Supplement information for

Shift in the chemical composition of dissolved organic matter in the Congo River network

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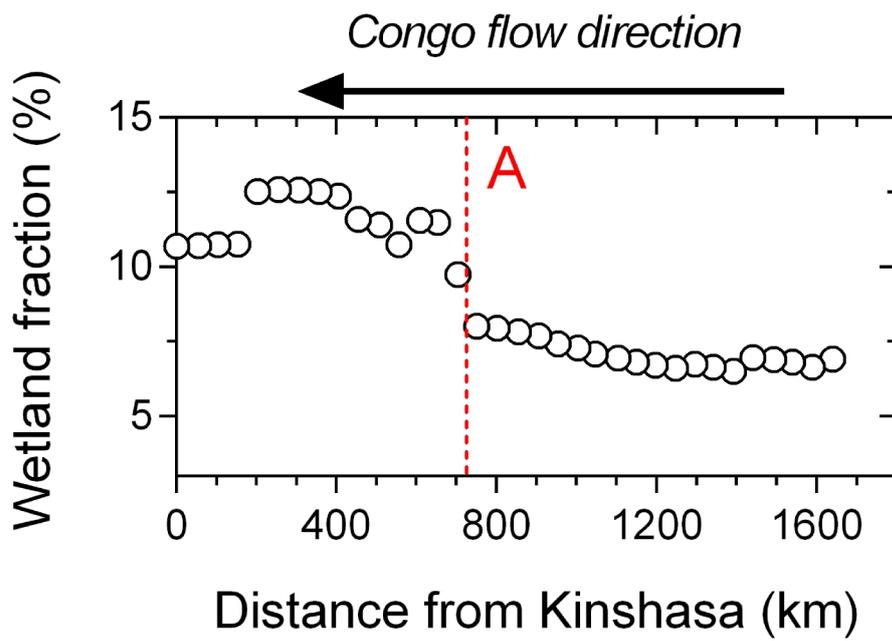
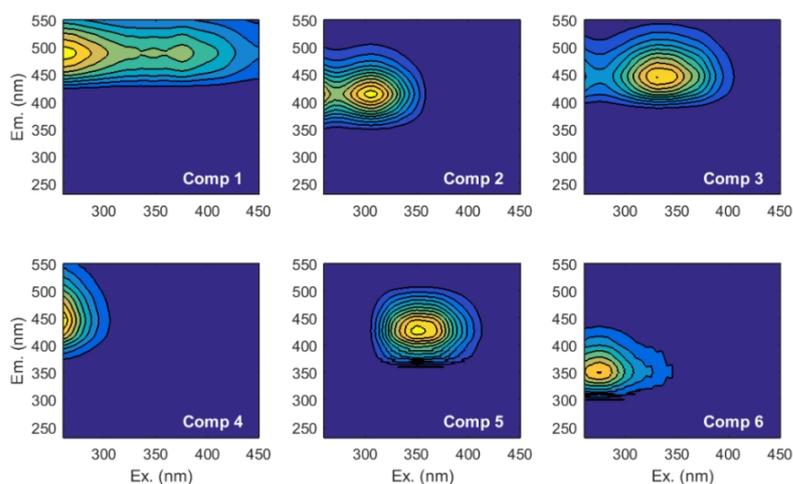
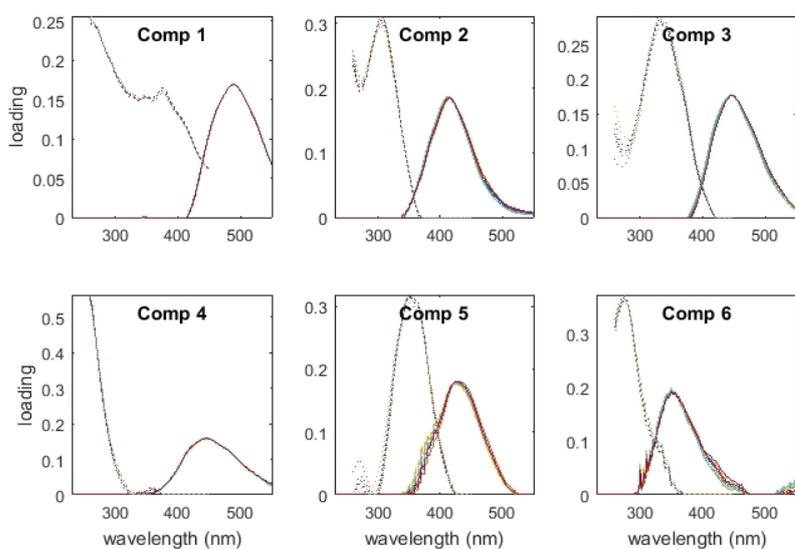
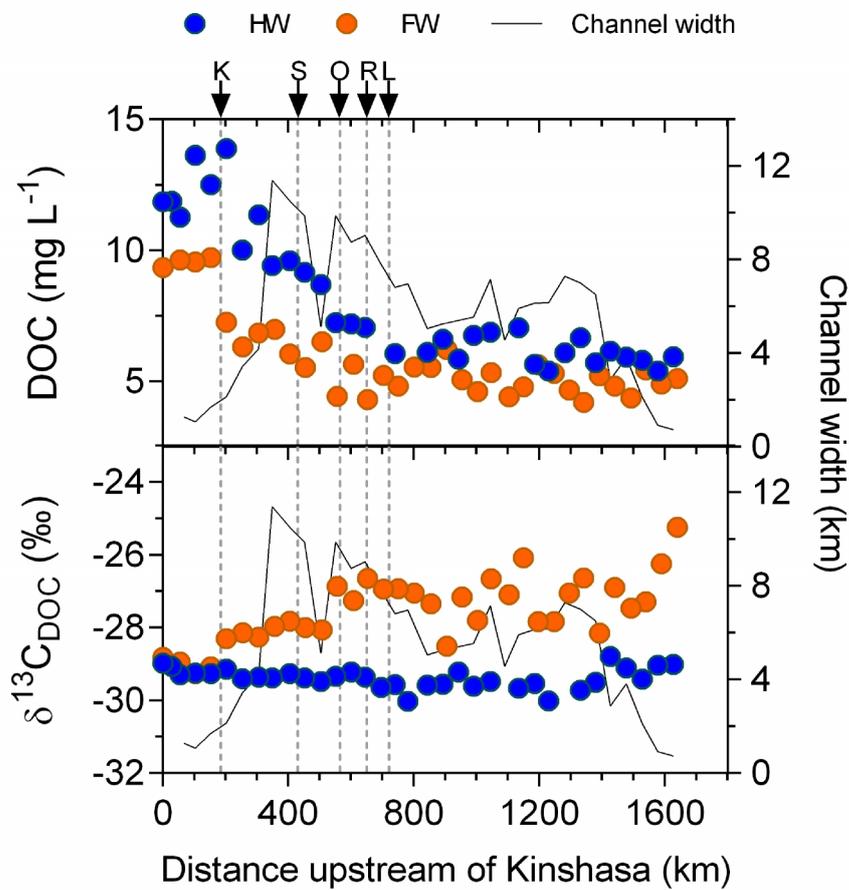
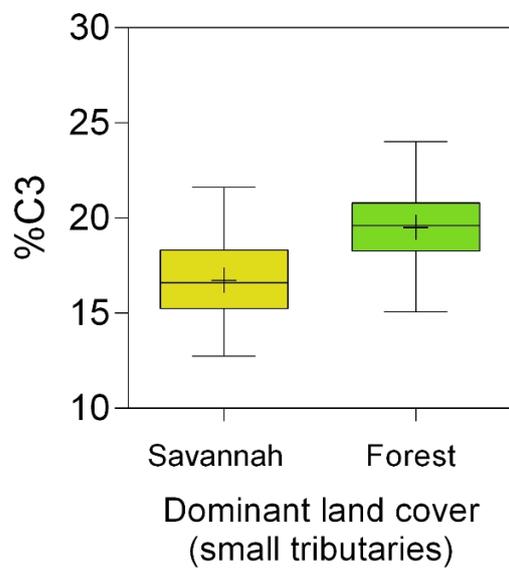
Supplementary Fig. 1 – Evolution of the wetland fraction along the Congo River. The red line "A" indicates the entrance of the Congo River within the core of the Cuvette Centrale (see text for details and figure 1).

