CURRICULUM VITAE

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Department of Natural Resource Sciences and McGill School of Environment, McGill University, 21,111 Lakeshore Road, Ste. Anne-de-Bellevue, Quebec, Canada, H9X 3V9

RESEARCH INTERESTS:

Sustainable use and management of ecosystem services; multi-functional landscapes; human impacts on biogeochemical cycles; management of tradeoffs among ecosystem services, especially agricultural production and water quality; global food security, agriculture and the SDGs, land use change and water quality; urban ecology; communicating science; scenarios

EDUCATION:

University of Wisconsin (1999-2002)
Ph.D., Limnology and Marine Sciences
Advisor: Dr. Stephen R. Carpenter

University of Wisconsin (1996-1999)
M.Sc., Land Resources
Advisor: Dr. Stephen R. Carpenter

Oberlin College (1990-1994)
B.A. Cum Laude, Biology and Environmental Studies, Minor in Chemistry
Advisors: Dr. David W. Orr and Dr. Roger H. Laushman

ACADEMIC APPOINTMENTS:

PROFESSOR, *McGill University,* Montreal, QC, Canada (1/2020 -)
Jointly appointed in the McGill School of Environment and the Department of Natural Resource Sciences.

CRC CHAIR, TIER 1, Sustainability Science (10/2019 – 10/2026)

ASSOCIATE PROFESSOR, *McGill University,* Montreal, QC, Canada (6/2012 – 12/2019)
Jointly appointed in the McGill School of Environment and the Department of Natural Resource Sciences.

AFFILIATE, Gund Institute, University of Vermont. Burlington, Vermont (2014 – present)

ASSISTANT PROFESSOR, *McGill University,* Montreal, QC, Canada (6/2005 – 6/2012)
Jointly appointed in the McGill School of Environment and the Department of Natural Resource Sciences. [On maternity leave September 2007 to September 2008, July 2009 to April 2010.]

POSTDOCTORAL RESEARCHER, *University of Wisconsin*, Madison, WI (1/2002 – 5/2005)
Technical and scientific support for the Millennium Ecosystem Assessment scenarios working group.

PUBLICATIONS:

Lifetime Summary (to date)
a) H-index: 54 (Google Scholar); 39 (ISI)
b) Papers in refereed journals (116)
c) Papers in press (3)
d) Papers in review (14)
e) Chapters in books - refereed (21)
f) Non-Peer Reviewed Publications (17)

SCIENTIFIC PUBLICATIONS (students in my lab are underlined)

In print

116. Norstrom, AV, C Cvitanovic, MF Lof, S West, C Wyborn, P Balvanera, AT Bednarek, **EM Bennett**, R Biggs, A de Bremond, BM Campbell, JG Canadell, SR Carpenter, C Folke, EA Fulton, O Gaffney, S Gelcich, J-B Jouffray, M Leach, M LeTissier, B Martin-Lopez, M-F Loutre, AM Meadown, H Nagendra, D Payne, G Peterson, B Reyers, R Scholes, CI Speranza, M Spierenburg, M Stafford-Smith, M Tengo, S van der Hel, I van Putten, H Osterblom. 2020. Principles for knowledge co-production in sustainability science. Nature Sustainability.
115. Solan, M, **EM Bennett**, PJ Mumby, J Leyland, JA Godbold. 2020. Benthic-based contributions to climate change mitigation and adaptation. Philosophical Transactions B.
114. Weise, H, H Auge, C Baesler, I Baerlund, **EM Bennett**, U Berger, F Bohn, A Bonn, D Borchardt, F Brand, A Cchatzinotas, R Corstanie, F De Laender, P Dietrich, S Dunker, W Durka, I Fazey, J Groeneveld, CSE Guilbaud, H Harms, S Harpole, J Harris, K Jaz, F Jeltsch, K Johst, J Joshi, S Klotz, I Kuhn, C Kuhlicke, B Muller, V Radchuk, H Reuter, K Rinke, M Schmitt-Jansen, R Seppelt, A Singer, RJ Standish, HH Thulke, B Tietien, M Weitere, C Wirth, C Wolf, V Grimm. 2020. Resilience trinity: safeguarding ecosystem services across time horizons and decision contexts? Oikos 129(4): 445-456.
113. Falardeau, M and **EM Bennett**. 2020. Towards integrated knowledge of climate change in Arctic marine systems: a systematic literature review of multidisciplinary research. Arctic Science 6: 1-23.
112. Mastrangelo, ME, N Perez-Harguindeguy, L Enrico, **EM Bennett**, S Lavorel, G Cumming, DV Abeygunawardane, B Burkhard, B Egoh, L Frishkoff, L Galetto, S Huber, DS Karp, A Ke, E Kowaljow, B Locatelli, B Martin-Lopez, P Meyfroidt, TH Mwampamba, J Nel, KA Nicholas, C Nicholson, E Otero-Rozas, SJ Rahlao, C Raudsepp-Hearne, T Ricketts, U Shrestha, KJ Winkler, K Zoeller. 2019. Key knowledge gaps to achieve global sustainability goals. Nature Sustainability.
111. Chaplin-Kramer, R, RP Sharp, C Weil, **EM Bennett**, U Pascual, AL Vogl, KK Arkema, KA Brauman, AD Guerrry, NM Haddad, M Hamann, P Hamel, JA Johnson, L Mandle, HM Pereira, S Polasky, M Ruckelshaus, MR Shaw, JM Silver, GC Daily. 2019. Global Modeling of Nature's Contributions to People. Science 366: 255–258.
110. Galappaththi, E, J Ford, **EM Bennett**, F Berkes. 2019. Climate change and community fisheries in the Arctic: A case study from Pangnirtung, Canada. Journal of Environmental Management 250: 109534.
109. Garrah, J, B Frei, and **EM Bennett**. 2019. Bright Spots Among Lakes in the Rideau Valley

Watershed, Ontario. Ecology & Society 24(3):22.

