

Supplementary Materials: Spatiotemporal Dynamics of Suspended Sediments in the Negro River, Amazon Basin, from in Situ and Sentinel-2 Remote Sensing Data

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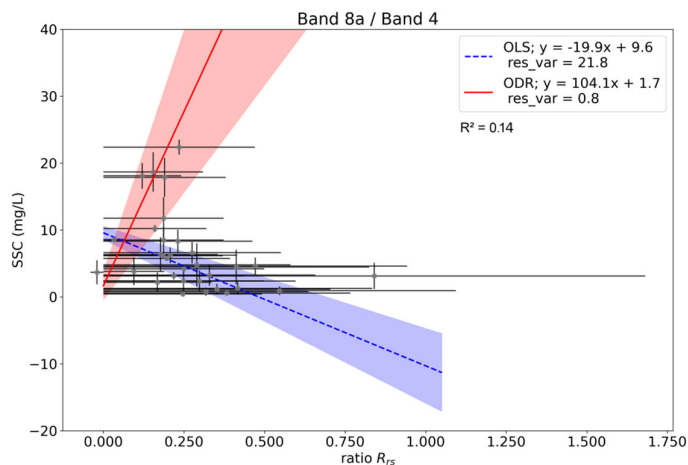


Figure S1. Empirical models between SSC and R_{rs} for the ratio B8a/B4 Sentinel-2 MSI simulated bands using Orthogonal Distance Regression (ODR) and Ordinary Least Square (OLS). The shaded areas indicate the uncertainty.

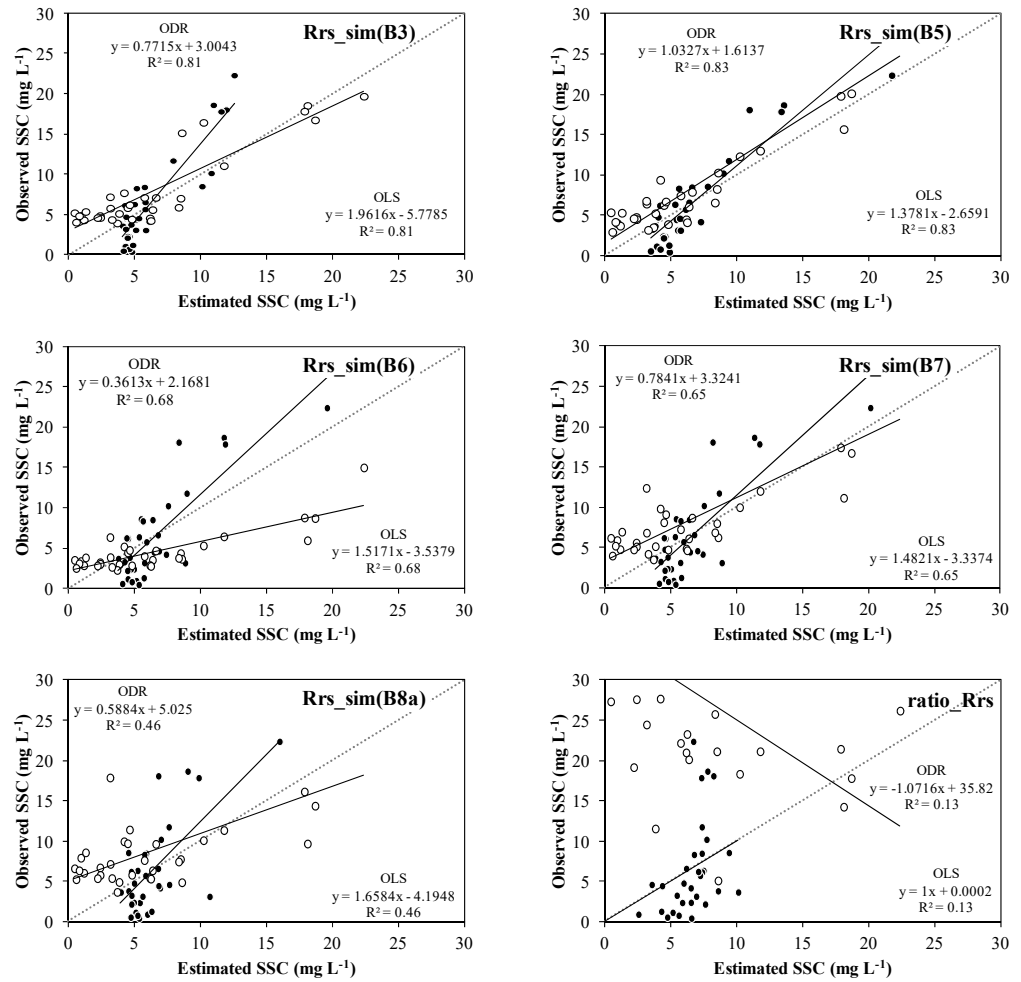


Figure S2. Comparison of SSC observed and estimated using in situ Rrs Sentinel-2 MSI simulated bands with OLS (black dots) and ODR (white dots) methods. Dashed line indicates values 1:1.

