

Supporting information

High organic carbon burial but high potential for methane ebullition in the sediments of an Amazonian hydroelectric reservoir

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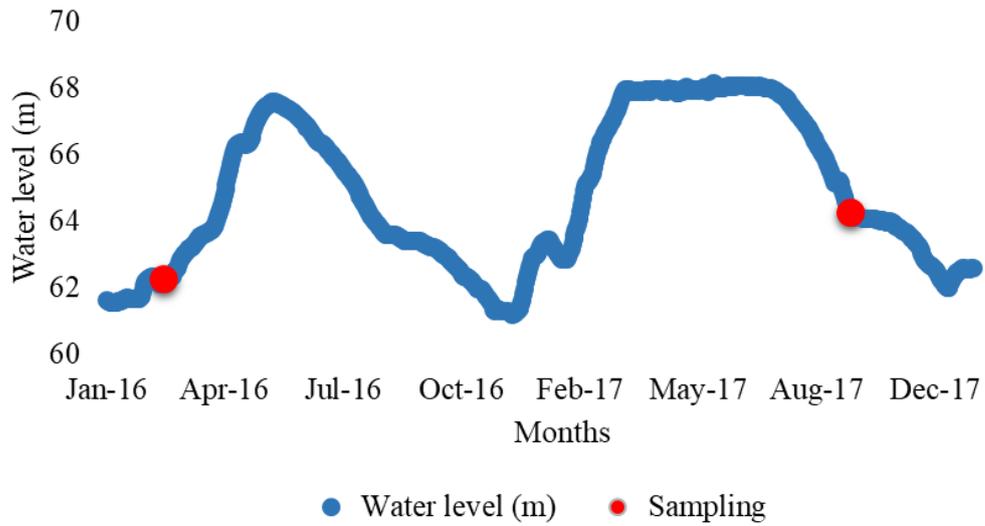


Figure S1. Water level of Curuá-Una reservoir in 2016 and 2017. Red points represent the sampling campaigns.

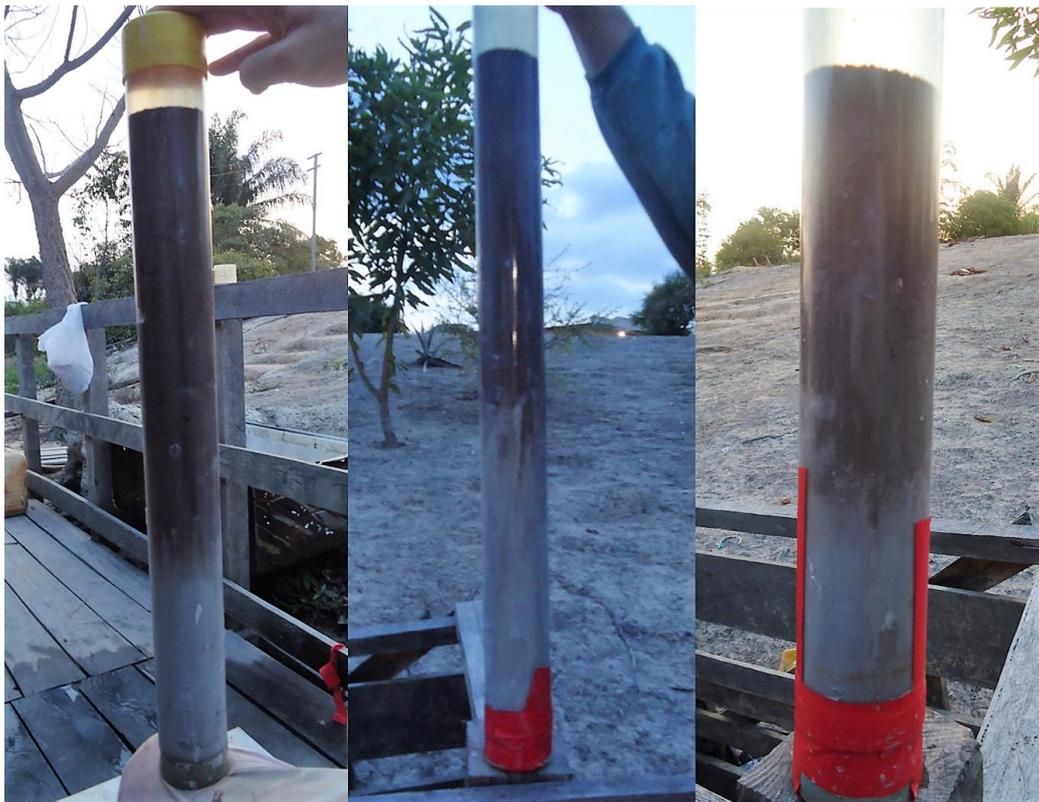


Figure S2. Pictures with sediment cores of Curuá-Una reservoir showing the transition zone between pre-flooded (grey color) and post-flooding (brown color) sediment.

