A remote sensing-based model of tidal marsh aboveground carbon stocks for the conterminous United States

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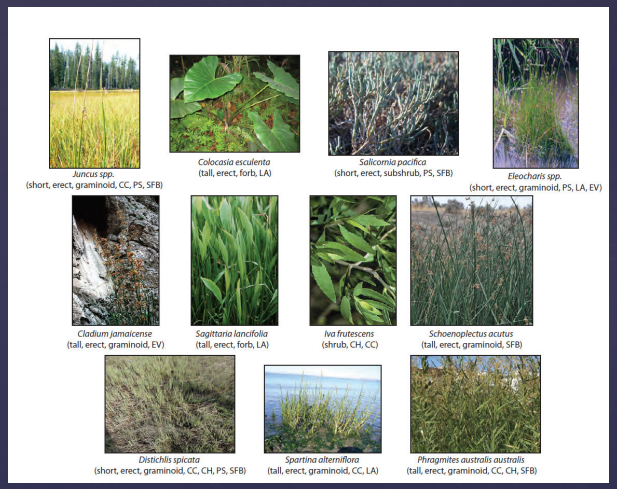
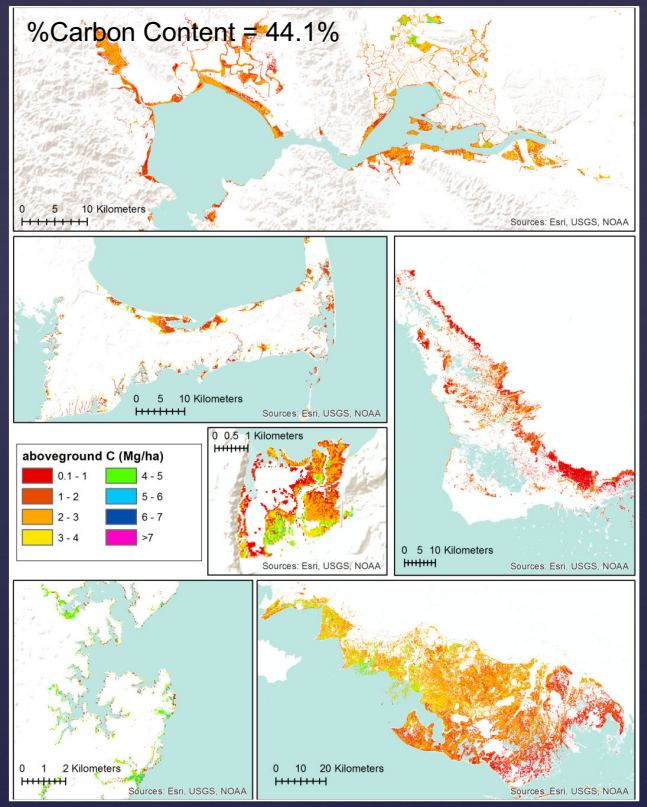
NASA Blue Carbon Monitoring System (# NNH14AY67I; Lead P.I. Lisamarie Windham-Myers, USGS).



Random Forest biomass model:
n=406
RMSE = 310 g/m^2
%RMSE = 10.3%
R^2 = 0.58



Multivariate delta method to propagate standard errors in mean C density and total C
x = mean biomass (Mg/ha)
y = %C
z = map area (ha) (Olofsson et al., 2014)

Aboveground C stocks in coastal wetlands chapter of National GHG Inventory

Admin Area	C-CAP Class	Mean C (Mg/ha)	+/- s.e.	Total C (Mg)	+/- s.e.
Terrebonne and St. Mary Parishes, LA	Estuarine Emergent	1.85	0.003	196,939	7,551
	Palustrine Emergent	2.67	0.004	310,822	13,834
	Total	2.25	0.003	507,761	14,822

Citation: Byrd, K.B., Ballanti, L., Thomas, N., Nguyen, D., Holmquist, J.R., Simard, M., Windham-Myers, L., 2018. A remote sensing-based model of tidal marsh aboveground carbon stocks for the conterminous United States. ISPRS Journal of Photogrammetry and Remote Sensing 139, 255-271. doi: https://doi.org/10.1016/j.isprsjprs.2018.03.019.