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Professional Experience

Executive Director, Pacific Institute for Climate Solutions, University Victoria, Canada (2015-present)
Professor, School of Environmental Studies, University Victoria, Canada (2015-present)
Executive Director, International Geosphere-Biosphere Program (2008-2015)
Director, Rutgers/NOAA Cooperative Marine Education and Research Program, Rutgers University (1994-2008)
Visiting Professor, Institute of Marine and Coastal Sciences, Rutgers University (1994-2012)
Secondment (sabbatical), UNESCO Intergovernmental Oceanographic Commission (2001-2002)
Distinguished Patrick Scholar, Assistant/Associate Curator, and Senior Scientist, Academy of Natural Sciences of Philadelphia (1982-1994)
Instructor in Marine Sciences, International Sea Grant Program, University of Pertanian, Malaysia (1980)

Education

Ph.D., Biological Oceanography; University of Rhode Island, Kingston, RI. (1982)
B.Sc., Biology; Boston University, Boston, MA (1974)

Selected Leadership Roles

Member, B.C. Climate Solutions and Clean Growth Advisory Council (2017-present)
Member, International Sustainability Advisory Board, Utrecht University, Netherlands (2018-present)
Member, Steering Committee, UN Global Climate Observing System (2015-present)
Executive Director, International Geosphere-Biosphere Program (2008-2015)
President, American Society of Limnology and Oceanography, (2006-2008)
Director, Rutgers/NOAA Cooperative Marine Education and Research Program, (1994-2008)
International Geosphere-Biosphere Program, Scientific Committee, member (2003-2008)
Evaluation Panel of Finnish Water Research, Finnish Academy of Sciences, (2007-2008)
U.S. National Committee for Intergovernmental Oceanographic Commission, UNESCO (2006-2008)
Expert Panel on Baltic Eutrophication, Sweden Environmental Protection Agency, (2005-2006)
International Nitrogen Initiative (INI) Steering Committee, member (2002-2008)
UNESCO-IOC International Working Group, Global Modeling of Nutrient Export from Watersheds (Global NEWS), Chair (2002-2009)
Board of Trustees, Bermuda Biological Station for Research, (2001-2008)
Institute for Ecosystem Studies, Scientific Advisory Committee, member (1998-2002)
United Nations, Organization for Economic Cooperation and Development, Intergovernmental Panel on Climate Change. Nitrous Oxide and Carbon Dioxide in Agriculture, Expert Work Group, member (1995-1997)

Awards and Honors

Harald Ulrik Sverdrup Lecturer, American Geophysical Union (2018)
Doctor *Honoris Causa* Degree, Utrecht University (2016)
Elected Fellow, American Academy of Arts and Sciences (2011)
Distinguished Achievement Award, University of Rhode Island President's Award (2011)
Certificate of Special US Congressional Recognition, Office of US Senator Sheldon Whitehouse (2011)
Elected President, American Society of Limnology and Oceanography (2006-2008)
Bronze Metal Award, NOAA Department of Commerce (2005)

Journal Editorships

Advisory Board, *Ambio* (2016-present)
Editorial Board of *Current Opinion in Environmental Sustainability* (2009-present)
Guest Editor, *Current Opinion in Environmental Sustainability*, special issue System Dynamics and Sustainability (2013-2014)
Editorial Board of *Ecosystems* (1999-2005)
Editorial Board of *Estuaries* (2000-2004)
Editorial Board of *Marine Pollution Bulletin* (1996-2000)
Editorial Board of FEMS *Microbiology Ecology* (1991-1997)

Funding (see Appendix for detail)
My research funding to date has been approx. 8 million USD from NSF, NASA, NOAA, EPA, and other sources.
Support for IGBP 2009 to 2015 - approx. 9.8 million Euros from national contributions for core support, plus grants for workshops, conferences, committee meetings, etc. from various sources

Rutgers University Teaching
Marine Biogeochemistry; Chemical Oceanography; Science Communication Skills

Student Committees
Major Advisor: 5 Ph.D., 9 Post-Docs
Committee Member: 10 Ph.D., 4 M.Sc.