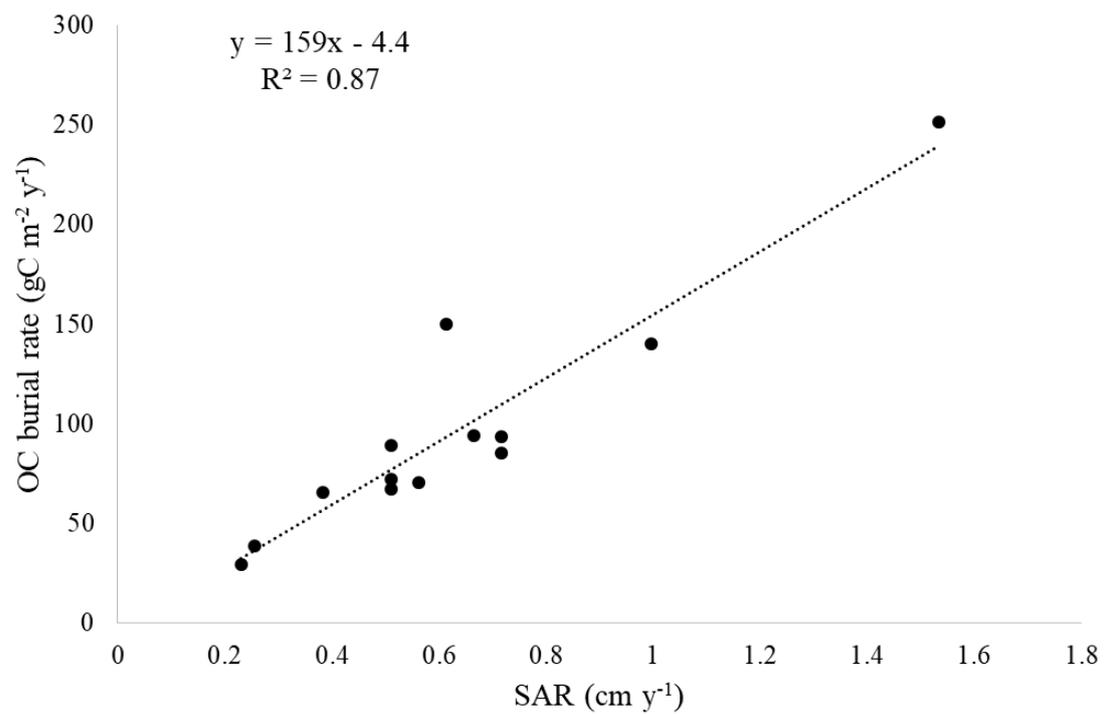


Figure S3. Regression model of sediment accumulation rate (SAR; cm yr⁻¹) and OC burial rate (g C m⁻² yr⁻¹).