108. Singh, GG, G Bassioni, E Ceyhan, V Farjalla, B Chen, M Dominik, E Alisic, A Kemp, **EM Bennett**, N Selin, A Pelling, KMA Chan. 2019. Science engagement unrewarded by institutions Despite high perceived value and motivated researchers. Frontiers in Ecology and Environment.
107. Hanna, D, C Raudsepp-Hearne, and **EM Bennett**. 2019. The contribution of protected areas to ecosystem service provision and biodiversity. Conservation Biology
106. Haberman, D and **EM Bennett**. 2019. Ecosystem service bundles in global hinterlands. Environmental Research Letters.
105. Raudsepp-Hearne, C, GD Peterson, **EM Bennett**, R Biggs, A Norstrom, L Pereira, J Vervoort, D Iwaniec, T McPhearson, T Hichert, M Falardeau, and A Jimenez-Aceituno. 2019. Seeds of Good Anthropocenes: Developing Sustainability Scenarios for Northern Europe. Sustainability Science.
104. Martin-Lopez, B, M Felipe-Lucia, **EM Bennett**, A Norström, GD Peterson, T Plieninger, C Hicks, F Turkelboom, M García-Llorente, S Jacobs, S Lavorel, B Locatelli. 2019. A novel telecoupling framework to assess social relations across spatial scales for ecosystem services research. Journal of Ecosystem Management 241: 251-263.
103. Lin, M, **EM Bennett**, and A Biswas. 2019. Spatio-temporal dynamics of groundwater level in the Yellow River Basin. Journal of Environmental Management 235: 84-95.
102. Lin, Mi, **EM Bennett**, A Biswas. 2019. Identifying hotspots and representative monitoring area of groundwater changes with time stability analysis. Science of the Total Environment 667: 419-426.
101. J-O Goyette, **EM Bennett**, and R Maranger. 2018. The influence of landscape features, dams, lakes, and climate on uncoupling nitrogen and phosphorus transport throughout the watershed. Biogeochemistry 142: 155-174.
100. Galappaththi, E, J Ford, **EM Bennett**. 2018. A framework for assessing community adaptation to climate change in a fisheries context. Environmental Science and Policy 92: 17-26.
99. Goyette, JO, **EM Bennett**, and R Maranger. 2018. Low phosphorus buffering capacity and long legacies in watersheds threaten water quality. Nature Geoscience 11:921-925
98. Treadwell, J, G Clark, and **EM Bennett**. 2018. The role of management instruments in the diversion of organic municipal solid waste and phosphorus recycling. FACETS 3: 896–919.
97. Falardeau, M, **EM Bennett**, and C Raudsepp-Hearne. 2018. A novel approach for co-producing positive scenarios that explore agency: Case study from the Canadian Arctic. Sustainability Science 14: 205-220.
96. Methot, J and **EM Bennett**. 2018. Reconsidering non-traditional export agriculture and household food security: a case study in rural Guatemala. PLOS One 13(5): e0198113.
95. Frei, B, D Renard, M Mitchell, V Seufert, B Chaplin-Kramer, J Rhemtulla, and **EM Bennett**. 2018. Bright spots in agricultural landscapes: Identifying areas exceeding expectations for multifunctionality and biodiversity. Journal of Applied Ecology: 1-13.
94. Talbot, CJ, **EM Bennett**, K Cassell, DM Hanes, EC Minor, H Paerl, PA Raymond, R Vargas, PG Vidon, W Wollheim, MA Xenopoulos. 2018. Gains and losses of aquatic ecosystem services from small and extreme flooding. Biogeochemistry. 141(3): 439-461.
93. Kusmer, AS, JO Goyette, GK MacDonald, **EM Bennett**, R Maranger, and PJA Withers. 2018. Watershed buffering of legacy phosphorus pressure at a regional scale: A comparison across space and time. Ecosystems 22(1): 91-109.

92. Frei, B, **EM Bennett**, and JT Kerr. 2018. Heterogenous, multifunctional agricultural landscapes critical for species of conservation concern in agroecosystems with a long history of agriculture. Regional Environmental Change 7: 2105-2115.
91. Nesme, T, GS Metson, **EM Bennett**. 2018. Global phosphorus flows through agricultural trade. Global Environmental Change 50: 133-141.
90. Chillo, V, D Vazquez, M Amoroso, and **EM Bennett**. 2018. Land use intensity indirectly affects ecosystem services mainly through plant functional identity in a temperate forest. Functional Ecology 32: 1390–1399.
89. Wironen, M, **EM Bennett**, and J Erikson. 2018. Phosphorus Flows and Legacy Accumulation in an Animal-Dominated Agricultural Region from 1925 to 2012. Global Environmental Change. 50: 88–99.
88. Treadwell, JL, OG Clark, and **EM Bennett**. 2018. Dynamic simulation of phosphorus flows through Montreal's food and waste systems. Resources, Conservation, and Recycling 131:122-133
87. Hanna, D, C Ouellet-Dallaire, S Tomscha, and **EM Bennett**. 2017. A review of riverine ecosystem service quantification: shortcomings and recommendations. Journal of Applied Ecology 55: 1299–1311.
86. Vermaire, JC, ZE Taranu, GK MacDonald, K Velghe, **EM Bennett**, and I Gregory-Eaves. 2017. Extrinsic versus intrinsic regimes shifts in shallow lakes: Long-term response of cyanobacterial blooms to historical catchment phosphorus loading and climate warming. Frontiers in Ecology and Evolution 5:146.
85. Campbell, BM, DJ Beare, EM Bennett, JM Hall-Spencer, JSI Ingram, F Jaramillo, R Ortiz, N Ramankutty, JA Sayer and D Shindell. 2017. Agriculture production as a major driver of the Earth system exceeding planetary boundaries. Ecology and Society 22 (4):8. [online] URL: https://www.ecologyandsociety.org/vol22/iss4/art8/
84. Spake, R, R Lasseur, E Crouzat, **EM Bennett**, J Maes, M Mulligan, M Mouchet, GD Peterson, CJE Schlup, W Thuiller, MG Turner, PH Verberg, K Parks, M Schaafsma, JM Bullock, S Lavorel, F Eigenbrod. 2017. Unpacking ecosystem service bundles: towards predictive mapping of synergies and trade-offs between ecosystem services. Global Environmental Change 47: 37-50.
83. Rieb, JT, R Chaplin-Kramer, GC Daily, PR Armsworth, K Böhning-Gaese, A Bonn, GS Cumming, F Eigenbrod, V Grimm, BM Jackson, A Marques, SK Pattanayak, HM Pereira, GD Peterson, TH Ricketts, BE Robinson, M Schröter, LA Schulte-Moore, R Seppelt, MG Turner, and **EM Bennett**. 2017. When, where, and how much does nature matter? BioScience 67(9): 820-833.
82. Sutherland, IJ, A Villamagna, C Ouellet Dallaire, **EM Bennett**, ATM Chin, A Yeung, KA Lamothe, SA Tomscha, and R Cormier. 2017. Undervalued and under pressure: a plea for greater attention toward regulating ecosystem services. Ecological Indicators 94: 23-32.
81. Garcia Rodrigues, J, S Villasante, AJ Conides, SR Rodriguez, S Raicevich, P Pita, KM Kleisner, C Pita, P Lopes, VA Roldán, S Ramos, D Klaoudatos, L Outeiro, C Armstrong, L Teneva, S Stefanski, A Böhnke-Henrichs, M Kruse, AI Lillebø, **EM Bennett**, A Belgrano, A Murillas, IS Pinto, B Burkhard. 2017. Marine and Coastal Cultural Ecosystem Services: knowledge gaps and research priorities. One Ecosystem 2: e12290. https://doi.org/10.3897/oneeco.2.e12290
80. Potvin, C, D Sharma, I Creed, S Aitken, F Anctil, **EM Bennett,** F Berkes, S Bernstein, N Bleau, A Bourque, B Brown, S Burch, J Byrne, A Cunsolo-Willox, A Dale, D de Lange, B Dyck, M Entz, J Etcheverry, R Faucher, A Fenech, L Fraser, I Henriques, A Heyland, M Hoffmann, G Hoberg , M

Holden, G Huang, A Jacob, S Jodoin, A Kemper, M Lucotte, R Maranger, L Margolis, I Mauro, J McDonnell, J Meadowcroft, C Messier, M Mkandawire, C Morency, N Mousseau, K Oakes, S Otto, P Palmater, T Palmer, D Paquin, A Perl, R Potvin, H Ramos, C Raudsepp-Hearne, N Richards, J Robinson, S Sheppard, S Simard, B Sinclair, N Slawinski, M Stoddart, M-A Villard, C Villeneuve, T Wright. 2017. Stimulating a Canadian narrative for climate. FACETS 2: 131-149.

