Supplement of

Driving and limiting factors of CH$_4$ and CO$_2$ emissions from coastal brackish-water wetlands in temperate regions

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Fig. S1 - Measuring GHGs fluxes with accumulation chamber on (a) deep and (b) shallow water with floating devise, and on (c) flooded soils.

Fig. S2 – Example of distribution of points measurements in both type of sampling: soil (a) and open standing water (b).
Fig. S3 – Scree plot of PCA analysis for CH$_4$ fluxes and environmental variables

Fig. S4 – Scree plot of PCA analysis for CO$_2$ fluxes and environmental variables

Fig. S5 - Variable correlation plot with related contributions for the PCA of CH$_4$ fluxes.
Fig. S6 - Variable correlation plot with related contributions for the PCA of CO₂ fluxes.

Fig. S7 - Correlation matrix between variables and PC for CH₄ fluxes
Fig. S8 - Correlation matrix between variables and PC for CO₂ fluxes

Fig. S9 – Correlation matrix with Pearson’s correlation for CH₄ fluxes and environmental variables
Fig. S10 - Correlation matrix with Pearson’s correlation for CO₂ fluxes and environmental variables

S11 - Scree plot of PCA analysis for CH₄ fluxes from standing waters and EC (a), sulphate (b), water column depth and environmental variables
Fig. S12 - Correlation matrix with Pearson’s correlation for CH₄ fluxes in flooded areas and EC (a), and SO₄²⁻ (b)

S13 - Scree plot of PCA analysis for CO₂ fluxes from standing waters and EC (a), sulphate (b), water column depth and environmental variables
Fig. S14 - Correlation matrix with Pearson’s correlation for CO$_2$ fluxes in flooded areas and EC (a), and SO$_4^{2-}$ (b).

Mann-Whitney test

\[
W_{\text{Mann-Whitney}} = 3429.00, \ p = 4.66e-06, \ r_{\text{rank}} = 0.46, \ CI_{95\%} [0.29, 0.60], \ n_{\text{obs}} =
\]

Fig. S15 - Mann Whitney test performed between CH$_4$ measurements from open waters with inundation levels <50 cm and >50cm. The two group are statistically different (*** with a $p = 4.66 \times 10^{-6}$)
Fig. S16 - Mann Whitney test performed between CO2 measurements from open waters with inundation levels <50 cm and >50 cm. The two groups are not statistically different with a $p = 0.82$. 