Publications (*indicates co-author who was student, post doc, or research assistant with me)
Seitzinger, S.P. and L. Phillips. 2017. Nitrogen stewardship in the Anthropocene. *Science* 357, issue 6347, pp.350–351, doi:10.1126/science.aao0812
Jickells, T.D., E. Buitenhuis, K. Altieri*, A.R. Baker, D. Capone, R.A. Duce, F. Dentener, K. Fennel, M. Kanakidou, J. LaRoche, K. Lee, P. Liss, J.J. Middelburg, J.K. Moore, G. Okin, A. Oschlies, M. Sarin, S. Seitzinger, J. Sharples, A. Singh, P. Suntharalingam, M. Uematsu, L.M. Zamora. 2017. A reevaluation of the magnitude and impacts of anthropogenic atmospheric nitrogen inputs on the ocean. *Global Biogeochemical Cycles* 31(2): 289–305. doi:10.1002/2016GB005586
Pedde, S., C. Kroeze, E. Mayorga*, S.P. Seitzinger. 2017. Sources of nutrients in the Bay of Bengal Large Marine Ecosystem. *Regional Environmental Change. 17 (8), 2495-2506.* doi 10.1007/s10113-017-1176-7
Biermann, F., X. Bai, N. Bondre, W. Broadgate, C.T. A. Chen, P. Dube, J.W. Erisman, M. Glaser, S. van der Hel, M. Carmen Lemos, S. Seitzinger, K. C. Seto. 2016. Down to Earth: contextualizing the Anthropocene. *Global Environmental Change* 39:341-359 http://dx.doi.org/10.1016/j.gloenvcha.2015.11.004
Seitzinger, S.P. and E. Mayorga*. 2016. Chapter 3.3 Water Quality: Nutrient Pollution-baseline and projected scenarios. pp 73–86. In: UNEP-DHI and UNEP Volume 3 Transboundary River Basins: Status and Trends. United Nations Environment Programme, Nairobi.
Seitzinger, S.P., E. Mayorga*. 2016. Chapter 7.3 Nutrient inputs from river systems to coastal waters. pp 179–195 In: IOC-UNESCO and UNEP. Transboundary Waters Assessment Programme, Global Environment Facility, Large Marine Ecosystems: Status and Trends. United Nations Environment Programme, Nairobi.
Seitzinger, S.P., O. Gaffney, G. Brasseur, W. Broadgate, P. Ciais, M. Claussen, J.W. Erisman, T. Keifer, C. Lancelot, P.S. Monks, K. Smyth, J. Syvitski, M. Uematsu. 2016. International Geosphere-Biosphere Program and Earth system science: Three decades of co-evolution. *Anthropocene* 12:3-16 http://dx.doi.org/10.1016/j.ancene.2016.01.001
Verburg, P. H., J. A. Dearing, J. Dyke, S. van der Leeuw, S. Seitzinger, W. Steffen, J. Syvitski. 2016. Methods and approaches to modelling the Anthropocene. *Global Environmental Change Change* 39:328-340 doi:10.1016/j.gloenvcha.2015.08.007
Lee, R.*, E. Mayorga*, S.P. Seitzinger. 2015. Land-based nutrient loading to LMEs: a global watershed perspective on magnitudes and sources. *Environmental Development* 17:220-229 doi:10.1016/j.envdev.2015.09.006

Stevenson, L.A., S.P. Seitzinger. 2015. Forward to special issue on Least Developed Countries. *Weather and Climate Extremes* 7:1 doi:10.1016/j.wace.2015.03.004

Rockström, J. and 30 other authors including S. P. Seitzinger. 2014. Climate change: the necessary, the possible and the desirable. *Earth's Future* 2 (12):606-611.

Bouwman A.F., A.H.W. Beusen, J. Griffioen, J.W. Van Groenigen, M.M. Hefting, O. Oenema, P.J.T.M. Van Puijenbroek, S.P. Seitzinger, C.P. Slomp, E. Stehfest. 2013. Global trends and uncertainties in terrestrial denitrification and N_2O emissions. *Philosophical Transactions Royal Society* B 368:doi.org/10.1098/rstb.2013.0112.