79. Balvanera, P. T. M. Daw, T. Gardner, B. Martín-Lopez, A. V. Nörstrom, C.I. Speranza, M. Spierenburg, **EM Bennett**, M. Farfan, M. Hamann, J. N. Kittinger, T. Luthe, M. Maass, G.D. Peterson,, G. Pérez-Verdin. 2017. Key features for more successful place-based sustainability research on social-ecological systems. Ecology and Society 22 (1):14. URL: http://www.ecologyandsociety.org/vol22/iss1/art14/
78. **Bennett, EM.** 2017. Research frontiers in ecosystem service science. Ecosystems (Special Feature on the Future of Ecosystem Ecology) 20 (1): 31-37.
77. Renard, D., J. Rhemtulla, and **E. M. Bennett**. 2016. Agro-biodiversity has increased over a 95 year period at sub-regional and regional scales in southern Quebec, Canada. Environmental Research Letters 11: 12404.
76. Lamy, T. Liss, K., **E. M. Bennett**, and A. Gonzalez. 2016. Landscape structure affects the provision of multiple ecosystem services. Environmental Research Letters 11: 124017.
75. **Bennett EM** and R Chaplin-Kramer. 2016. Science for the sustainable use of ecosystem services. F1000 research 5: 2622.
74. **Bennett, E.M.**, M. Solan, R. Biggs, T. MacPhearson, A. Norstrom, P. Olsson, L. Pereira, G. D. Peterson, C. Raudsepp-Hearne, F. Beirmann, S. R. Carpenter, E. Ellis, T. Hichert, V. Galaz, M. Lahsen, B. Martin-Lopez, K. A. Nicolas, R. Preisser, G. Vince, J. Vervoort, and J. Xu. 2016. Bright Spots: Seeds of a Good Anthropocene. Frontiers in Ecology and Environment 14(8): 441-448.
73. Tomscha, S, I Sutherland, D Renard, SE Gergel, JE Rhemtulla, **EM Bennett**, L Daniels, I Eddy, E Clark. 2016. A guide to historical datasets for reconstructing ecosystem services over time. BioScience 66 (9): 747-762.
72. Maguire, DY, **EM Bennett**, and CM Buddle. 2016. Sugar maple tree canopies as reservoirs for arthropod functional diversity in forest patches across a fragmented agricultural landscape in southern Quebec, Canada. Ecoscience 23: (1) https://doi.org/10.1080/11956860.2016.1192010
71. Sutherland, IJ, SE Gergel, and **E.M. Bennett**. Seeing the forest for its multiple ecosystem services: indicators for cultural services in heterogeneous forests. 2016. Ecological Indicators 71: 123-133.
70. Goyette, J-O., **E.M. Bennett**, R. W. Howarth, R. Maranger. 2016. Changes in anthropogenic nitrogen and phosphorus inputs to the St. Lawrence Basin over 100 years: impacts on riverine export. Global Biogeochemical Cycles 30: 1000-1014.
69. Martinez-Melendez, L.A., and **E. M. Bennett**. 2016. Is crop trade between the US and Mexico environmentally efficient. Environmental Research Letters 11: doi:10.1088/1748-9326/11/5/055004.
68. Sutherland, I. J., **E. M. Bennett**, and S. E. Gergel. 2016. Recovery trends for multiple ecosystem services reveal long-term tradeoffs from temperate forest harvesting. Forest Ecology and Management 374: 61–70.

67. Schipanski, M. E., G. K. MacDonald, S. Rosenzweig, **E. M. Bennett**, R. Bezner Kerr, J. Blesh, J. Chappell, T. Crews, J. G. Lundgren, and C. Schnarr. 2016. Realizing resilient food systems. BioScience 66(7): 600-610.
66. Maguire D.Y., Buddle, C.M., and **E.M. Bennett**. 2016. Within and among patch variabillty in patterns of insect herbivory across a fragmented forest landscape. PLoSONE 11(3): e0150843 DOI:10.1371/journal.pone.0150843
65. Nesme, T., S. Roques, G. S. Metson, and **E. M. Bennett**. 2016. The surprisingly small but increasingly important role of international agricultural trade on the European Union's dependence on mineral phosphorus fertilizer. Environmental Research Letters 11: 025003.
64. Palomo, I, MR Felipe-Lucia, **E. M. Bennett**, B. Martin-Lopez, U. Pascual. 2016. Disentagling the pathways and effects of ecosystem service co-production. Advances in Ecological Research 54: 245-283.
63. Metson, GS, GK MacDonald, D Haberman, T Nesme, and **EM Bennett**. 2016. Feeding the Corn Belt: Opportunities for phosphorus recycling in U.S. agriculture. Science of the Total Environment 542: 1117–1126.
62. Mulder, C., **E. M. Bennett**, David A. Bohan, Michael Bonkowski, Stephen R. Carpenter, Rachel Chalmers, Wolfgang Cramer, Isabelle Durance, Nico Eisenhauer, Alison J. Haughton, Jean-Paul Hettelingh, Jes Hines, Michael A. Huston, Erik Jeppesen, Jennifer Adams Krumins, Athen Ma, Giorgio Mancinelli, Órla McLaughlin, Shahid Naeem, Unai Pascual, Josep Peñuelas, Nathalie Pettorelli, Michael J. O. Pocock, Dave Raffaelli, Jes J. Rasmussen[§], Graciela M. Rusch, Christoph Scherber, Heikki Setälä, Corinne Vacher, Winfried Voigt, J. Arie Vonk, Stephen A. Wood, Guy Woodward. 2015. 10 Years Later: Networking 35 Priorities for Science and Society after the Millennium Assessment. Advances in Ecological Research 53: 1-53.
61. Mitchell, MGE **E M. Bennett**, A Gonzalez, M Lechowicz, J Rhemtulla, JA Cardille, K Vanderheyden, G Poirier-Ghys, D Renard, S Delmotte, C Albert, B Rayfield, M Dumitru, H-H Huang, R Kipp, M Larouche, K Liss, D Maguire, K Martins, M Terrado, C Ziter, L Taliana, K Dancose. 2015. Montérégie Connection: Connecting landscape structure, biodiversity, ecosystem services, and stakeholders at multiple scales for decision-making. Ecology and Society 20(4): 15. http://dx.doi.org/10.5751/ES-07927-200415
60. Renard, D., J. M. Rhemtulla, and **E.M. Bennett**. 2015. Historical dynamics in ecosystem service bundles. Proceedings of the National Academy of Sciences. 112 (43): 13411-13416.
    Recommended by Faculty of 1000[1]: "Understanding the changes in ecosystem services (ES) is fundamental for ecosystem management. [This paper] fills a gap in ES assessment."
59. Metson, G.S. and **E. M. Bennett**. 2015. Increasing phosphorus recycling in Montreal: facilitators and barriers. Elementa 3:000070 doi: 10.12952/journal.elementa.000070
58. Fischer, J., T. Gardner, **E. M. Bennett**, P. Balvanera, R. Biggs, S.R. Carpenter, T. Daw, C. Folke, T. Hughes, T. Luthe, M. Meacham, A. Norström, G.D. Peterson, C. Queiroz, R. Seppelt, M. Spierenburg, J. Tenhunen. 2015. Advancing sustainability via the concept of social-ecological systems. Current Opinion in Environmental Sustainability 14:144-149.
57. Mitchell, MGE, A. Gonzalez, and **E. M. Bennett**. 2015. Strong and nonlinear effects of fragmentation on ecosystem service provision at multiple scales. Environmental Research Letters 10: 094014. doi:10.1088/1748-9326/10/9/094014

[1] Faculty of 1000 is a select group of highly respected scientists in the biomedical sciences who publish short evaluations of top papers.

