaled between 0 and 1.

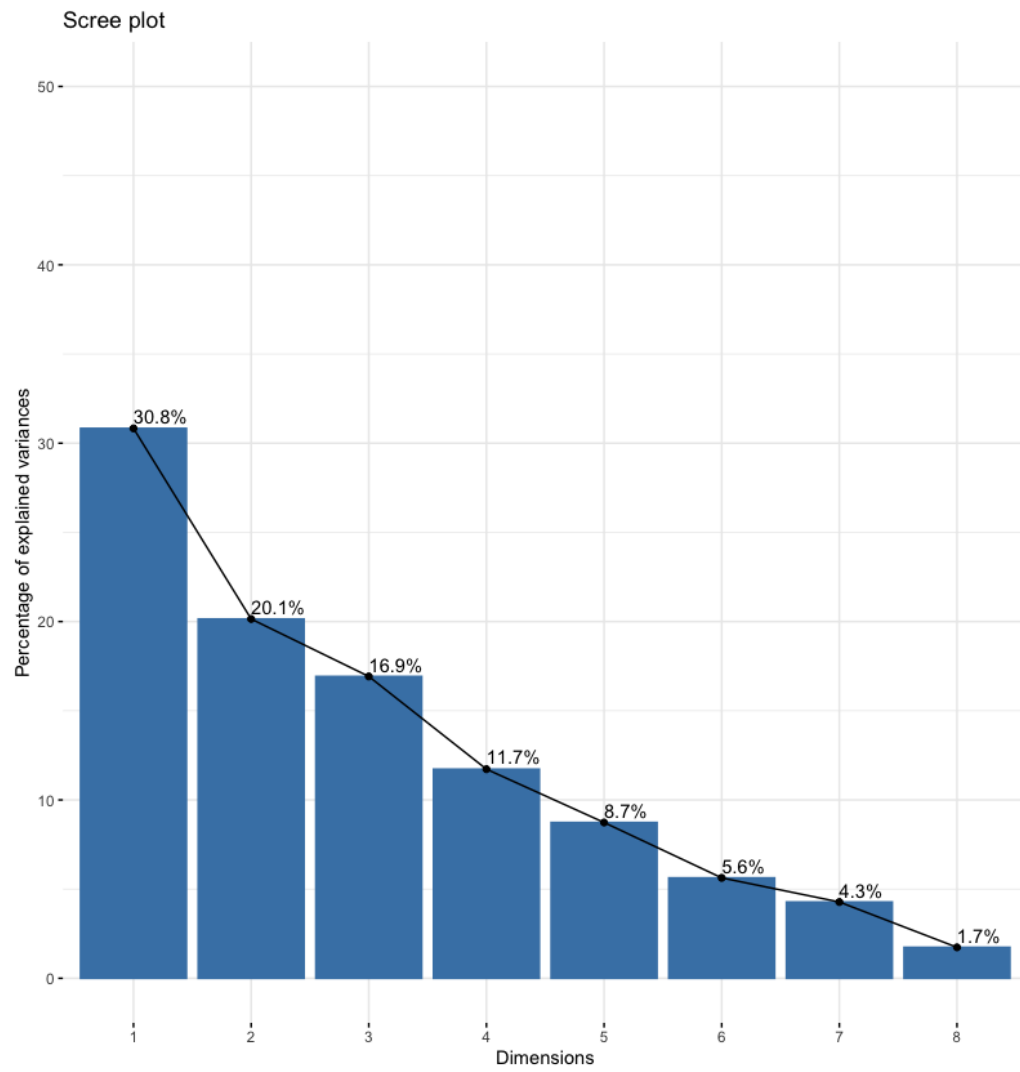


Figure S2: screeplot of the environmental Principal Component Analysis showing the percentage of variance explained by each axis.

