

Table S1. Logistic regression statistics for spatial distribution of three vegetation zones (sub-Mediterranean, eu-Mediterranean and steno-Mediterranean). Predictor variables were altitude (A), precipitation (P) and temperature (T).

| Model for sub-Mediterranean (3 variables, n=38) | | | R-squared (McFadden) | RMSE | Mean | # Fitted | ROC area | Critical z | Conf. level |
|--|----------|-------------|-------------------------|-------------|---------|-----------|-----------|------------|-------------|
| Logistic Regression Statistics: | | | 1,000 | 0,000 | 0,368 | 38 | 1,00 | 1,960 | 95,0% |
| Logistic Regression Coefficient Estimates: | Variable | Coefficient | Std.Err. | z-statistic | P-value | Lower 95% | Upper 95% | VIF | Std. coeff. |
| | Constant | -66,573 | 318,197 | -0,209 | 0,834 | -690,228 | 557,083 | | |
| | A | 0,532 | 0,933 | 0,570 | 0,568 | -1,297 | 2,361 | 1,488 | 32,397 |
| | P | 0,168 | 0,279 | 0,601 | 0,548 | -0,380 | 0,715 | 1,149 | 23,632 |
| | T | -9,163 | 21,845 | -0,419 | 0,675 | -51,979 | 33,653 | 1,605 | -6,517 |
| Model for eu-Mediterranean (3 variables, n=38) | | | R-squared (McFadden) | RMSE | Mean | # Fitted | ROC area | Critical z | Conf. level |
| Logistic Regression Statistics: | | | 0,150 | 0,455 | 0,447 | 38 | 0,70 | 1,960 | 95,0% |
| Logistic Regression Coefficient Estimates: | Variable | Coefficient | Std.Err. | z-statistic | P-value | Lower 95% | Upper 95% | VIF | Std. coeff. |
| | Constant | 4,258 | 6,346 | 0,671 | 0,502 | -8,181 | 16,697 | | |
| | A | -0,012 | 0,006877 | -1,703 | 0,088 | -0,025 | 0,001764 | 1,488 | -0,713 |
| | P | -0,002265 | 0,001717 | -1,320 | 0,187 | -0,005630 | 0,001099 | 1,149 | -0,319 |
| | T | -0,106 | 0,364 | -0,290 | 0,772 | -0,819 | 0,608 | 1,605 | -0,075 |
| Model for steno-Mediterranean (3 variables, n=38) | | | R-squared (McFadden) | RMSE | Mean | # Fitted | ROC area | Critical z | Conf. level |
| Logistic Regression Statistics: | | | 0,797 | 0,184 | 0,184 | 38 | 0,99 | 1,960 | 95,0% |
| Logistic Regression Coefficient Estimates: | Variable | Coefficient | Std.Err. | z-statistic | P-value | Lower 95% | Upper 95% | VIF | Std. coeff. |
| | Constant | -64,780 | 51,345 | -1,262 | 0,207 | -165,415 | 35,856 | | |
| | A | -0,047 | 0,033 | -1,420 | 0,156 | -0,111 | 0,018 | 1,488 | -2,844 |
| | P | -0,036 | 0,022 | -1,674 | 0,094 | -0,079 | 0,006226 | 1,149 | -5,127 |
| | T | 6,062 | 4,196 | 1,444 | 0,149 | -2,163 | 14,287 | 1,605 | 4,311 |

Table S2. Correlations among studied bioclimatic variables at 38 sites from the east Adriatic coast. Lower diagonal matrix: correlation coefficients (r). Upper diagonal matrix: corresponding P -values.

