

Appendix

The Benefits of Combining Global and Local Data—A Showcase for Valuation and Mapping of Mangrove Climate Regulation and Food Provisioning Services within a Protected Area in Pará, North Brazil

Appendix A

Ecosystem service “Carbon stock for global climate regulation”

Species-specific average parameters of diameter at breast height (DBH), average height (H) and individuals per grid cell (Ind./Grid cell) for three different forest stands: *R. mangle*-dominated, *A. germinans*-dominated and *L. racemosa*-dominated [1]

Height values of the dominant species in a dominant stand were replaced by satellite based height data [2]

Stands / variables	<i>R. mangle</i> -dominated	<i>A. germinans</i> -dominated	<i>L. racemosa</i> -dominated
DBH _{Rz} ¹	20.7 cm	7.0 cm	No value
H _{Rz} ²	Variable, maximum tree height in a grid cell	7.5 m	No value
Ind./Gridcell _{Rz} ³	29.9	12.4	No value
DBH _{Av} ¹	32.6 cm	11.8	No value
H _{Av} ²	14.8 m	Variable, maximum tree height in a grid cell	No value
Ind./Gridcell _{Av} ³	5.1	148.2	No value
DBH _{La} ¹	13.8 cm	No value	13.1
H _{La} ²	8.1 m	No value	Variable, maximum tree height in a grid cell
Ind./Gridcell _{La} ³	3.0	No value	4.5

¹Average diameter at breast height, ²Maximum height in a grid cell/average height, ³Average individuals per grid cell, Rm=*R. mangle*, Av=*A. germinans*, La=*L. racemosa* [1–2]

References

1. Mehlig, U.; Menezes, M.P.M.; Reise, A.; Schories, D.; Medina, E. Mangrove Vegetation of the Caeté Estuary. In Saint-Paul, U. and Schneider, H. (eds): *Mangrove Dynamics and Management in North Brazil*. Ecological Studies 2010, volume 211, pp. 71–107. Berlin Heidelberg: Springer-Verlag. DOI: 10.1007/978-3-642-13457-9_6.
2. Simard, M.; Fatoyinbo, L.; Smetanka, C.; Rivera-monroy, V.H.; Castaneda-Moya, E.; Thomas, N.; Van der Stocken, T. Mangrove canopy height globally related to precipitation, temperature and cyclone frequency. *Nature Geoscience* 2019, 12 (12), pp. 40–45. DOI: 10.1038/s41561-018-0279-1.