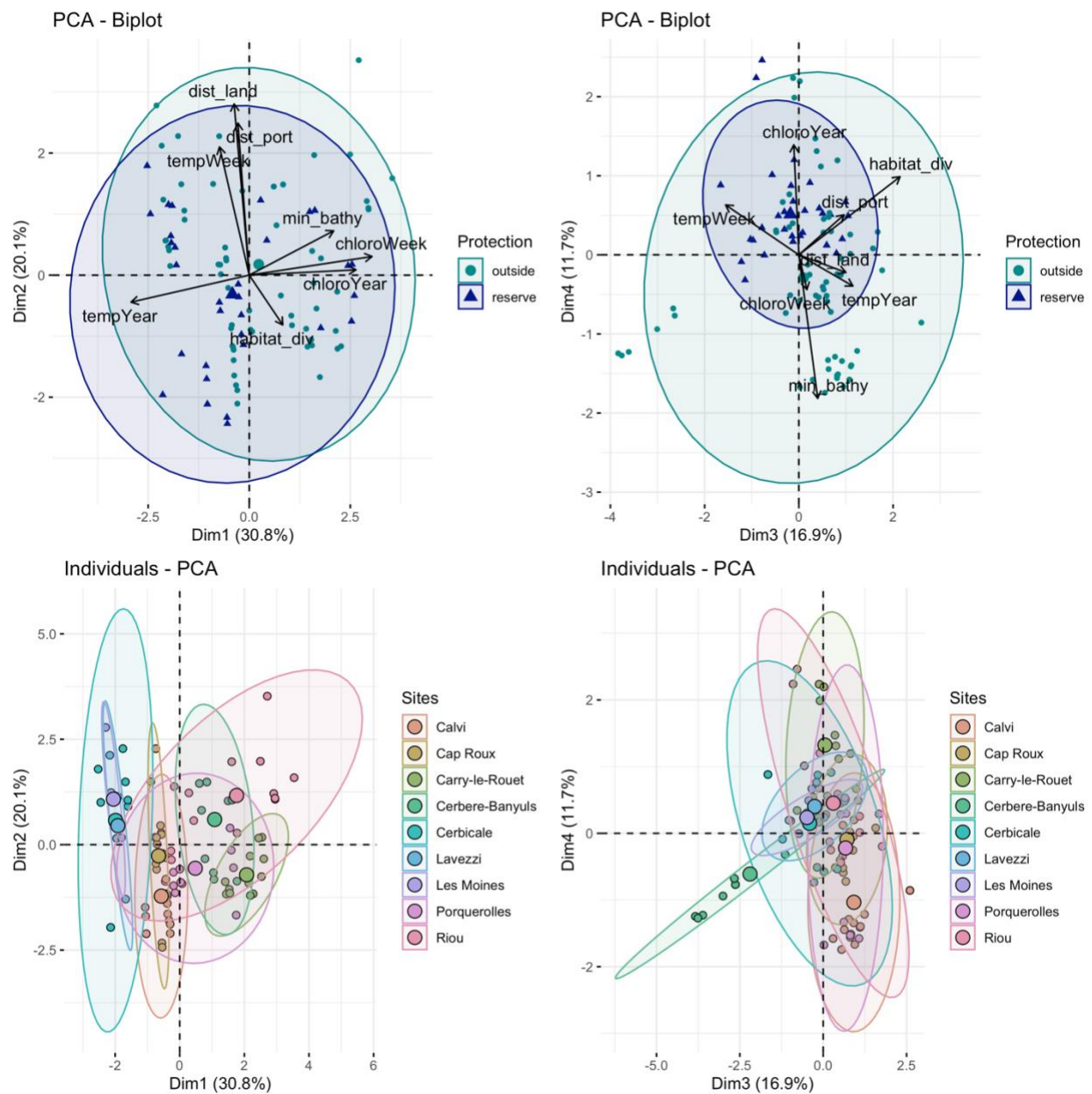
