

Biographical sketch  
 Matthew C. Long  
 National Center for Atmospheric Research  
 P.O. Box 3000, Boulder, CO 80307  
 Phone: 303-497-1311; e-mail: mclong@ucar.edu  
 ORCID: 0000-0003-1273-2957

(a) Professional preparation

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
NCAR	Boulder, CO	Advanced Study Program	Postdoc	2010-12

(b) Appointments

2022–present	Director; [C]worthy Project at Convergent Research.
2014–present	Scientist I, II, III; Oceanography Section, Climate & Global Dynamics Laboratory, National Center for Atmospheric Research.
2012–2014	Project Scientist; Oceanography Section, Climate & Global Dynamics Laboratory, National Center for Atmospheric Research.
2005–2010	Research Assistant, Stanford University.
2004–2009	Teaching Assistant, Stanford University.
2003–2004	Water Resources Engineer; Camp Dresser & McKee Inc., Cambridge, MA.
2000–2002	High School Physics & Geography Teacher; US Peace Corps, Tanzania.
1999–1999	Environmental Analyst, Massachusetts Department of Public Health.

(c) Selected publications (\*student led; †postdoc led)

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. 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.
3. 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.
4. Ito, T., M. C. Long, C. Deutsch, S. Minobe, D. Sun (2019), Mechanisms of low-frequency O<sub>2</sub> variability in the North Pacific, *Global Biogeochem. Cycles*, 33(2), 110–124.
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.
6. 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.
7. \*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.

8. Ito, T., S. Minobe, M. C. Long, C. Deutsch (2017), Upper Ocean O<sub>2</sub> trends: 1958–2015, *Geophys. Res. Lett.*, 44(9), 4214–4223.
9. Long, M. C., C. A. Deutsch, and T. Ito (2016), Finding forced trends in oceanic oxygen. *Global Biogeochem. Cycles*, 30, 381–397.
10. 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) Synergistic activities

2020-2022	Co-Chair of the NCAR Scientists' Assembly Executive Committee
2020-2023	Member: NOAA Marine Ecosystem Task Force
2019	Lead organizer of the CLIVAR/OCB CMIP6 Hackathon
2018-2020	Member: Ocean Carbon & Biogeochemistry Scientific Steering Committee
2013	Lead organizer of the 2013 NCAR Advanced Study Program Graduate Student Colloquium: Carbon-climate connections in the Earth System