

BIOGRAPHICAL SKETCH – Evamaria W. Koch

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**Professional Preparation:**

Universidade de Rio Grande, Brazil, Oceanography B.S. 1984  
University of South Florida, Tampa, Biology, M.S. 1988  
University of South Florida, St. Petersburg, Marine Science Ph.D. 1993

**Positions Held:**

Associate Professor, Horn Point Laboratory, University of Maryland Center for Environmental Science, Cambridge, MD, 2001 - present.

Assistant Professor, Horn Point Laboratory, University of Maryland Center for Environmental Science, Cambridge, MD, 1995-2001.

Visiting Scientist, Max Planck Institute for Marine Microbiology, Bremen, Germany, October and November 1999.

Research Scientist, Department of Marine Sciences, University of Connecticut, 1993-1995.

Biological Scientist, Florida Marine Research Institute, St. Petersburg, FL, 1988-1989.

**Publications Last Three Years:**

**2007** Chen, S.-N., L.P. Sanford, E.W. Koch, F. Shi, E.W. North. 2007. A nearshore model to investigate the effects of seagrass bed geometry on wave attenuation and suspended sediment transport. *Estuaries* 30(2):296-310.

Van den Belt, M., R. Constanza, S. Demers, S. Diaz, G.A. Ferreyra, S.M.F. Gianesella, E.W. Koch, F.R. Momo and M. Vernet. 2007. Mediated modeling for integrating science and stakeholders: Impacts of enhanced ultraviolet-B radiation on ecosystem services. In: Tiessen, H., M. Brklacich, G. Breulmann and R.S.C. Menezes (eds), *Communicating Global Change Science to Society*, Island Press, Washington, pp 179-186.

**2008** Barbier, E.B., E.W. Koch, B. Silliman, E. Wolanski, J. Primavera, E. Granek, S. Hacker, S. Polasky, S. Aswani, L.A. Cramer, D. Stoms, C. Kennedy, B. Halpern, D. Bael, C. Kappel, G.M.E. Perillo and D.J. Reed. 2008. Coastal ecosystem-based management with non-linear ecological functions and values. *Science* 319:321-323 (Report).

Barbier, E.B., E.W. Koch, B. Silliman, S. Hacker, E. Wolanski, J. Primavera, E. Granek, S. Polasky, S. Aswani, L.A. Cramer, D. Stoms, C. Kennedy, D. Bael, C. Kappel, G.M.E. Perillo and D.J. Reed. 2008. Response to R.A. Feagin's Letter: Vegetation's role in coastal protection. *Science* 320 (5873): 176b (Letter).

Crump, B.C. and E.W. Koch. 2008. Attached bacteria populations shared by four species of aquatic angiosperms. *Applied and Environmental Microbiology* 74:5948-5957.

**2009** Koch, E.W., E.D. Barbier, B.R. Silliman, D.J. Reed, G.M.E. Perillo, S.D. Hacker,

E.F. Granek, J.H. Primavera, N. Muthiga, S. Polasky, B.S. Halpern, C.J. Kennedy, E. Wolanski, C.V. Kappel. 2009. Non-linearity in ecosystem services: temporal and spatial variability in coastal protection. *Frontiers in Ecology and the Environment*

Wicks, E.C., E.W. Koch, J.M. O'Neil and K. Elliston. 2009. Sediment organic content and the growth and distribution of *Zostera marina*: hydrodynamic conditions may play a role. *Marine Ecology Progress Series*

Smith, K.A., E.W. North, F. Shi, S-N. Chen, R.R. Hood, E.W. Koch and R.I.E. Newell. 2009. Modeling the effects of oyster reefs and breakwaters on seagrass growth. *Estuaries and Coasts*

#### **Five Other Relevant Publications:**

Koch, E.W., J. Ackerman, M. van Keulen and J. Verduin. 2006. Fluid Dynamics in Seagrass Ecology: from Molecules to Ecosystems. In: Larkum, A.W.D., R.J. Orth and C.M. Duarte (eds), *Seagrasses: Biology, Ecology and Conservation*. Springer Verlag, pp 193-225.

Newell, R.I.E. and E.W. Koch. 2004. Modeling seagrass density and distribution in response to changes in turbidity stemming from bivalve filtration and seagrass sediment stabilization. *Estuaries* 27:793-806.

Koch, E.W. and R.J. Orth 2003. *Seagrasses of the Mid-Atlantic Coast, USA*. World Atlas of Seagrasses, University of California Press, pp 216-223.

Kemp, W.M., R. Batiuk, R. Bartleson, P. Bergstrom, V. Carter, C. Gallegos, W. Hunley, L. Karrh, E.W. Koch, J. Landwehr, K. Moore, L. Murray, M. Naylor, N. Rybicki, J.C. Stevenson and D. Wilcox. 2004. Habitat requirements for submerged aquatic vegetation in Chesapeake Bay: Water quality, light regime, and physical-chemical factors. *Estuaries* 27(3):363-377.

Stevenson, J.C., M.S. Kearney and E.W. Koch. 2002. Impacts of Sea Level Rise on Tidal Wetlands and Shallow-Water Habitats: A Case Study from Chesapeake Bay. In: N.A. McGinn (Ed.) *Fisheries in a Changing Climate*. American Fisheries Society, Symposium 32, Bethesda, Maryland, pages 23-36.

#### **Synergistic Activities:**

**National Academy of Sciences Committee on “Mitigating Shore Erosion Along Sheltered Coasts”; Founding member of the Global Seagrass Monitoring Network, SeagrassNet; Member of the Steering Committee for the World Seagrass Association; Member of the Scientific and Technical Advisory Committee for the Maryland Coastal Bays.**

#### **Collaborators and Other Affiliations:**

*Advisors:* C. Dawes (M.S), A. Hine & G. Gust (Ph.D.), C. Yarish (Post-Doc)

*Students:* M. Guarraci, K. Chiscano, A. Klunenberg, C. Huber, K. Magalhães, C. Wicks, T. Jordan, K. McKone

*Post-Docs:* G. Di Carlo