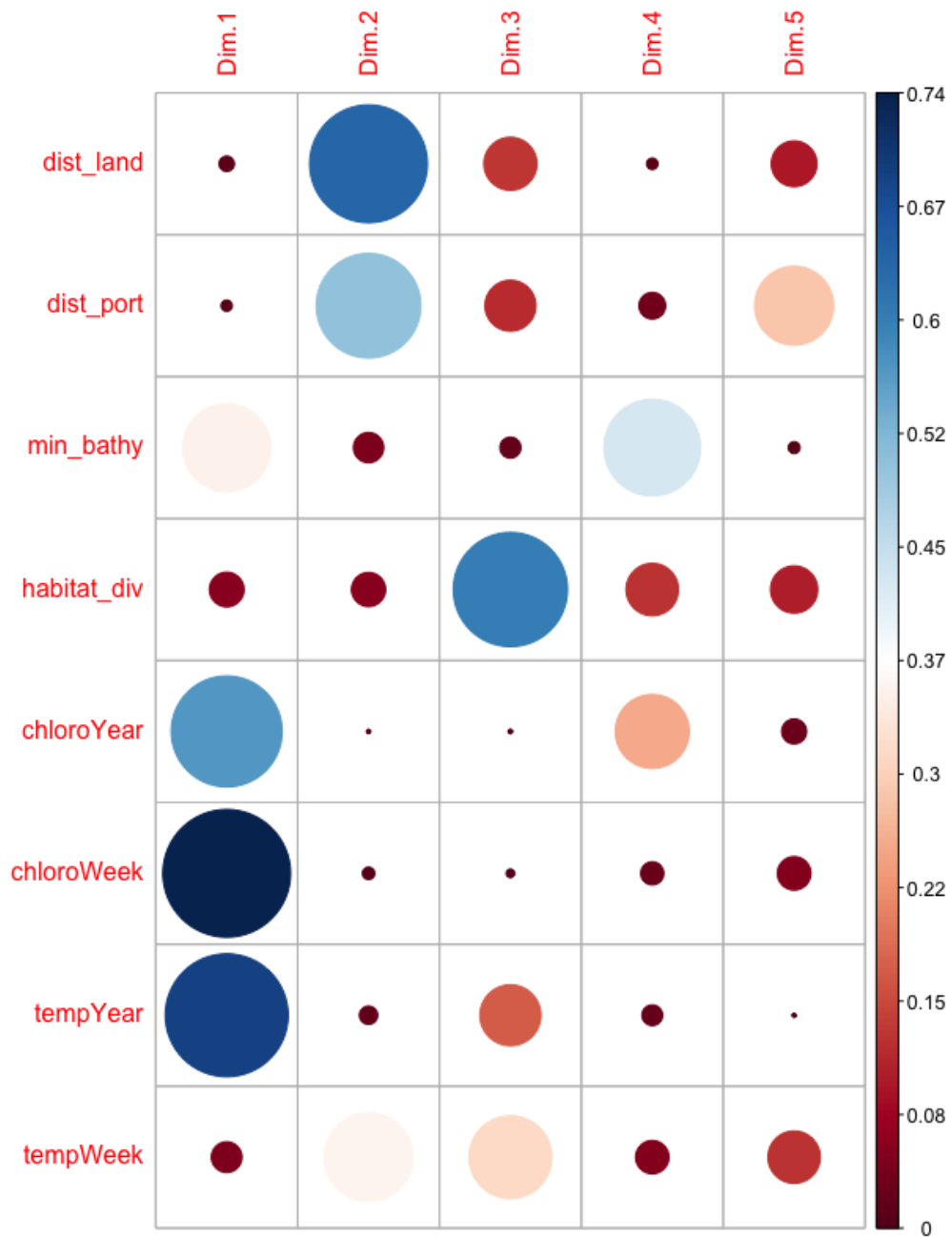


