Biographical sketch

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(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_2 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_2 trends: 1958–2015, Geophy. 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

2023	Co-lead author, Chapter on Modeling Ocean Alkalinity Enhancement (OAE) in the OAE Best Practices Guide (in progress, target publish date: Fall 2023).
2022–	Co-Chair: Community Earth System Model, Biogeochemistry Working Group
2022–	Expert Advisor Frontier: An advance market commitment to accelerate carbon removal
2022–	Expert Advisor: Ocean Visions LauchPad, supporting selected competitors for the $100M XPRIZE in Carbon Removal
2022	Co-organizer: Ocean Carbon & Biogeochemistry Workshop: Marine Carbon Dioxide Removal: Essential Science and Problem Solving for Measurement, Reporting, and Verification