SUPPLEMENTARY INFORMATION

The analyses for this study were conducted using R version 4.2.2. This version of R provides robust statistical and graphical tools essential for handling and analyzing the complex datasets involved in our research.

Several R packages were employed to perform various analyses and generate the results presented in the study. These packages include:

vegan: This package was utilized for calculating biodiversity indices, including species richness, evenness, and Simpson's Diversity Index. It offers functions for multivariate analysis and ecological data handling.

ggplot2: Used for creating visualizations such as Figure **1**, which illustrates biodiversity metrics across different levels of conservation efforts. ggplot2 provides advanced graphical capabilities for generating high-quality plots.

dplyr: This package facilitated data manipulation and preprocessing, allowing for efficient filtering, summarizing, and transforming of the dataset.

stats: Included with the base R distribution, the stats package was used for conducting statistical tests, including T-tests and ANOVA, to evaluate differences between high and low biodiversity areas.