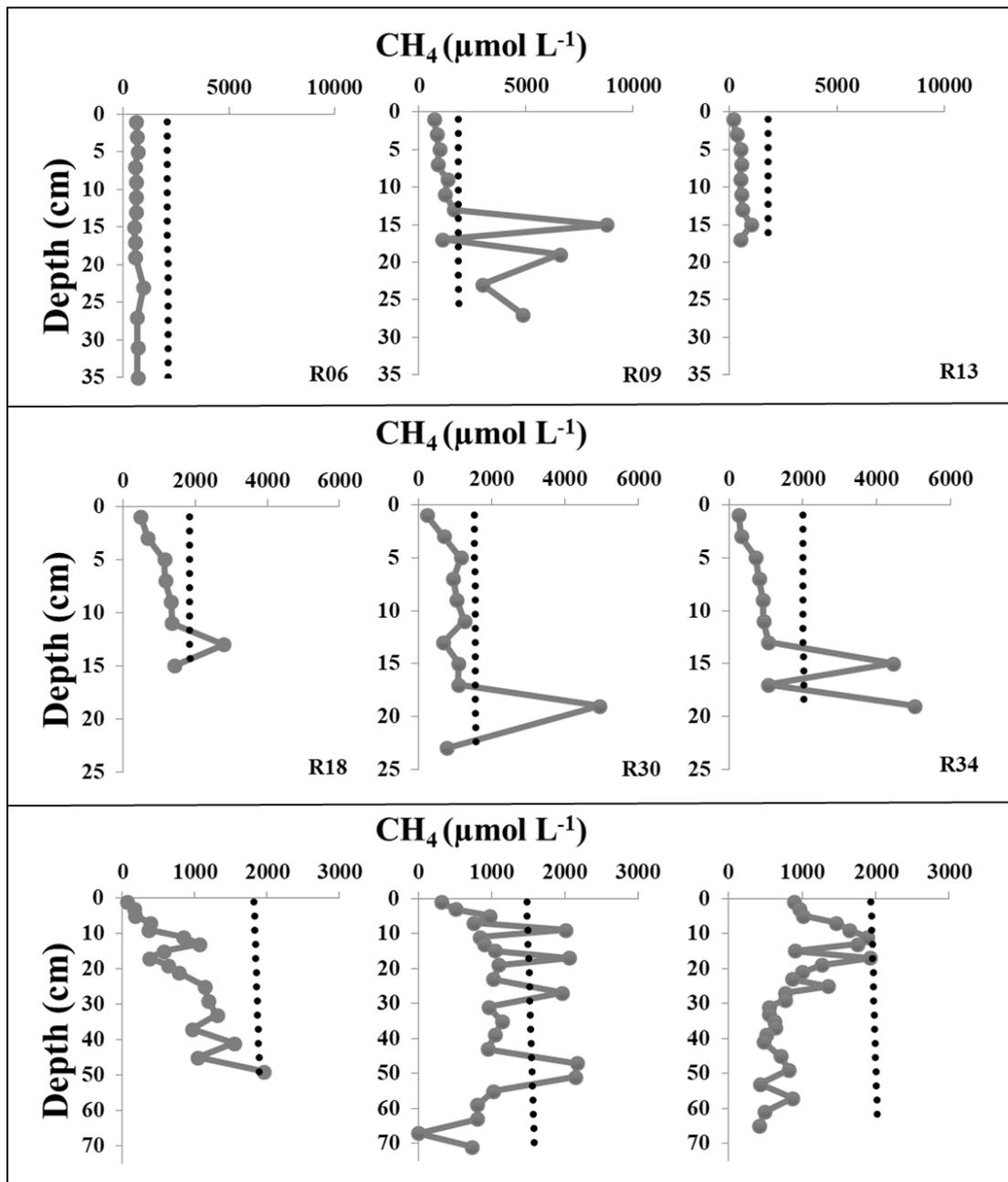


Figure S4. Pore water CH₄ profiles from rising (R) and falling (F) water periods. Black lines represent the CH₄ saturation line ($\mu\text{mol L}^{-1}$) and grey lines represent the measured CH₄ concentration ($\mu\text{mol L}^{-1}$).