| | P | T | m | M | PET | LDS | DSWD | LRF | P/PET | DMI | CONTINETY | Io | Iosq | It | Q2 | EQ |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-----|
| P | | * | ** | * | * | *** | *** | ** | *** | ** | * | *** | *** | ns | *** | *** |
| T | -0.36 | | *** | ns | *** | *** | *** | *** | *** | ** | *** | *** | *** | * | ** | ** |
| m | -0.51 | 0.57 | | *** | ** | *** | *** | *** | *** | *** | *** | *** | *** | ns | * | ** |
| M | 0.39 | -0.01 | -0.82 | | ns | ns | ns | * | * | * | ** | * | ns | ns | ns | ns |
| PET | -0.32 | 0.99 | 0.49 | 0.07 | | *** | *** | *** | ** | ** | ** | *** | *** | * | * | ** |
| LDS | -0.72 | 0.70 | 0.57 | -0.22 | 0.66 | | *** | *** | *** | *** | ** | *** | *** | ns | *** | *** |
| DSWD | 0.73 | -0.82 | -0.57 | 0.14 | -0.80 | -0.93 | | *** | *** | *** | ** | *** | *** | * | *** | *** |
| LRF | 0.96 | -0.60 | -0.60 | 0.33 | -0.57 | -0.80 | 0.85 | | *** | *** | ** | *** | *** | ns | *** | *** |
| P/PET | 0.92 | -0.56 | -0.65 | 0.41 | -0.52 | -0.67 | 0.73 | 0.96 | | *** | *** | *** | *** | ns | *** | *** |
| DMI | 0.98 | -0.51 | -0.57 | 0.36 | -0.48 | -0.78 | 0.81 | 0.99 | 0.95 | | ** | *** | *** | ns | *** | *** |
| CONTINETY | 0.37 | -0.62 | -0.73 | 0.42 | -0.53 | -0.51 | 0.52 | 0.48 | 0.57 | 0.45 | | ** | ** | ns | ns | ** |
| Io | 0.96 | -0.60 | -0.60 | 0.33 | -0.57 | -0.80 | 0.85 | 1.00 | 0.96 | 0.99 | 0.48 | | *** | ns | *** | *** |
| Iosq | 0.71 | -0.77 | -0.56 | 0.17 | -0.74 | -0.91 | 0.97 | 0.83 | 0.68 | 0.79 | 0.45 | 0.83 | | ns | *** | *** |
| It | -0.13 | 0.38 | 0.11 | 0.16 | 0.37 | 0.29 | -0.35 | -0.23 | -0.20 | -0.19 | -0.23 | -0.23 | -0.32 | | ns | ns |
| Q2 | 0.78 | -0.42 | -0.38 | 0.17 | -0.40 | -0.65 | 0.67 | 0.80 | 0.73 | 0.80 | 0.17 | 0.80 | 0.70 | -0.20 | | *** |
| EQ | -0.94 | 0.50 | 0.54 | -0.30 | 0.47 | 0.82 | -0.83 | -0.94 | -0.88 | -0.95 | -0.45 | -0.94 | -0.77 | 0.25 | -0.78 | |

P -value significance level: ns $P > 0.05$, * $0.01 < P < 0.05$, ** $0.001 < P < 0.01$, *** $P < 0.001$.

Table S3. Correlations between 16 bioclimatic variables and the first three principal components.

| Bioclimatic variable | PC-Principal component | | |
|--------------------------|------------------------|--------|--------|
| | PC1 | PC2 | PC3 |
| T | -0.765 | -0.323 | -0.322 |
| m | -0.846 | 0.470 | -0.144 |
| M | 0.499 | -0.803 | -0.079 |
| LDS | -0.861 | -0.252 | 0.126 |
| DMI | 0.850 | 0.117 | -0.393 |
| CONTINETY | 0.736 | -0.226 | 0.487 |
| It | -0.327 | -0.581 | -0.454 |
| Q2 | 0.687 | 0.307 | -0.572 |
| Eigenvalue | 4.14 | 1.53 | 1.07 |
| % of total variance | 51.71 | 19.12 | 13.40 |
| Cumulative % of variance | 51.71 | 70.82 | 84.22 |

Figure S1. Biplot of the principal component analysis based on bioclimatic variables PC1-PC3.