Erisman, J.W., J. Galloway, S.P. Seitzinger, A. Bleeker, N. Dise, R. Petrescu, A. Leach, W. De Vries. 2013. Consequences of human modification of the global nitrogen cycle. *Philosophical Transactions Royal Society* B 368: doi.org/10.1098/rstb.2013.0116.

deVries, W., J. Kros, C. Kroeze, S. P. Seitzinger. 2013. Assessing planetary and regional nitrogen boundaries related to food security and adverse environmental impacts. *Current Opinion in Environmental Sustainability* 5:392-402.

Sipler*, R.E., D.A. Bronk, S.P. Seitzinger, R.J.Lauck*, L.R. McGuinness, G.J. Kirkpatrick, C.A. Heil, L.J. Kerkhof, O.M. Schofield. 2013. *Trichodesmium* derived dissolved organic matter is a source of nitrogen capable of supporting the growth of toxic red tide *Karenia brevis*. *Marine Ecology Progress Series* 483: 31-45.

Seitzinger, S.P., U. Svedin, C.L. Crumley, W. Steffen, S.A. Abdullah, C. Alfsen, W. J. Broadgate, F. Biermann, N.R. Bondre, J.A. Dearing, L. Deutsch, S. Dhakal, T. Elmqvist, N. Farahbakhshazad, O. Gaffney, H. Haberl, S. Lavorel, C. Mbow, A.J. McMichael, J.M.F. de Morais, P. Olsson, P.F. Pinho, K.C. Seto, P. Sinclair, M. Stafford Smith, L. Sugar. 2012. Planetary stewardship in an urbanizing world: Beyond city limits. *AMBIO* 41:787-794

Kroeze. C., A.F. Bouwman, S.P. Seitzinger. 2012. Modeling global nutrient export from watersheds. *Current Opinion in Environmental Sustainability* 4:195-202.

Ortiz-Montalvo, D.L., Y.B. Lim, M.J. Perri*, S.P. Seitzinger, B.J. Turpin. 2012. Volatility and yield of glycolaldehyde SOA formed through aqueous photochemistry and droplet evaporation. *Aerosol Science and Technology* 46:1002-1014.

Stafford–Smith, M., O. Gaffney, L. Brito, E. Ostrom, S.P. Seitzinger. 2012. Interconnected risks and solutions for a planet under pressure-overview and introduction. *Current Opinion in Environmental Sustainability* 4:1-4.

Erisman, J.W., J. Galloway, S. Seitzinger, A. Bleeker, K. Butterbach–Bahl. 2011. Reactive nitrogen in the environment and its effect on climate change. *Current Opinion in Environmental Sustainability* 3:1-9.

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Nobre, C., G. P. Brasseur, M. A. Shapiro, M. Lahsen, G. Brunet, A. J. Busalacchi, K. Hibbard, S.Seitzinger, K. Noone, J. P. Ometto. 2010. Addressing the complexity of the Earth system. *Bulletin of the American Meteorological Society* 91:1389-1396.

Seitzinger, S. P., A. F. Bouwman, and C. Kroeze. 2010. Preface to special section on past and future trends in nutrient export from global watersheds and impacts on water quality and eutrophication. *Global Biogeochemical Cycles* 24: GB0A01.

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Harrison*, J. A., A. F. Bouwman, E. Mayorga*, and S. Seitzinger. 2010. Magnitudes and sources of dissolved inorganic phosphorus inputs to surface fresh waters and the coastal zone: A new global model. *Global Biogeochemical Cycles*, 24: GB1003.