56. Maguire, D.Y., James, P.M.A., Buddle, C.M., and **E.M. Bennett**. 2015. Landscape connectivity and insect herbivory: A framework for understanding tradeoffs among ecosystem services. Global Ecology and Conservation: 73-84.
55. **Bennett, E. M.,** W. Cramer, A. Begossi, G. Cundill, B. Egoh, I. R. Geijzendorffer, C. B. Krug, S. Lavorel, L. Lebel, B. Martin-Lopez, P. Meyfroidt, H. A. Mooney, J. L. Nel, U. Pascual, K. Payet, N. Perez Harguindeguy, G. D.Peterson, A-H., Prieur-Richard, B. Reyers, P. Roebeling, R. Seppelt, M.Solan, P. Tschakert, T. Tschntke, B. L. Turner, P. H. Verburg, E. Viglizzo, P. C.L. White, and G. Woodward. 2015. Linking biodiversity, ecosystem services and human well-being for sustainability: Three Challenges for designing research for sustainability. Current Opinion in Environmental Sustainability 14:76-85.
54. Metson, G. S. and **E. M.Bennett**. 2015. Phosphorus cycling in Montreal's food system and through urban agriculture. PloS ONE. 10(3): e0120726.
53. Steffen, W., K. Richardson, J. Rockström, S. Cornell, I. Fetzer, **E. M. Bennett**, R. Biggs, S Carpenter, W. de Vries, C. A. de Wit, D. Gerten, J. Heinke, C. Folke, G. Mace, L. M. Persson, V. Ramanathan, B. Reyers, S. Sörlin. 2015. Planetary Boundaries: Guiding human development on a changing planet. Science 347: 6223. 10.1126/science.1259855
52. Metson, GS, D. M. Iwaniec, L. Baker, **E. M. Bennett**, D. L. Childers, D. Cordell, N. B. Grimm, J. M. Grove, D. Nidzgorski, and S. White. 2015. Urban phosphorus sustainability: Systemically incorporating social, ecological, and technological factors into phosphorus flow analysis Environmental Science and Policy 47: 1-11.
51. Maguire, D. Y., T. Nicole, C. Buddle, and **E. M. Bennett**. 2015. Effect of fragmentation on predation pressure of insect herbivores in a north temperate deciduous forest ecosystem. Ecological Entomology 40: 182-186.
50. Terrado, M, R Tauler, and **E. M. Bennett**. 2014. Local and landscape factors influence water purification in the Monteregian agroecosystem in Quebec, Canada. Regional Environmental Change 15(8): 1743-1755.
49. **E. M. Bennett**, S. R. Carpenter, L. Gordon, N. Ramankutty, P. Balvanera, B. Campbell, W. Cramer, J. Foley, C. Folke, L. Karlberg, J. Lui, H. Lotze-Campen, N. Mueller, G.D. Peterson, S. Polasky, J. Rockstrom, R. J. Scholes, and M. Spirenburg. 2014. Toward a more resilient agriculture. Solutions 5(5): 65-75.
48. Halbe, J., J. Adamowski, **E.M. Bennett**, C. Pahl-Wostl, K. Farahbakhsh. 2014. Functional Organization Analysis for the Design of Sustainable Engineering Systems. Ecological Engineering 73: 80-91.
47. Ziter, C., A. Gonzalez, and **E. M. Bennett**. 2014. Temperate forest fragments maintain aboveground carbon stocks out to the forest edge despite changes in community composition. Oecologia 176: 893-902.
46. J. D. Anadón, O E. Sala, B. L.Turner, **E. M. Bennett**. 2014. The effect of woody plant encroachment on livestock production: a comparison of North and South America. Proceedings of the National Academy of Sciences 111: 12948–12953.
45. Mitchell, M. G. E., **E. M. Bennett**, and A. Gonzalez. 2014. Agricultural landscape structure affects arthropod diversity and arthropod-derived ecosystem services. Agriculture, Ecosystems, and Environment 192: 144-151.

44. Mitchell, M. G. E. , **E. M. Bennett,** and A. Gonzalez. 2014. Forest fragments modulate the provision of multiple ecosystem services in an agricultural landscape. Journal of Applied Ecology 51: 909-918.
43. Felipe-Lucia, M. R., F. A. Comin, and **E. M. Bennett**. 2014. Interactions among ecosystem services across land uses in a floodplain agroecosystem. Ecology and Society Society 19 (1): 20. URL: http://www.ecologyandsociety.org/vol19/iss1/art20/
42. Villamagna, A. M., P. L. Angermeier, and **E.M. Bennett**. 2013. Capacity, pressure, demand, and flow: A conceptual framework for analyzing ecosystem service delivery. Ecological Complexity 15: 114–121.
41. Ziter, C., A. Gonzalez, and **E. M. Bennett**. 2013. Functional diversity and management mediate carbon storage in small forest fragments. Ecosphere 4(7): 85
40. Liss, K.N., M.G.E. Mitchell, G. K. MacDonald, S. Mahajan, J. Méthot, A. L. Jacob, D. Maguire, G. Metson, C. Ziter, K. Dancose, K. Martins, M. Terrado, and **E. M Bennett**. 2013. Variability in ecosystem service measurement: A case study of pollination service studies. Frontiers in Ecology and Environment 11: 414–422.
39. M.G. E. Mitchell, **E. M. Bennett**, and A. Gonzalez. 2013. Linking landscape connectivity and ecosystem service provision: current knowledge and research gaps. Ecosystems 16: 894-908.
    Recommended by Faculty of 1000: "Good for teaching. This paper may promote current attention to be turned from single ecosystems to the relationship between landscape and ES."
38. Riskin, S. S. Porder, M. Schipanski, **E. M. Bennett**, and C. Neill. 2013. Regional differences in phosphorus budgets in intensive soybean agriculture. BioScience 63: 49-54.
37. G. Metson, **E. M. Bennett**, and J. Elser. 2012. The effect of diet on P demand. Environmental Research Letters 7 (4): 044043.
36. MacDonald, G. K., E**. M. Bennett**, and S. R. Carpenter. 2012. Embodied phosphorus and the global connections of United States agriculture. Environmental Research Letters 7: 1-13.
35. Schipanksi, M., and **E. M. Bennett**. 2012. The influence of trade and livestock production on the global P cycle. Ecosystems 15 (2): 256-268.
34. MacDonald, G. K., **E. M. Bennett**, and Z. E. Taranu. 2012.The influence of time, soil characteristics, and land-use history on soil phosphorus legacies: a global meta-analysis. Global Change Biology 18 (6): 1904-1917.
33. Shaw Charibi, V.L. , **E. M. Bennett**, and I. Gregory-Eaves. 2011. Conservation of a transboundary lake: Historical watershed and paleolimnological analyses can inform management strategies. Lake and Reservoir Management 27: 355-364.
32. Foley, J.A., N. Ramankutty, K. A. Brauman, E. S. Cassidy, J.S. Gerber, M. Johnston, N. D. Mueller, C. O'Connell, D. K. Ray, P. C. West , C. Balzer, **E. M. Bennett**, S. R. Carpenter, J. Hill, C. Monfreda, S. Polasky, J. Rockström, J. Sheehan, S. Siebert, D. Tillman, and David P.M. Zaks. 2011. Solutions for a cultivated planet. Nature 478: 337-42.
    Recommended by Faculty of 1000: "Balancing sustainability and sufficiency of food production is a massive challenge and this article attempts to project the path for achieving this."
31. L. R. Pfeifer and **E. M. Bennett**. 2011. Environmental and social predictors of phosphorus in urban streams on the island of Montreal. Urban Ecosystems 14 : 485.
30. Carpenter, S. R. and **E. M. Bennett**. 2011. Reconsideration of the planetary boundary for phosphorus. Environmental Research Letters 6: 1, doi:10.1088/1748-9326/6/1/014009
    Selected to appear in the Highlights of 2011 from Environmental Research Letters for "its particular significance to the field, multidisciplinary interest and scientific impact".