Figure S3: biplots showing the position of environmental variables and sites in the principal component space with axes 1-2 (left) and 3-4 (right). Sites are grouped by protection level (top) and regions (bottom).



**Figure S4:** Pearson correlation between environmental variables using the first five principal components.

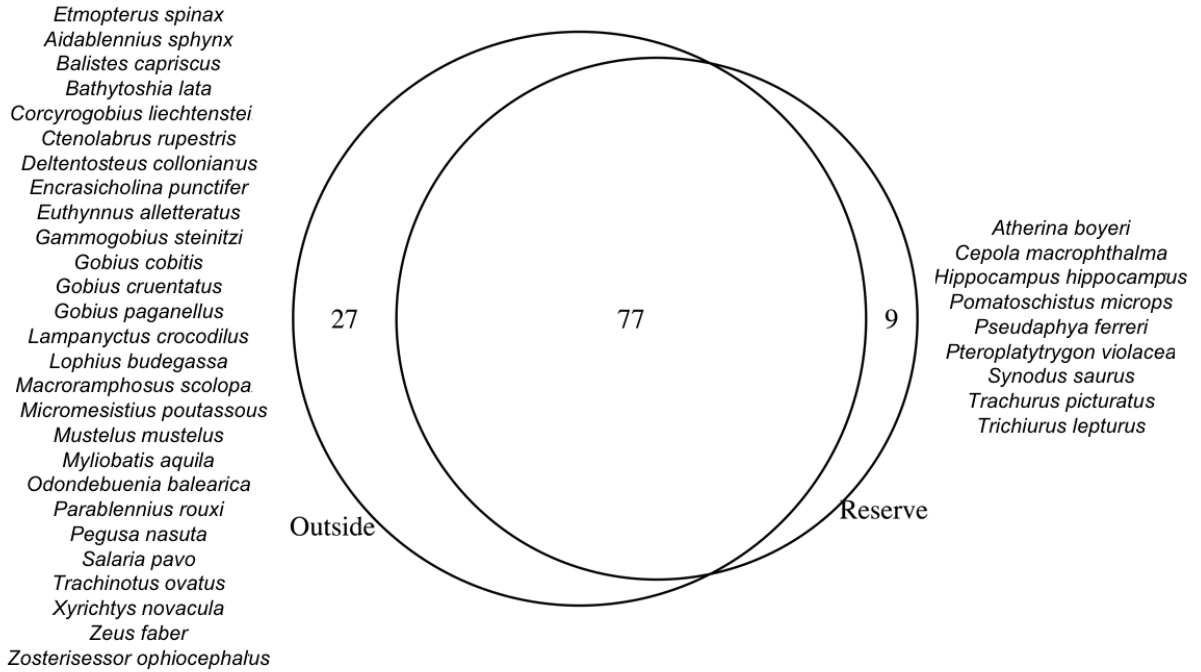


