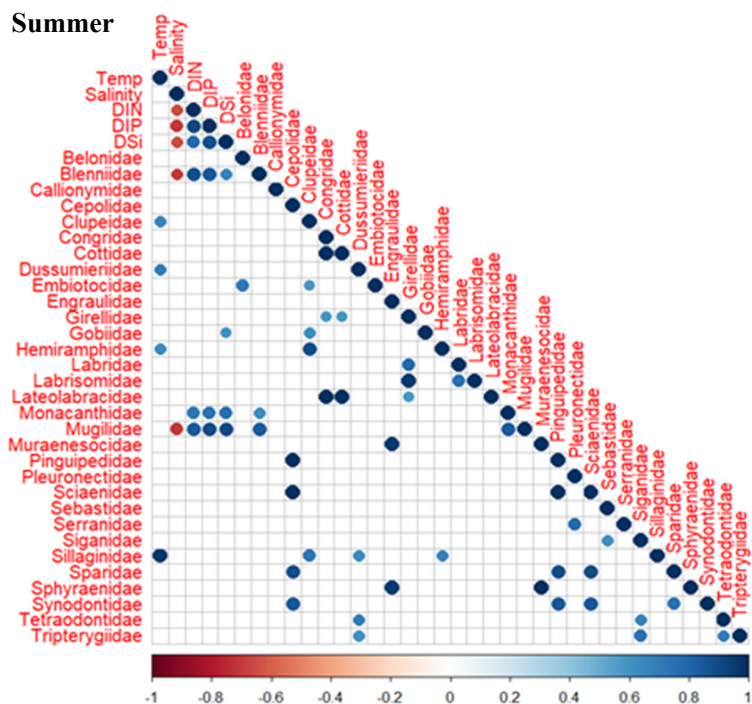
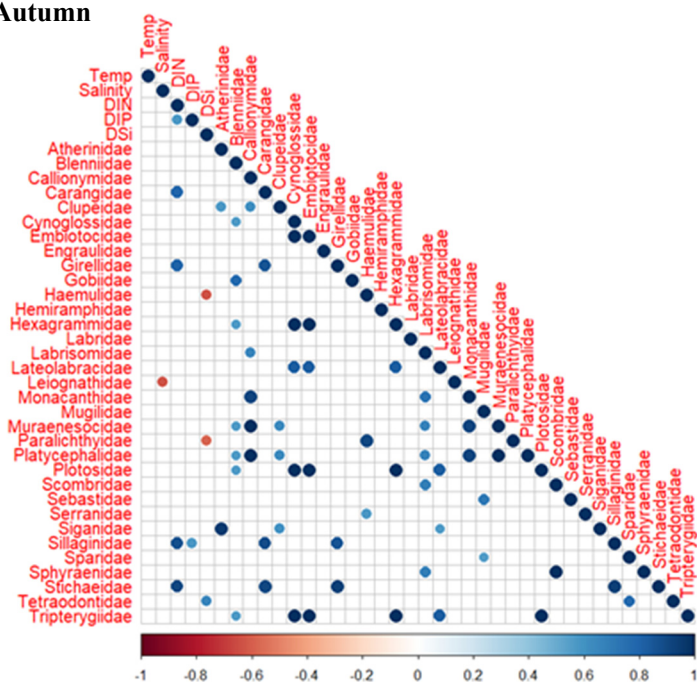


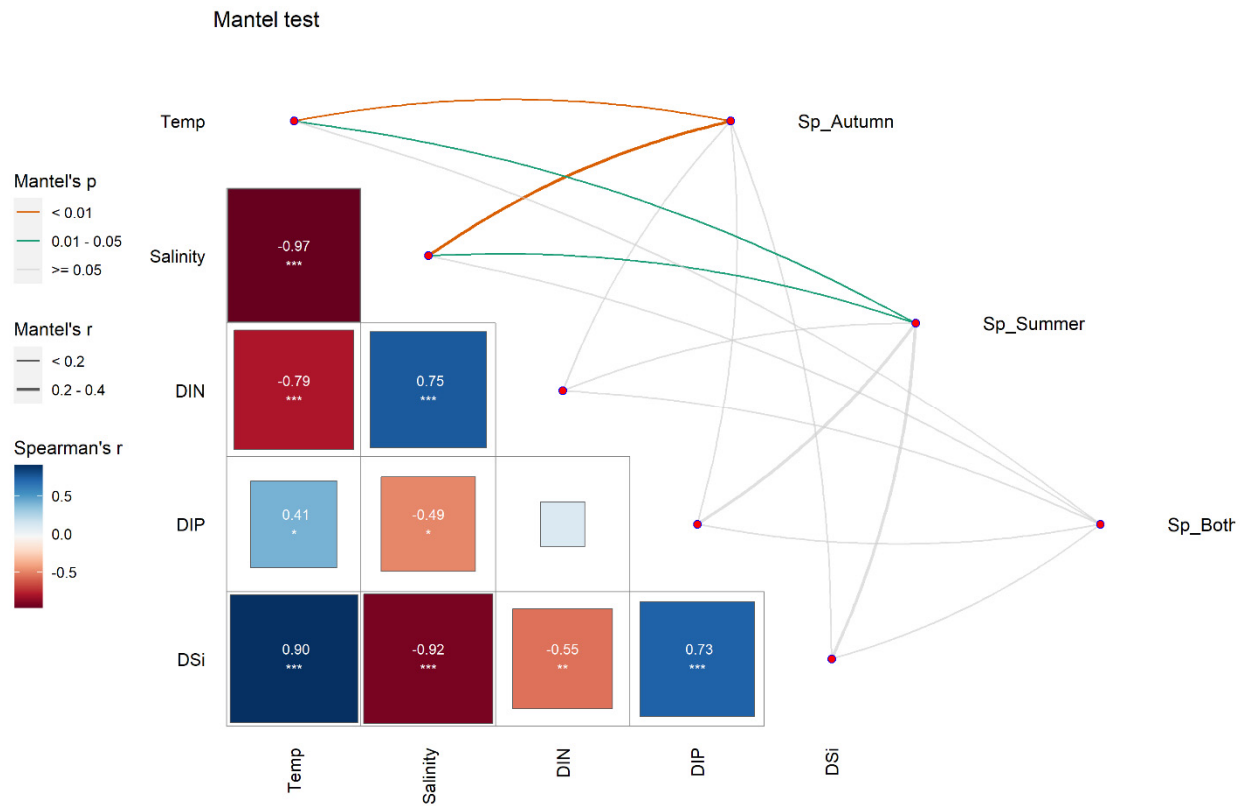
## Summer



## Autumn



**Figure S1.** Correlations between environmental factors and fish family in autumn and summer



**Figure S2.** Mantel tests and Spearman's correlation matrix illustrate the relationships between composition of fish communities and dependent factors. The line width corresponds to the Partial Mantel's r statistic for the corresponding correlation, and the line color indicates statistical significance. Orange and green are denoted the significant level of  $<0.001$ ,  $0.01 - 0.05$ , respectively. Spearman's correlation coefficient matrix shows the relationships among dependent factors. Red and blue represent the negative and positive correlations. The significant levels of Spearman's correlation among dependent variables were indicated by the square size and starred numbers show the degree of significance (\*,  $0.05 > P > 0.01$ ; \*\*,  $0.01 > P > 0.001$ ).