29. MacDonald, G. K., E. M. Bennett, N. Ramankutty, and P. Potter. 2011. Too much or not enough: Agronomic phosphorus balances across the world's croplands. Proceedings of the National Academy of Sciences **108** (7): 3086-3091.
    Recommended by Faculty of 1000: "Their maps will provide an essential input to upcoming environmental and agricultural assessments, and can be used to start resolving the imbalances by a more efficient use of P fertilizers and more effective recycling of manure P."
28. Keatley, B.E., **E. M. Bennett**, G. K. MacDonald, Z. Taranu, and I. Gregory-Eaves. 2011. Is there evidence of a Great Acceleration in lake eutrophication? PLoS ONE 6(1): e15913. doi:10.1371/journal.pone.0015913.
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    Recommended by Faculty of 1000: "I liked this paper because it is a relatively comprehensive analysis of trade-offs among the delivery of multiple ES within a specific region."
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19. Gordon, L., G. D. Peterson, and **E. M. Bennett**. 2008. Agricultural modifications of hydrological flows create ecological surprises. Trends in Ecology and Evolution 23: 211-219.
    Recommended by Faculty of 1000: "This article offers one of the best summaries … of potential regime shifts and non-linearities resulting from broad-scale agricultural impacts in river basins."
18. **E. M. Bennett** and P. A. Balvanera. 2007. The future of production systems: Challenges and opportunities in a globalized world. Frontiers in Ecology and the Environment 5: 191-198.
17. S. Cork, G. Petschel-Held, G. D. Peterson, **E. M. Bennett**, and M. Zurek. 2006. Synthesis of the storylines. Ecology and Society: 11 (2) [online] URL: http://www.ecologyandsociety.org/vol11/iss2/art11/
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In press

1. Galappaththi, E, J Ford, and **EM Bennett**. Climate change and adaptation to social-ecological change: The case of indigenous people and reservoir aquaculture in Sri Lanka. Climatic change
2. Lin, M, A Biswas, **EM Bennett**. Socio-ecological determinants on spatio-temporal changes of groundwater in the Yellow River Basin, China. Re-submitted to: Science of the Total Environment (February 2020).
3. Hanna, D, D Roux, B Currie, and **EM Bennett**. Identifying pathways to reduce discrepancies between ecosystem service demand and provision. Re-submitted to: Ecosystem Services (February 2020).

Peer-reviewed reports, books, and book chapters

24. Hogan, KFE, KL Nash, and **EM Bennett**. 2020. Adaptive management of ecosystem services for multisystemic resilience: iterative feedback between application and theory. Multisystemic Resilience: Adaptation and Transformation in Changing Contexts. Ed., Michael Ungar.
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12. Lebel, L., P. Thongbai, K. Kok, **E. M. Bennett**, W. Mala, J. Agard, R. Biggs, C. Rumsey, Y. Gokhale, M. Zurek, C. Filer, S. J. Velarde, M. Ferreira.. Sub-global scenarios. In Millennium Ecosystem Assessment: Multi-scale Assessments. Washington, D.C.: Island Press.
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8. S. Cork, G. Peterson and G. Petschel-Held, J. Alcamo, J. Alder**, E. M. Bennett**, E. Carr, D. Deane, G. Nelson, and T. Ribeiro. 2005. Ch. 8. Four Scenarios. In Millennium Ecosystem Assessment. Scenarios for the Future of Ecosystem Services. Washington, D.C.: Island Press.
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3. S. R. Carpenter, **E. M. Bennett**, M. Zurek, and P. Pingali, Eds. 2005. Ecosystems and Human Well-Being: Millennium Ecosystem Assessment Scenarios for the Future of Ecosystem Services. Washington, D. C.: Island Press.
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1. **Millennium Ecosystem Assessment**. 2003. People and Ecosystems: A Framework for Assessment and Action. Washington, D.C.: Island Press.

Other publications

21. Ramankutty, N, E Bennett, and L Silberman. 2019. Opinion: Instead of flight shaming, let's be thoughtful and selective about travel. Ensia. https://ensia.com/voices/flight-shaming-flying-travel-carbon-co2-emissions-flyless-aviation-cars-trains/
20. Pereira, L, **EM Bennett**, R Biggs, A Mangnus, A Norstrom, GD Peterson, C Raudsepp-Hearne, M Sellberg, J Vervoort. 2019. Seeding change by visioning good Anthropocenes. Solutions 10 (3).
19. Peterson, GD, Z Harmackova, M Meacham, C Quieroz, A Jimenez Aceituno, J Kuiper, K Malmborg, N Sitas, and **EM Bennett**. 2018. Welcoming different perspectives in IPBES: Nature's Contributions to People and Ecosystem Services. Ecology and Society 23(1):39. https://doi.org/10.5751/ES-10134-230139.
18. Peterson, GD, ZV Harmackova, M Meacham, C Queiroz, A Jiménez Aceituno, JJ Kuiper, K Malmborg, NE Sitas 2 and EM Bennett. 18 March 2018. Connecting people's contributions to nature to nature's contributions to people. Science eLetters.
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15. **Bennett, EM.** 2017. Changing the agriculture and environment conversation. Nature Ecology and Evolution 1: 0018. DOI: 10.1038/s41559-016-0018
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12. Metson, GS, VH Smith, D Cordell, DA Vaccari, JJ Elser, and **EM Bennett**. 2014. Phosphorus is a key component of the resource demands for meat, eggs, and dairy production in the United States. Proceedings of the National Academy of Sciences.
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9. Raudsepp-Hearne, C., G. D. Peterson, M. Tengo, and **E. M. Bennett**. 2011. The paradox persists: How to resolve it? BioScience 61(1): 11
8. Cardille, J.A. and **E. M. Bennett**. 2010. Tropical Teleconnections. Nature Geoscience **3**: 154-155. (Invited Commentary)
7. **E. M. Bennett.** 2010. Understanding the interactions among ecosystem services can improve

ecosystem management. Bulletin of the British Ecological Society **41**: 4-6.