Figure S5: Venn diagram of species detected inside and outside reserves

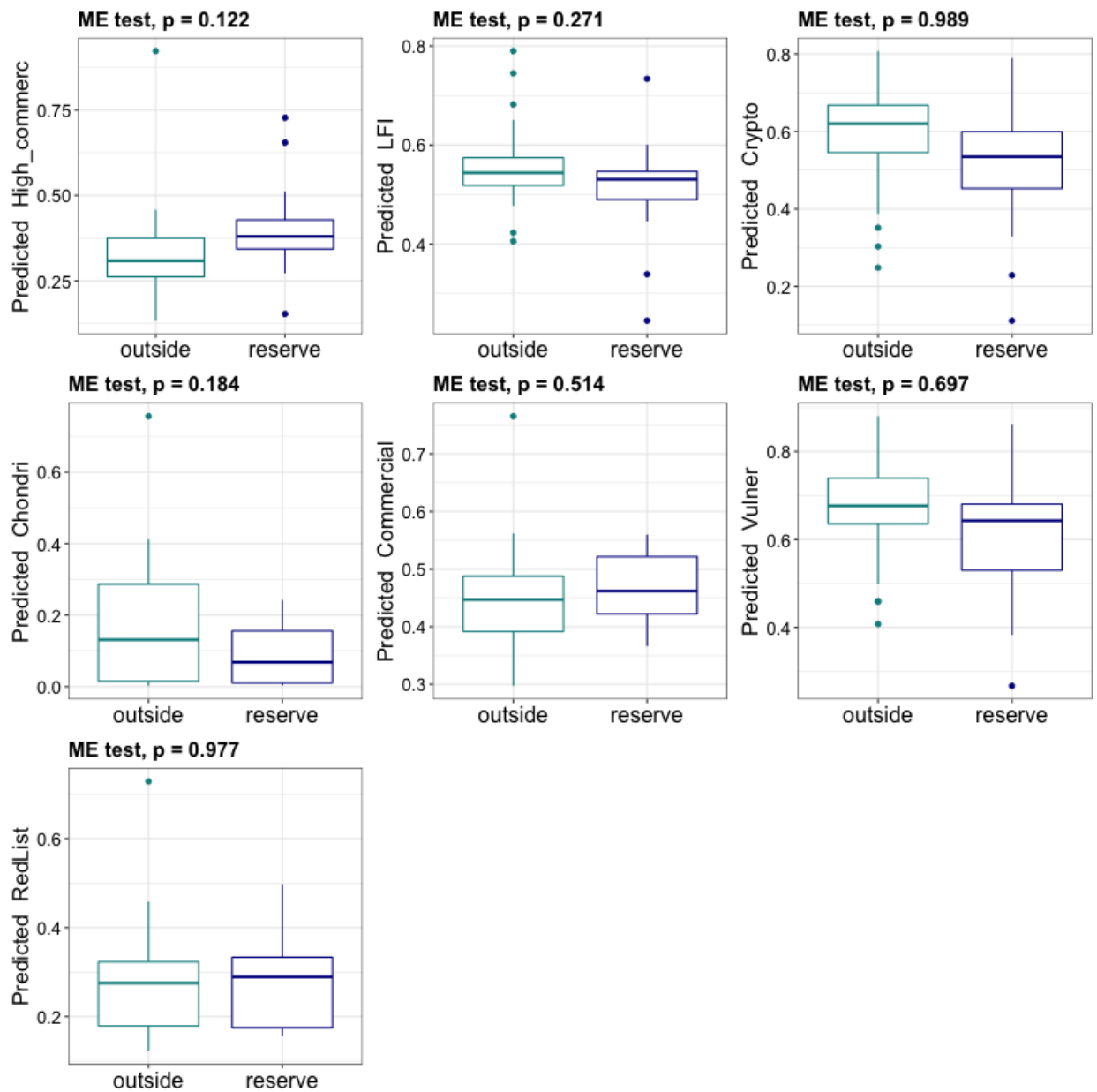


Figure S6: Results of the generalized linear models testing the effect of protection on the biodiversity indicators while accounting for environmental heterogeneity. Boxplots represent the conditional predicted values of the indicators inside vs. outside reserves, with the test of marginal effects (p-values).

