

Interactive comment on “Carbon stocks and soil sequestration rates of riverine mangroves and freshwater wetlands” by M. F. Adame et al.

Anonymous Referee #2

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General comments As stated by Referee #1, Adame and coauthors provide mostly a “very descriptive place-based study” of mangrove forests, one peat swamp site, and one marsh site in the La Encrucijada Biosphere Reserve (LEBR). However, the study does provide a useful and needed inventory of carbon stocks and soil C sequestration rates for LEBR. In agreement with Referee #1, additional analyses need to be performed to better address the uncertainty in C stocks and C sequestration rates across the LEBR. For instance, the two class 2 mangrove forest sites exhibit very different C stocks. This uncertainty needs to be addressed in computing the carbon budget for Class 2 mangrove forests across the LEBR. Also, Class 3 mangrove forests cover a large range of NDVI (0.1 to 0.632), and this likely contributes to additional uncertainty in the total carbon budget of LEBR. What are the NDVI values of the two Class 3 sites? If, for instance, the NDVI values are near the upper bound (0.632) for Class 3, then

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biomass estimates using only these two sites may represent an overestimate. Again, some justification and additional uncertainty analysis is warranted here.

Specific comments p.1016 l.17 – The units should be in Mg C and the uncertainty should be much higher (more than 10% of the mean value of 27762 Mg C). p.1027 l.8-9 – The text should read something like, “C stock of mangrove forests of LEBR to be 20.9×10^6 Mg of C.” p.1030 l.19 – should read, “forests of Chiapas...” p.1030 l.24 – should read, “...designed the project, led the field campaign,...”

Interactive comment on Biogeosciences Discuss., 12, 1015, 2015.