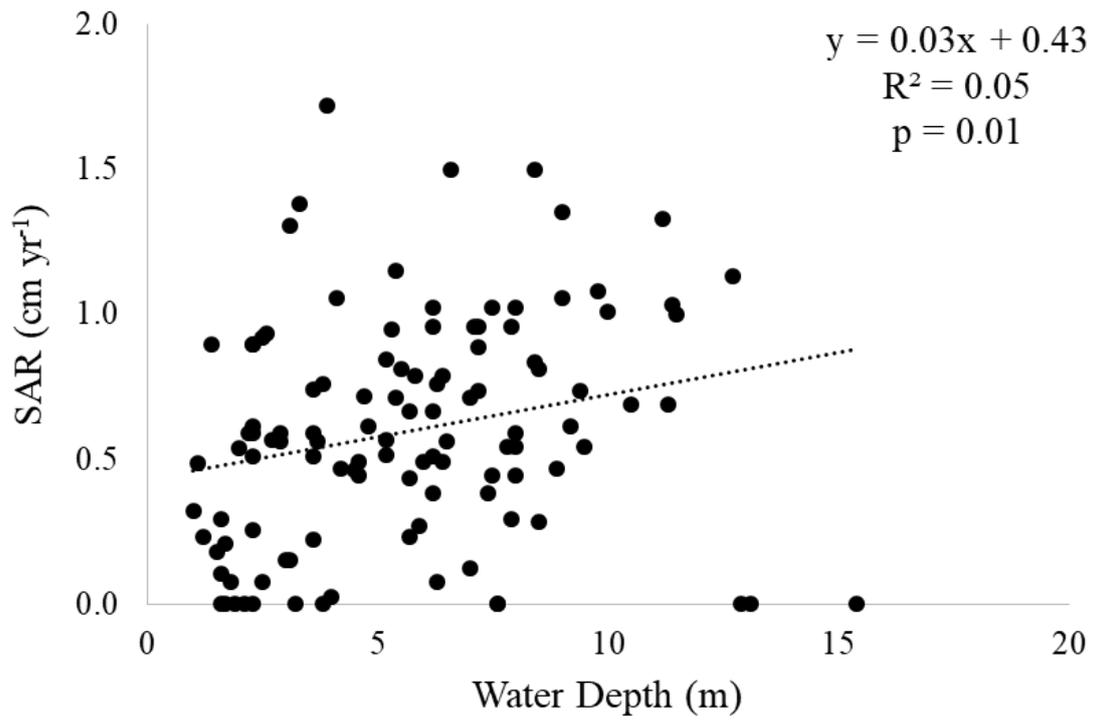


Figure S5. Regression model of sediment accumulation rate (SAR; cm yr⁻¹) and water depth (m).