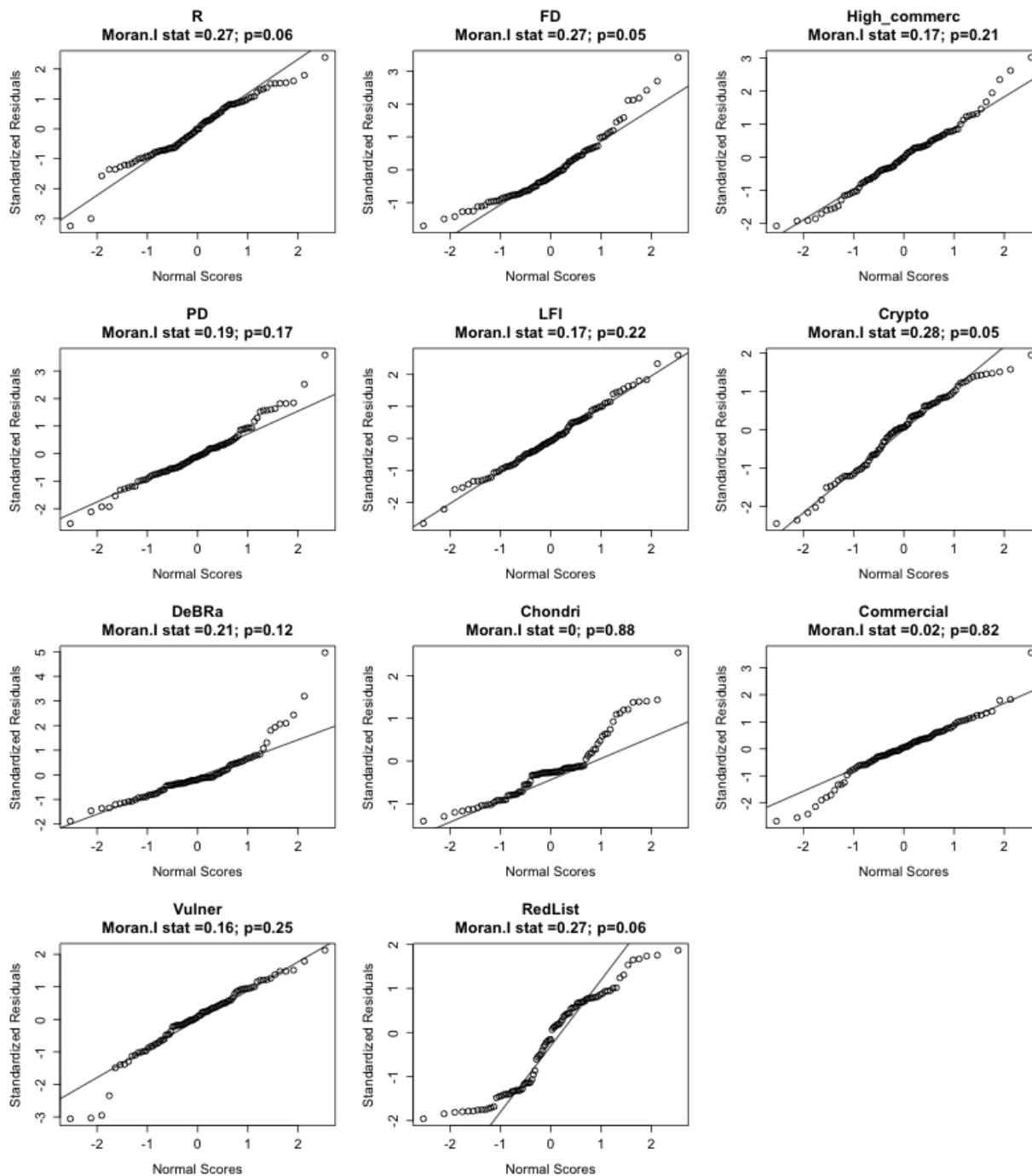


Figure S7: QQplot of model residuals for the 11 biodiversity indicators with results of Moran's I test for spatial autocorrelation.

