

Biographical sketch

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(a) Professional preparation

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|---------------------|--------------|---------------------------|-------|------|
| Tufts University | Medford, MA | Environmental Engineering | B.S. | 1998 |
| Tufts University | Medford, MA | Environmental Engineering | M.S. | 2000 |
| Stanford University | Stanford, CA | Oceanography | Ph.D. | 2010 |

(b) Appointments

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| 2014–present | Scientist I, II; Oceanography Section, NCAR. |
| 2012–2014 | Project Scientist I; Oceanography Section, NCAR. |
| 2010–2012 | Postdoctoral Fellow; Advanced Study Program, NCAR. |
| 2003–2004 | Water Resources Engineer; Camp Dresser & McKee Inc., Cambridge, MA. |
| 2000–2002 | High School Physics & Geography Teacher; US Peace Corps, Tanzania. |

(c) Five most closely related publications (*student led; † postdoc led)

1. **Long, M. C.**, Moore, J. K., Lindsay, K., Levy, M., Doney, S. C., Luo, J. Y., et al. (2021). Simulations with the Marine Biogeochemistry Library (MARBL). *JAMES*, **13**, e2021MS002647.
2. **Long, M. C.**, T. Ito, and C. Deutsch (2019), Oxygen projections for the future, in Ocean deoxygenation: everyone's problem. Causes, impacts, consequences and solutions., edited by D. Laffoley and J. Baxter, doi:10.2305/IUCN.CH.2019.13.en.
3. *Krumhardt, K. M., N. S. Lovenduski, **M. C. Long**, and K. Lindsay (2017), Avoidable impacts of ocean warming on marine primary production: Insights from the CESM ensembles, *Global Biogeochem. Cycles*, **31**(1), 114–133.
4. **Long, M. C.**, C. A. Deutsch, and T. Ito (2016), Finding forced trends in oceanic oxygen. *Global Biogeochem. Cycles*, **30**, 381–397.
5. **Long, M. C.**, K. Lindsay, S. Peacock, J. K. Moore, S. C. Doney (2013), Twentieth-Century oceanic carbon uptake and storage in CESM1(BGC). *J. Clim.*, **26**(18), 6775–6800.

(d) Five other significant publications

1. **Long, M. C.**, B. B. Stephens, K. McKain, C. Sweeny, R. Keeling, E. A. Kort, et al. (2021), Strong Southern Ocean carbon uptake evident in airborne observations, *Science*, **374**(6572), 1275–1280.
2. Ito, T., **M. C. Long**, C. Deutsch, S. Minobe, D. Sun (2019), Mechanisms of low-frequency O₂ variability in the North Pacific, *Global Biogeochem. Cycles*, **33**(2), 110–124.
3. Ito, T., S. Minobe, **M. C. Long**, C. Deutsch (2017), Upper Ocean O₂ trends: 1958–2015, *Geophys. Res. Lett.*, **44**(9), 4214–4223.
4. Moore, J. K., W. Fu, F. Primeau, G. L. Britten, K. Lindsay, **M. C. Long**, S. C. Doney, N. Mahowald, F. Hoffman, J. T. Randerson (2018), Sustained climate warming drives declining marine biological productivity, *Science*, **359**(6380), 1139–1143.
5. †Harrison, C., **M. C. Long**, N. Lovenduski, J. K. Moore (2018), Mesoscale effects on carbon export: a global perspective. *Global Biogeochem. Cycles*, **32**(4), 680–703.