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secondary organic aerosol (SOA) formation. *Atmospheric Chemistry and Physics* 10:10521-10539.
Tan*, Y., A.G. Carlton, S.P. Seitzinger and B.J. Turpin. 2010. SOA from methylglyoxal in clouds and wet aerosols: measurement and prediction of key products. *Atmospheric Environment* 44:5218-5226.
Galloway, J., F. Dentener, M. Burke, E. Dumont, L. Bouwman, R. Kohn, H. Mooney, S. Seitzinger and C. Kroeze. 2010. The impact of animal production systems on the nitrogen cycle. Chpt. 6. *In:* H. Steinfeld, H.A. Mooney, F. Schneider, and L.E. Neville (eds.). Livestock in a Changing Landscape: Vol. 1. Drivers, Consequences, and Responses. Island Press, Washington, DC.
Seitzinger, S.P. and R. Lee*. 2010. Land-based nutrient loading to LMEs: a global watershed perspective on magnitudes and sources. Chpt. 7. *In:* K. Sherman and S. Adams (eds). Sustainable Development of the World's Large Marine Ecosystems during Climate Change. IUCN, Gland, Switzerland.
Kroeze, C., E. Dumont and S. P. Seitzinger. 2010. Future trends in emissions of N_2O from rivers, estuaries and continental shelves. *Journal of Integrative Environmental Sciences* 7:71-78.
Perri*, M. J., Y. B. Lim, S. P. Seitzinger and B. J. Turpin. 2010. Organosulfates from glycolaldehyde in aqueous aerosols and clouds: laboratory studies. *Atmospheric Environment* 44:2658-2664.
Harrison*, J.A., R. J. Maranger, R.B. Alexander, A. Giblin, P-A. Jacinthe, E. Mayorga*, S.P. Seitzinger, D. J. Sobota and W. M. Wollheim. 2009. The regional and global significance of nitrogen removal in lakes and reservoirs. *Biogeochemistry* 93:143-157.
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Sherman, K., I. Belkin, S.P. Seitzinger, P. Hoagland, K. Jin, M-C. Aquarone and S. Adams. 2009. Indicators of changing states of large marine ecosystems. pp. 13-49. *In:* K. Sherman, M-C Aquarone and S. Adams (eds.). Sustaining the World's Large Marine Ecosystems. IUCN, Gland, Switzerland.
Conley, D.J., H. W. Paerl, R. W. Howarth, D. F. Boesch, S. P. Seitzinger, K. E. Havens, C. Lancelot, G. E. Likens. 2009. Controlling eutrophication: nitrogen and phosphorus. *Science* 323: 1014-1015.
Leemans, R., G. Asrar, A. Busalacchi, J. Canadell, J. Ingram, A. Larigauderie, H. Mooney, C. Nobre, A. Patwardhan, M. Rice, S. Schmidt, S.P. Seitzinger, H. Virji, C. Vorosmarty and O. Young. 2009. Developing a common strategy for integrative global environmental change research and outreach: The Earth System Science Partnership (ESSP) Strategy paper. *Current Opinion in Environmental Sustainability* 1:4-13.
Alexander, R.B., J. K. Böhlke, E. W. Boyer, M. B. David, J.W. Harvey, P. J. Mulholland, S. P. Seitzinger, C. R. Tobias, C.Tonitto and W. M. Wollheim. 2009. Dynamic modeling of nitrogen losses in river networks unravels the coupled effects of hydrological and biogeochemical processes. *Biogeochemistry* 93:91-116.
Groffman, P.M., E. A. Davidson and S. Seitzinger. 2009. New approaches to modeling denitrification. *Biogeochemistry* 93:1-5.
Fennel, K., D. Brady, D. DiToro, R. W. Fulweiler, W. S. Gardner, A. Giblin, M. J. McCarthy, A. Rao, S. Seitzinger and M. Thouvenot-Korppoo and C. Tobias. 2009. Modeling denitrification in aquatic sediments. *Biogeochemistry* 93:159-178.
Altieri*, K. E., B. J. Turpin, and S. P. Seitzinger. 2009. Oligomers, organosulfates, and nitrooxy organosulfates in rainwater identified by ultra---high resolution electrospray ionization FT-ICR mass spectrometry. *Atmospheric Chemistry Physics* 9(7):2533-2542.
Perri*, M. J., S. Seitzinger and B. J.Turpin. 2009. Secondary organic aerosol production from aqueous photooxidation of glycolaldehyde: laboratory experiments. *Atmospheric Environment* 43:1487-1497.
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Sipler*, R. and S.P. Seitzinger. 2008. Use of electrospray ionization (ESI) mass spectrometry to investigate complex dissolved organic matter (DOM) and its potential applications in phytoplankton research. *Harmful Algae* 8 (1):182-187.
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Liu, K-K. Seitzinger, S. P., Mayorga*, E., Harrison*, J., Ittekkot V. 2008. Fluxes of nutrients and selected organic pollutants carried by rivers. Chpt. 8. *In*: E.R. Urban Jr., B. Sundby, P. Malanotte-Rizzoli, and J. Mellilo (eds.). Watersheds, Bays, and Bounded Seas, The Science and Management of Semi-Enclosed Marine Systems. Island Press, Washington, D.C.