6. M. B. Zurek, R. Biggs, **E. M. Bennett,** C. Raudsepp-Hearne, K. Kok, S. J. Velarde. Module 5: Exploring Future Implications of Choices about Ecosystem services and Human well-being. World Resources Institute.
5. **Bennett, E. M.** and S. R. Carpenter. P Soup. 2001. World Watch
4. Carpenter, S. R., E. A. Levitt, G. D. Peterson, **E. M. Bennett**, T. D. Beard, J. A. Cardille, and G. S. Cumming. 2003. Future of the Lakes: Scenarios for the future of Wisconsin's Northern Highland Lake District. Illustrations by Bill Feeney. (http://www.lakefutures.wisc.edu)
3. **Bennett, E. M.** 2003. Scenario development and resilience: Local and global examples of resilience of social-ecological systems. IHDP [International Human Dimensions of Global Change] Update. February 2003.
2. Lucas, N. and **E. M. Bennett**. 2006. Resilience and Pluralism: Ecosystems and Society in a Great Transition. GTI [Great Transition Institute] Paper Series #14. Boston, MA: Tellus Institute.
1. Evans, K., Velarde, S.J., Prieto, R., Rao, S.N., Sertzen, S., Dávila, K., Cronkleton P. and de Jong, W. 2006. Field guide to the future: Four ways for communities to think ahead. **E. Bennett** and M. Zurek (eds.). Nairobi: Center for International Forestry Research (CIFOR), ASB, World Agroforestry Centre. p.87. URL: http://www.asb.cgiar.org/ma/scenarios.

MAJOR GRANTS AND FUNDING: Grants listed only once in the year the grant was first received.
(Listed in parentheses is the amount of funding going to the Bennett lab in case of multiple PIs.)

2019 NSERC Strategic Network (5 years, lead PI) **$5,500,000** ($1,500,000)

NSERC Discovery (5 years, sole applicant) **$275,000**

2018 NSERC Funding to support preparation of a full Strategic Network proposal **$23,576**

2017 E.W.R. Steacie Memorial Fellowship (2 years) **$250,000**

La Ministre Responsible de L'Enseignement Supérieur (1 year, co-PI) **$91,500**

2015 Marine Environmental Observation Prediction and Response Network (MEOPAR) **$350,000** ($65,500)

2014 NSF/Future Earth. Bright Spots: Seeds of a Good Anthropocene. (2 years, lead PI) **US $75,000** (approx. CDN $70,000)

sDiv Synthesis Centre of Biodiversity Sciences. Next generation models for ecosystem services and biodiversity, sESMOD (1 year, lead PI) **€17,544** (approx. CDN $25,000)

FQRSC Regroupement Stratégiques. (CICADA. Centre pour la conservation et le development autochothones alternatifs (3 years, co-PI) **$204,750**

Sustainability Projects Fund. (1 year, co-PI). **$39,850** ($15,000)

NSERC CREATE. Enhancing Canada's prosperity through innovative environmental assessment, monitoring, and management (6 years, co-PI) **$1,750,000** ($50,000)

SSHRC Partnership. Economics for the Anthropocene (6 years, co-PI) **$2,495,691** ($25,000)

2013 Sustainability Projects Fund. (1 year, E Bennett, sole PI) **$31,030**

NSERC Discovery. "Ecosystem service interactions across landscapes**"** (5 years, sole applicant, **$200,000**)

2012 NSERC Strategic Network Grant. Canadian network for aquatic ecosystem services. (5 years, co-PI). **$4,416,625.** ($84,700)

NAKFI (National Academy Keck Futures Initiative). Woody plant encroachment: degradation or just a shift in the portfolio of ecosystem services? (2 years, E Bennett and O Sala, co-PIs) **$75,000.** ($37,500)

NAKFI (National Academy Keck Futures Initiative). Assessing the sustainability of agricultural commodity chains: Contrasting ecosystem service impacts of small-scale agriculture and large-scale agribusiness. (2 years, E. Bennett, C. Kremen, K. Carlson, N. Walker, co-PIs). $**100,000** ($25,000)

2011 IDRC (International Development Research Centre). Innovating for resilient farming systems in semi-arid Kenya. (3 years, co-PI). **$1,441,317**. ($111,927)

2010 USGS. "Spatial Analysis of relations among conservation practices, aquatic ecosystem services, human well-being in the Albemarle-Pamlico basin."(1 year, sole applicant) **$50,000**

NSERC Strategic Projects. Ecosystem services, biodiversity, and landscape connectivity. (3 years, E Bennett, lead PI) **$463,483** ($300,000)

Max Bell Foundation award. Integrating bioindicators of stream water quality into regional planning for peri-urban landscapes. (3 years, co-PI) **$209,000.** ($75,000)

Programmation Scientifique PACC-26/OURANOS. Corridors, biodiversité, et services écologiques: un réseau écologique pour le maintien de la connectivité et une gestion résiliente aux changements climatiques dans l'Ouest des Basses-Terres du Saint-Laurent. (3 years, co-PI) **$250,000** ($100,000)

2009 USGS. "Spatial Analysis of relations among conservation practices, aquatic ecosystem services, human well-being in the Albemarle-Pamlico basin."(1 year, sole applicant) **$25,000**

2008 NSERC Discovery. "Understanding resilience across the landscape: mapping, modeling, and

managing ecosystem services."(5 years, sole applicant). **$75,000**

USGS. Quantifying multiple ecosystem services. (1 year, co-PI). **$20,000** ($10,000)

2007 CFI Leaders Opportunity Fund. "Understanding resilience across the landscape: mapping, modeling, and managing ecosystem services." 5 years, sole applicant) **$193,337**

2006 FQRNT. "Soil P and eutrophication: Slowly-changing variables as a possible mechanistic explanation for land use legacies." (2 years, sole applicant) **$40,000**

Christensen Foundation. A long-range planning process for building the resilience of traditional communities. As a team led by the Conservation Strategy Fund. (1 year, sole applicant) **$50,000**

HONORS AND AWARDS:

- Canada Research Chair (CRC) 1 in Sustainability Science, 2019-2026
- Winner, Ecological Society of America *Innovations in Sustainability Science Award*, 2019, for "Bennett et al. Bright Spots: Seeds of a Good Anthropocene".
- Member, College of New Scholars, Artists, and Scientists of the Royal Society of Canada (2017 – 2024)
- Alice Johannsen Award, 2016 (given annually by the Mont Saint-Hilaire Nature Centre to a person or a group who has made a significant contribution towards the protection of nature) for the Montérégie Connection Project.
- E.W.R. Steacie Memorial Fellow, 2015 (with $250,000)
- McGill Catalyst Award for staff contribution to sustainability on campus, 2015
- Trottier Public Policy Fellowship 2013-2014 (with $80,000 funding to initiate public policy engagement related to the Monteregie Connection project)
- Winner, Carrie M. Derick Award for Excellence in Graduate Supervision, 2013
- Selected to be a member of the Global Young Academy, 2013 – 2017
- IAP Young Scientist representative of the Royal Society of Canada at the Summer Davos meeting of the World Economic Forum. Tianjin, China, September 2012
- Faculty of Agriculture and Environmental Science nominee for the Principal's Award for Teaching Excellence, 2012
- Macdonald Campus Award for Teaching Excellence, 2012
- Invited to attend the 9th Annual National Academies Keck Futures Initiative (NAKFI) conference on Ecosystem Services: Charting a Path to Food Security that is a Win Win for People and the Environment, 2011
- Leopold Leadership Fellow, 2011
- Dane County Lakes and Watershed Commission's Lake Champion Award, 2005