Supplementary Fig. 2 – Spectral properties of the six fluorophores identified by the parallel factor analysis (PARAFAC): (a) color scale indicates the fluorescence intensity varying from low (blue) to high (yellow) in Raman units; (b) line plots (showing the split-half validation) represent emission (bold lines) and excitation (dashed lines) loadings for each components.

(a)

(b)

Supplementary Fig. 3 – Longitudinal evolutions of DOC concentrations (top panel) and δ^{13}C$_{DOC}$ (bottom panel) along the Congo River during high water (blue circle) and falling water (red circle) periods compared to the variation of the channel width of the mainstem (grey line). Black lines indicate the confluence zone with large tributaries: L= Lulonga, R=Ruki, O=Oubangui, S= Sangha, K=Kwa/Kasai.

Supplementary Fig. 4 – Satellite imagery illustrating the fact that DOM-rich waters from the Cuvette Centrale (black waters) can travel along the ridge of the Congo River (white waters) without mixing totally with the central water masses of the mainstem.

Supplementary Fig. 5 – Relative contribution of C3 component in small tributaries dominated by savannah or forest cover. The box spans the interquartile range (25–75 percentiles), whiskers correspond to min-max values, horizontal bar to median, cross to average.

Supplementary Fig. 6 – Relationship between DOC concentrations and pH in the Congo River network. Sampling stations were grouped based on their relative contribution of (a) the C2 and (b) C6 component.