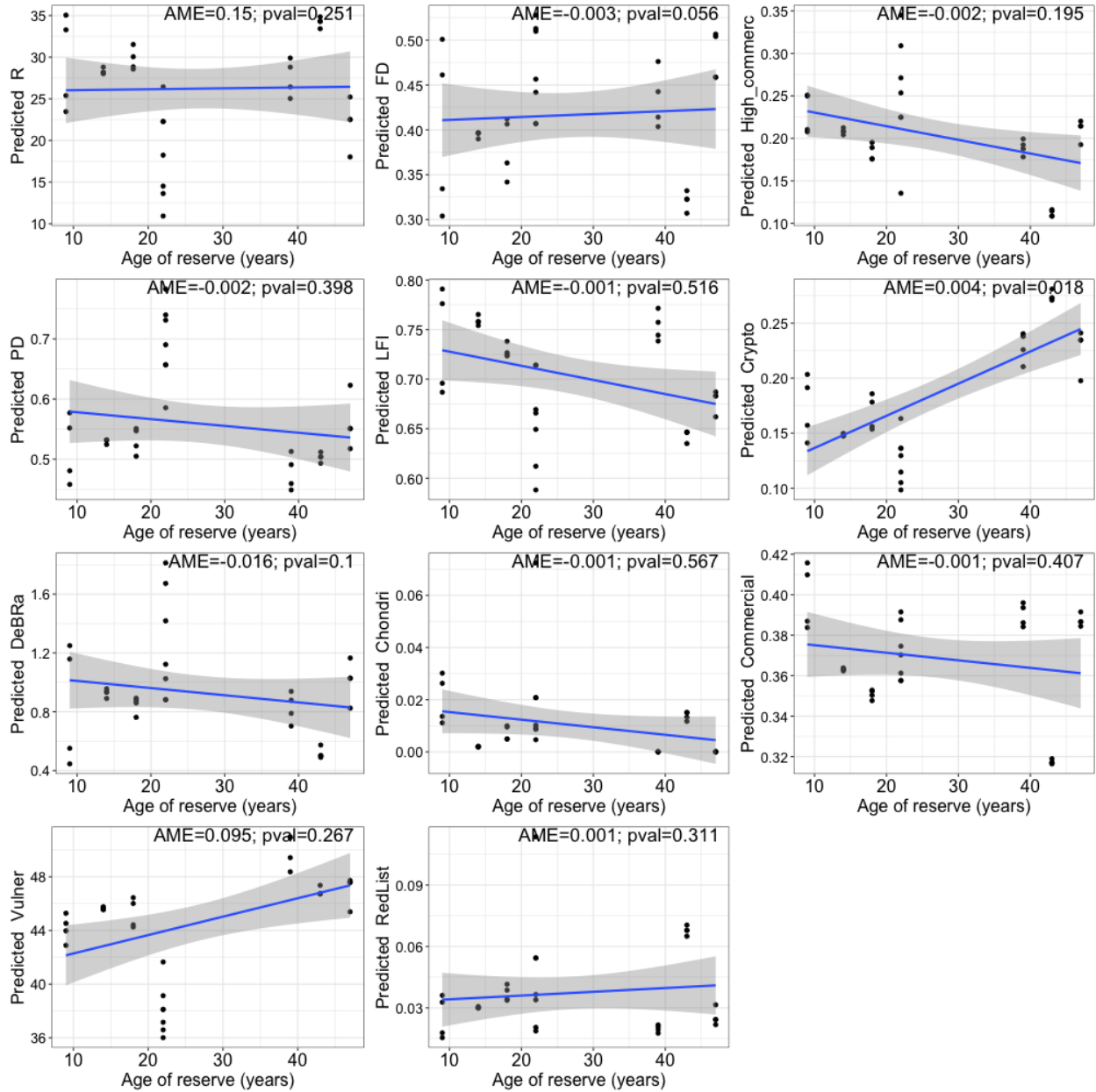


Figure S8 : Results of the generalized linear models testing the effect of reserve age on the biodiversity indicators while accounting for environmental heterogeneity. Plots represent the conditional predicted values of the indicators as a function of reserve age, with the test of marginal effects (p-values).