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Seitzinger, S.P., and J.A. Harrison*. 2008. Land-based nitrogen sources and their delivery to coastal systems. Chapter 9, pp. 469-510. *In:* C. Capone, D.A. Bronk, M.R. Mullholland, E. Carpenter (editors), Nitrogen in the Marine Environment. 2nd edition, Elsevier.

Duce, R.A., J. LaRoche, K.Altieri*, K. Arrigo, A. Baker, D. Capone, S. Cornell, F. Dentener, J. Galloway, R. Ganeshram, R.Geider, T. Jickells, M. Kuypers, R. Langlois, P. S. Liss, S. M. Liu, J. Middelburg, C.M. Moore, S. Nickovic, A. Oschlies, T. Pedersen, J. Prospero, R. Schlitzer, S. Seitzinger, L.L. Sorensen, M. Uematsu, O. Ulloa, M. Voss, B. Ward, and L. Zamora. 2008. The impacts of atmospheric anthropogenic nitrogen on the open ocean. *Science.* 320:893-897.

Galloway, J.N., A.R. Townsend, J.W. Erisman, M. Bekunda, Z. Cai, J.R. Freney, L.A. Martinelli, S.P. Seitzinger, and M.A. Sutton. 2008. Transformation of the nitrogen cycle: Recent trends, questions, and potential solutions. *Science.* 320:889-892.

Hood, R., W. Naqvi, J. Goes,V. Coles, J. McCreary, N. Bates, J. Wiggert, G. Meyers, N. Mahowald and S. Seitzinger. 2008. Research opportunities and challenges in the Indian Ocean, EOS 89 (13) doi:10.1029/2008EO130001

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Glibert, P.M., R. Azanza, M. Burford, K. Furuya, E. Abal, A. Al-Azri, F. Al-Yamani, P. Andersen, D.M. Anderson, J. Beardall, G.M. Berg, L. Brand, D. Bronk, J. Brookes, J.M. Burkholder, A. Cembella, W.P. Cochlan, J.L. Collier, Y. Collos, R. Diaz, M. Doblin, T. Drennen, S. Dyhrman, Y. fukuyo, M. Furnas, J. Galloway, E. Graneli, D.V. Ha, G. Hallegraeff, J. Harrison, P.J. Harrison, C.A. Heil, K. Heimann, R. Howarth, C. Jauzein, A.A. Kana, T.M. Kana, J. Kim, R. Kudela, C. Legrand, M. Mallin, M. Mulholland, S. Murray, J.O'Niel, G. Pitcher, Y. Qi, N. Rabalais, R. Raine, S. Seitzinger, P.S. Salomon, C. Solomon, D.K. Stoecker, G. Usup, J. Willson, K. Yin, M. Zhou, and M. Zhu. 2008. Ocean urea fertilization for carbon credits poses high ecological risks. *Marine Pollution Bulletin*. 56:1049-1056.

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Wiegner*, T.N., S.P. Seitzinger, P.M. Glibert, and D.A. Bronk. 2006. Bioavailability of dissolved organic nitrogen and carbon from nine rivers in the eastern United States. *Aquatic Microbial Ecology* 43:277-287.
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