INVITED CONFERENCE PRESENTATIONS

- Opening Plenary Panel. McConnell Foundation Transition: Places, Pathways, and People. Waterloo, Ontario, February 2020
- Keynote: Ecosystem Services Partnership World Conference. Hamburg, Germany, October 2019
- Plenary: Leverage Points. Bright Spots – Seeds of Good Anthropocenes. Luneburg, Germany, February 2019.
- TEDxCERN. Seeds of Good Anthropocenes. Geneva, Switzerland, November 2018
- US National Academy of Science Sackler Forum. Managing working landscapes for multiple ecosystem services as solution to climate change. Washington DC, November 2018
- Public Keynote: Bright Spots-Seeds of a Good Anthropocene. The Long Now Foundation. San Francisco, California, March 2018
- Nature Talks: Cross Country Speaker Series. Montreal, Canada, October 2017.
- Plenary: Canadian Society for Ecological Economics. Montreal, Canada, October 2017.
- Keynote: Joint British Ecological Society and Biodiversity and Ecosystem Services for Sustainability Symposium. Cardiff, Wales, April 2017
- World Economic Forum. IdeasLab: Bright Spots-Seeds of Good Anthropocenes. Davos, Switzerland, January 2017.
- Using resilience thinking to mainstream biodiversity. 3rd Annual Science for Biodiversity Forum at the Convention on Biological Diversity, Cancun, Mexico, December 2016
- Inland Fisheries annual meeting. Plenary lecture on Bright Spots of a Good Anthropocene. Queens University Biological Station. October 2016.
- Opening Plenary: Canadian Society for Ecology and Evolution. Ecosystem services to improve ecological management. St John's, NL. July 2016.
- World Economic Forum. IdeasLab. Bright spots: Exploring Pathways to a Better Anthropocene Tianjin, China. June 2016.
- EM Bennett, R. Biggs, G. D. Peterson, and A. Norstrom. Bright Spots: Exploring Pathways to a Better Anthropocene. Ecological Society of America. Baltimore, MD. August 2015.
- EM Bennett and W. Cramer. Future Directions: Research priorities for landscape management of ecosystem services and biodiversity. International Association of Landscape Ecologists. Portland, OR. July 2015
- L'ère Anthropocène : exploration vers un meilleur futur, à Montréal et dans le monde. Americana Conference. Montreal, QC. March 2015.
- Nesme, T. and E.M. Bennett. Keynote address: Sustainable phosphorus use in agroecosystems: a story of global imbalance and resource recycling. 5th international symposium on Phosphorus in Soils and Plants. Montpellier, France. August 2014.
- The role of ecosystem science in understanding food security. US Congressional briefing. October 25, 2013.
- Bennett, EM, S.R. Carpenter, N. Ramankutty, and L. Gordon. What can resilience thinking tell us about sustainable agricultural development? Ecological Society of America invited Ignite talk. Minneapolis, Minnesota. August 2013.
- Long-term legacies and cross-scale impacts of agriculture on water quality. Ecological Society of America invited Symposium talk. Minneapolis, Minnesota. August 2013.

- Panel Discussion: Engaging Ecologists in Public Policy: Revisiting ESA Recommendations. Minneapolis, Minnesota. August 2013.
- Measuring Multiple Ecosystem Services in Disturbed Landscapes. CNAES (Canadian Network for Aquatic Ecosystem Services) annual meeting. April 29, 2013.
- Reconnecting people to nature: Planning for multi-functional landscapes. February 2013. AAAS. Boston, MA, USA
- L. Gerber and EM Bennett. Overcoming institutional barriers to science communication. February 2013. AAAS. Boston, MA, USA
- Bennett, EM., A. Gonzalez, M. Lechowicz, and J. Rhemtulla. Ecosystem services and the future of production systems. Ecological Society of America, Austin, Texas. August 2011
- MacKay, R., EM Bennett, and A. LeFebvre. 2010. Using a Beneficial Management Practice (BMP) Adoption Index in Agri-Environmental Policy in Canada. OECD Workshop: Agri-environmental indicators: Lessons learned and future directions. 23-26 March 2010. Leysin-Switzerland.
- 2007. Introductory remarks on modeling multiple ecosystem services. Ecological Society of America. San Jose, California.
- Bennett, EM and P. Balvanera. 2006. Ecology in an era of globalization: Production systems. Ecological Society of America, Merida, Mexico.
- Bennett, EM. 2005. Comparing alternate futures of ecosystem services and human well-being: The Millennium Ecosystem Assessment Scenarios. Ecological Society of America, Montreal, QC, Canada.
- Brunson, Mark, and E. M. Bennett. 2004. Developing assessment tools in support of sustainable land use policy: a status report. Ecological Society of America, Portland, OR.
- Bennett, E. M., S. R. Carpenter, P. Pingali, and M. Zurek. 2003. The role of ecology in global scenarios. Ecological Society of America, Savannah, Georgia.
- North American Benthological Society. Phosphorus storage along an urban to rural gradient. June 2001.
- Implications of watershed P budgets for nutrient management. 2000. Statewide nonpoint manager's conference, Wisconsin DNR.
- Agriculture and Lake Mendota water quality. Wisconsin Fertilizer, Aglime, and Pest Management Conference. 2000. Madison, WI.
- A phosphorus budget for the Lake Mendota watershed: management implications. Statewide fisheries managers' conference, Wisconsin Department of Natural Resources. 1999. Eau Claire, WI.

INVITED UNIVERSITY LECTURES (AND SIMILAR):

- University of Nebraska Heuermann Lecture, January 2020
- University of Ottawa Biology Department Seminar, November 2019
- Burba Family Lecture, Northeastern University, April 2019
- Stockholm Seminar (Royal Swedish Academy of Sciences), May 2017
- Université de Sherbrooke, Departement de Biologie, November 2016
- Dalhousie University, Department of Plant, Food, and Environmental Sciences, November 2016