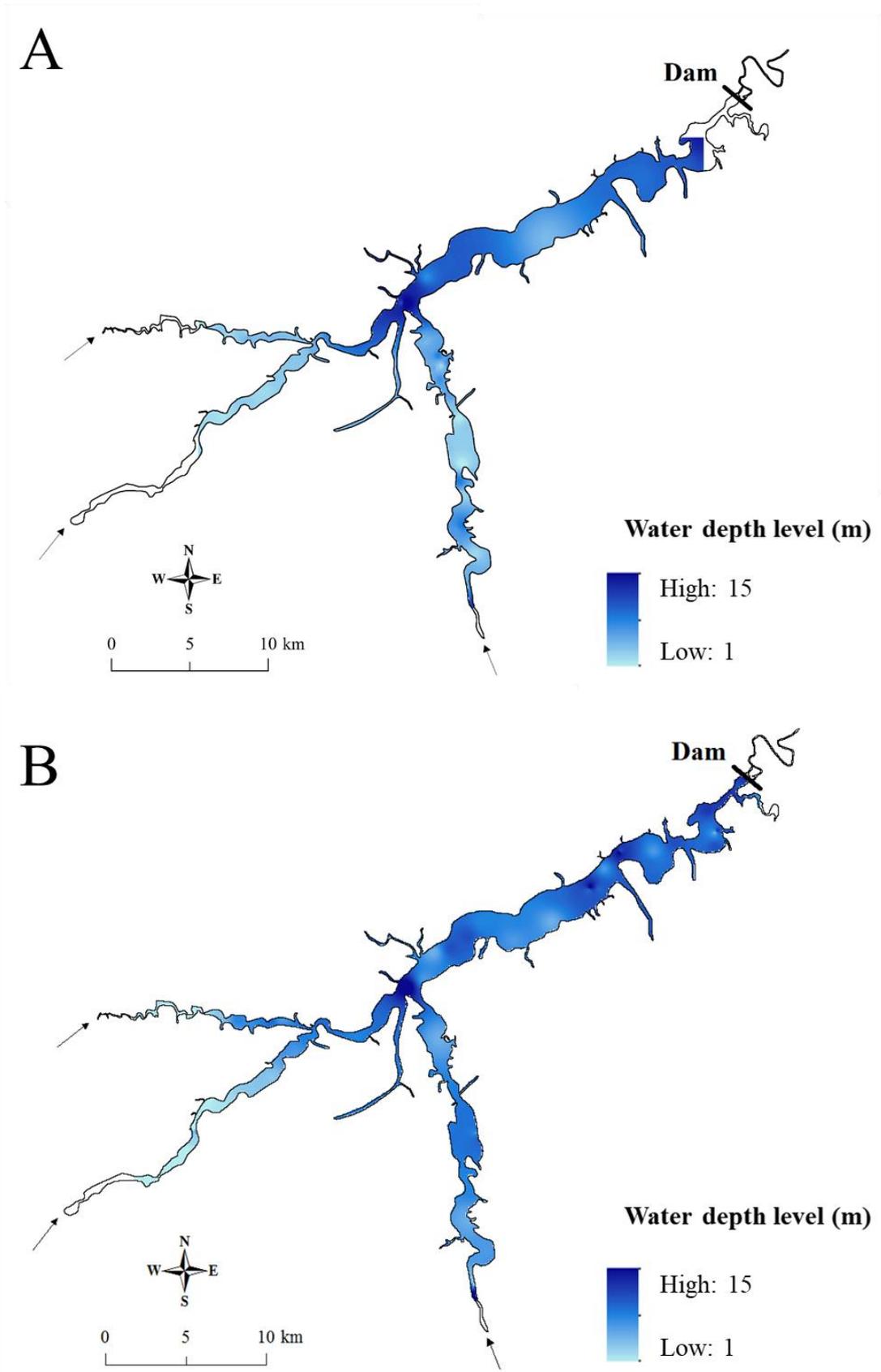


Figure S6. Bathymetric map (m) of CUN during rising (A) and falling (B) periods.

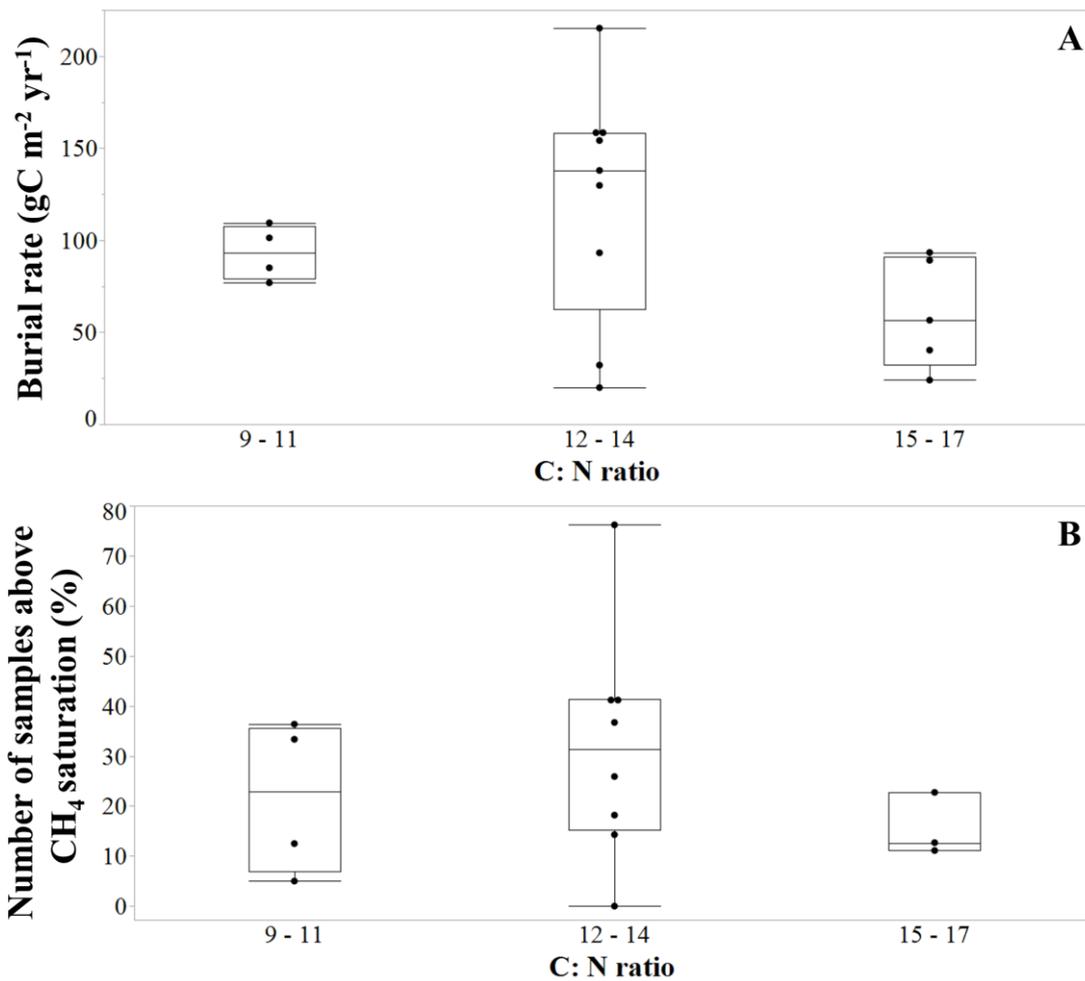


Figure S7. Boxplots of (A) C:N ratio and OC burial rate and; (B) C:N ratio and percentage of sediment layers with CH₄ concentration above saturation.