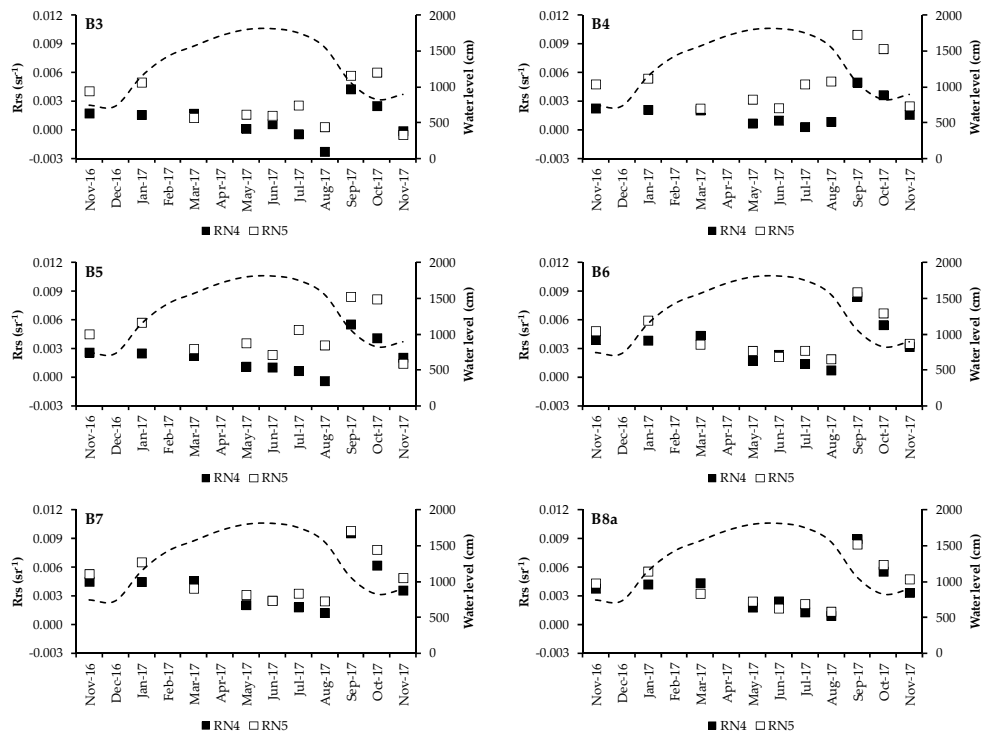


Figure S3. Variability of Rrs for Sentinel-2 MSI bands (dots) and water level (dashed line) of the Negro River in 2017 (sample stations RN4 and RN5).

Table S1. Field cruise dates and satellite Sentinel-2 data acquisition dates.

IN SITU MEASUREMENTS				
Field Cruise	Date	Sample Station	Hydrologic period	water level (m)
I	Nov-16	RN3; RN5	Low water	18.07
II	Jan-17	RN5	Low water	21.92
III	Mar-17	RN3	Low water	26.43
IV	May-17	LAP; RN3; RN4; RN5; RN6	High water	28.73
V	Jul-17	BCO; RN1; RN2; RN3; RN4; RN5; RN6	High water	28.17
VI	Oct-17	RN3; RN4; RN5	Low water	17.60
VII	Nov-17	BCO; RN1; RN2; RN3; RN4; RN5; LAP	Low water	18.54
VIII	Mar-18	RN6	High water	24.46
IX	Jun-18	RN4; RN5	High water	28.25
X	Nov-18	BCO; RN1; RN2	Low water	17.50
XI	Dec-18	RN3; RN4; RN5	Low water	20.89
XII	May-19	RN3; RN4; RN5	High water	28.24
XIII	Dec-19	BCO; RN1; RN2; RN5; RN6	Low water	21.61
SATELLITE DATA				
Date	Satellite	Using in	Hydrologic period	water level (m)
2016-11-07	Sentinel-2 A	Fig. 9(a)	Low water	18.07
2017-01-06	Sentinel-2 A	Fig. 9(a)	Low water	21.92
2017-03-27	Sentinel-2 A	Fig. 9(a)	Low water	26.43
2017-05-26	Sentinel-2 A	Fig. 9(a) and Fig. 10	High water	28.73
2017-06-15	Sentinel-2 A	Fig. 9(a) and Fig. 10	High water	28.82
2017-07-25	Sentinel-2 A	Fig. 9(a), Fig. 10 and Fig. 11 (a)	High water	28.17
2017-08-19	Sentinel-2 B	Fig. 9(a) and Fig. 10	High water	26.13
2017-09-23	Sentinel-2 A	Fig. 9(a), Fig. 10 and Fig. 11 (a)	Low water	20.41
2017-10-03	Sentinel-2 A	Fig. 9(a) and Fig. 10	Low water	17.60
2017-11-22	Sentinel-2 A	Fig. 9(a)	Low water	18.54