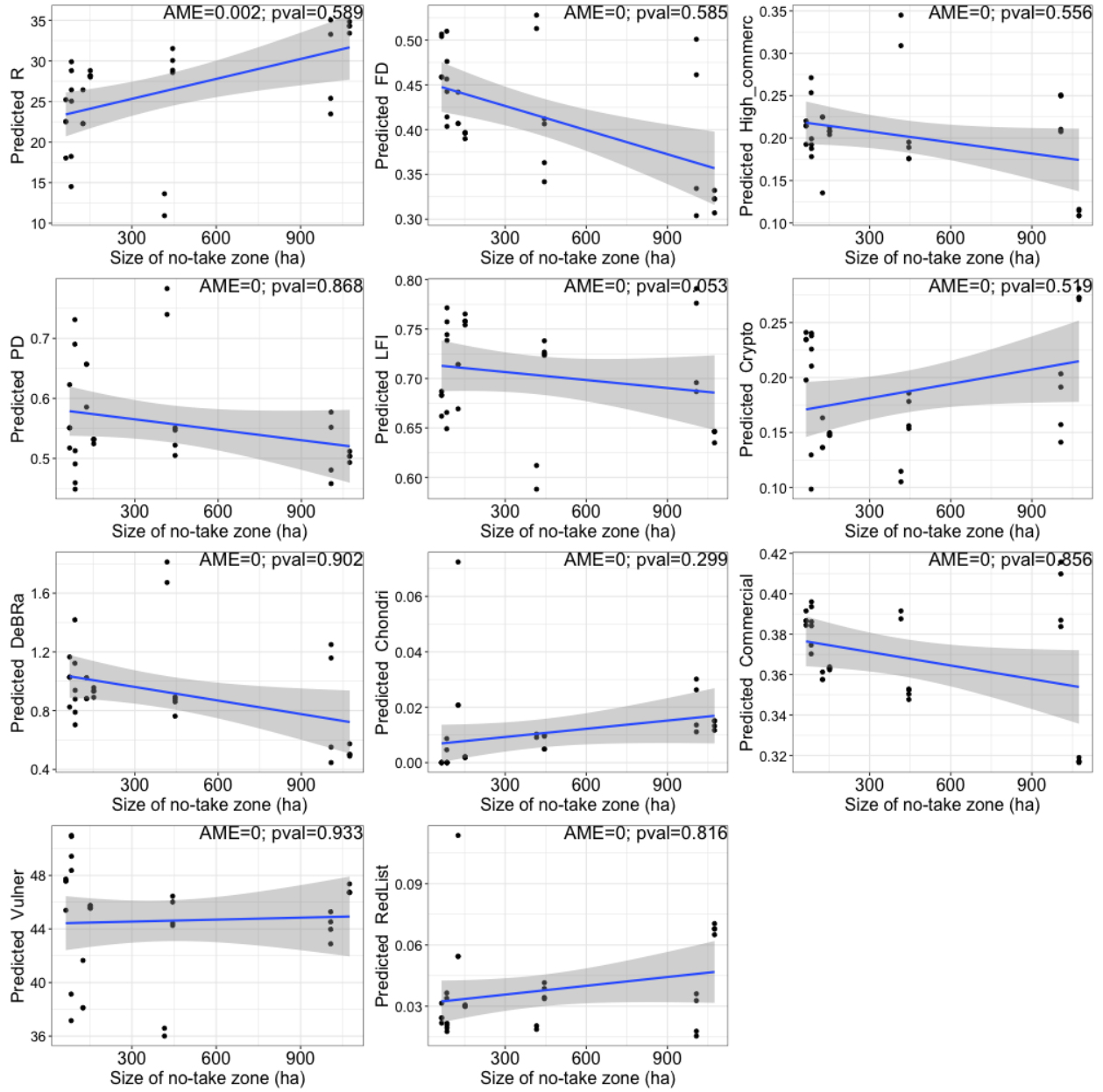


Figure S9 : Results of the generalized linear models testing the effect of reserve size on the biodiversity indicators while accounting for environmental heterogeneity. Plots represent the conditional predicted values of the indicators as a function of reserve size, with the test of marginal effects (p-values).