- Columbia University, Department of Ecology, Evolution, & Environmental Biology, Nov 2016
- McGill joint Senate and Board of Governors meeting, November 2016
- Cary Institute for Ecosystem Studies, October 2016
- Université de Quebec à Montréal, Seminar de Biologie, January 2016
- Panelist, Teaching what's important: Educating students for today and tomorrow, McGill University, December 2015
- First annual lecture and panel, the Trottier Institute for Science and Public Policy, Sept 2015
- sDiv (Leipzig, Germany) public seminar, April 2015
- University of Virginia Environmental Sciences seminar, November 2014
- Duke University Mega-trends in Ecology seminar, October 2014
- Muskoka Summit on the Environment public forum, May 2014
- Iowa State Graduate Program in Sustainable Agriculture Symposium, April 2014
- Carleton College Environmental Studies Lecture Series, March 2014
- The Baker Center Energy and Environment Forum University of Tennessee, January 2014
- Gund Institute for Ecological Economics, University of Vermont. October 2013
- MAUT (McGill Association of University Teachers) Retirees Luncheon. June 2013.
- McGill University. McGill School of Environment 5th Annual Symposium. April 2013.
- University of Hawaii. Geobiology and Geophysics seminar. April 2013
- Arizona State University. Ecology Seminar. March 2013
- 2013 Hammond Lecture in Environment at the University of Guelph. March 2013
- Guelph University. School of Environmental Science. March 2013
- Virginia Tech. Multiple ecosystem services in agricultural landscapes. December 2012.
- Fairfield University. Multiple ecosystem services in agricultural landscapes. March 2012.
- Michigan State University (Kellogg Biological Station). Provision of multiple ecosystem services in an agricultural landscape in Quebec. January 2012.
- McGill University. Cutting Edge Science lecture. Feeding the world without destroying it: What we can learn from the agricultural areas around Montreal. December 2011.
- Podcast interview about "virtual ecosystem services" with Joe Palca (NPR) for the NAFKI conference on Ecosystem services.
- Pennsylvania State University. 2010. Earth Talks Series: Embracing Change: Resilience and Adaptation in Turbulent Times
- Quebec Centre for Biodiversity Science. 2010. Ecosystem services and biodiversity in QC
- Cornell University. 2009. Keynote Speaker, Natural Resource Sciences Annual Symposium.
- McGill University. 2008. Classes without Quizzes (MSE homecoming presentation).
- McGill University. 2007. ReThink Campus Sustainability Seminar. Synthesis Speaker.
- Queen's University. 2006. Ecology and Evolutionary Biology Seminar Series
- University of Washington. 2006. Rising stars in Aquatic Sciences, School of Aquatic and Fisheries Science
- McGill University. 2006. Food for Thought (FAES evening seminar series).

TEACHING (2005 TO PRESENT)

ENVR 201. Society and Environment- as team member (2005-2010)
ENVR 201. Society, Environment, and Sustainability – as course coordinator (2010-2016)
ENVR 401. Environmental Research– as team member (2006)
ENVR 401. Environmental Research – as course coordinator (2008)
ENVB 415. Ecosystem Management: Capstone Course (2011 – present)
NRSC 430. GIS for Natural Resource Management- sole instructor (2006-2013)
ENVR 480. Unearthing Montreal. The ecological history of Montreal Island and its impact on the environmental sustainability of modern Montreal. (2012-2016)
NRSC 680/ENVR 680. Special Topics: The Ecology and Environment of Food – sole instructor (Winter 2009)
NRSC /751 Graduate Proposal Seminar. (2012, 2014 - 2016)
ENVR614. Mobilizing research for sustainability (2020 -)

Undergraduate Supervision

Honors:

- Andrea Rawluk (MSE, 2006)
- Sophie Mazowita (MSE, 2006-2007)
- Helene Higgins (MSE, 2006-2007)
- Phil Potter (Geography, with Navin Ramankutty, 2007-2008)
- Valerie Francella (MSE, 2008-2009)
- Maggie Knight (MSE, 2010-2011)
- Emery Hartley (NRS, 2012-2013)
- Susanna Klassen (MSE, 2013-2014)
- Stephanie Cotnoir (MSE, 2015-2016)
- Jacob Garrah (MSE, 2017-2018)
- Ella Martin (NRS, 2018-2019)
- Noemie Roy (NRS, 2018-2019)
- Samuel Collin-Latour (NRS, 2018-2019)

Independent Studies:

- Sarah Booth (NRS, 2005)
- Meghan Collins (MSE and NRS, 2006)
- Naomi Robert (MSE, 2011)
- Emily Pedersen (MSE, 2012)
- Tereza Jarnikova (Math, Biology, 2012)
- Matthew Henry (Math, MSE, 2012)
- Morgan Crowley (MSE, 2012)
- Claudia Atomei (Geography, 2012)
- Cecile Tang (Biology, 2012)
- David Chen (Geography, 2015 (USRA))

Graduate Supervision

Completed

PhD

- Ciara Raudsepp-Hearne, PhD, Geography. NSERC-PGSD. 2004-2009. Managing ecosystem services: tools and theory for understanding and managing the dynamics of multiple ecosystem services (Co-supervised with Dr. Garry Peterson)
- Graham MacDonald, PhD. NRS 2009 – 2012. Human impact on large-scale P Cycling. NSERC-PGSD.
- Matt Mitchell, PhD, NRS. NSERC-CGSD. 2009 – 2013. The effects of landscape structure on biodiversity and ecosystem services. (Co-supervised with Dr. Andy Gonzalez)
- Genevieve Metson. PhD, NRS. NSERC-CGSD 2011-2014. Urban phosphorus sustainability: how human diet, urban agriculture, and socioecological context influence phosphorus cycling and management
- Dorothy Maguire. PhD, NRS. 2011-2015. The effect of landscape structure on insect herbivory and biodiversity: implications for forest ecosystem services in the Monteregie, Quebec. (Co-supervised with Chris Buddle)
- Jean-Olivier Goyette. 2012-2018. Influence des flux anthropiques de nutriments et des caractéristiques du territoire sur la qualité de l'eau: une perspective historique du basin du Saint-Laurent. Biologie (U de Montreal. Co-supervised with Roxanne Maranger.)
- Jacob Zeigler. PhD, NRS. 2014-2018. Social-ecological interactions in inland fisheries management. (Co-supervised with Chris Solomon)
- Marianne Falardeau. PhD, NRS. 2014-2019. The Arctic Ocean under multiple pressures: Linking impacts on marine ecosystem processes, ecosystem services, and human well-being.
- Mi Lin, PhD, NRS. 2015-2019. Spatio-temporal changes in groundwater and its management in the Yellow River Basin, China.
- Jesse Trueman Rieb, PhD, NRS. 2014-2019. The dynamics of multiple ecosystem services: Improving models for the management of multifunctional landscapes.

MSc

- Graham MacDonald, MSc, NRS. 2006-2008. "Long-term trends in agriculture and water quality in the St. Lawrence River sub-basin, Canada." NSERC PGSM.
- Laura Pfiefer, MSc NRS (Environment Option). 2007-2009. "Physical, biological, and social drivers of urban stream chemistry in Montreal, Canada." NSERC CGSM.
- Rachel Laurin, Bioresource Integrated Water Resource Management (Non-thesis MSc). 2010.
- Robin MacKay, MSc, NRS. 2007-2010. "Development of a Beneficial Management Practices Adoption Index for Canada." Funded by Agriculture and Agri-foods Canada.
- Kate Liss, MSc. NRS (2010 – 2012) NSERC – Julie Payette. The role of configuration and composition in determining the provision of ecosystem services in multifunctional agricultural landscapes.
- Carly Ziter, MSc, Biology (co-supervised with Andy Gonzalez). (2011-2013) NSERC-CGSM. The effect of forest fragmentation on above ground carbon stocks and tree diversity: A case study of the Monteregie, Quebec.
- Josee Methot. MSc, NRS (MSE Option). NSERC-CGSM. (2010 – 2013) A multidimensional

approach to food security and non-traditional export agriculture: a case study in rural Guatemala
- Ira Sutherland, MSc, NRS. NSERC-PGSM. (2013-2015). Long-term recovery of ecosystem services following forest harvest in coastal temperate rainforests of Vancouver Island, British Columbia, Canada
- Dan Haberman, MSc NRS. NSERC-PGSM (2014-2016). Ecosystem services in hinterlands: How cities connect to their resource base.
- Jillian Treadwell, Bioresource Engineering. NSERC-PGSM. (2014-2016). Phosphorus and waste management: Investigating the potential for recovery and recycling.Co supervised with Grant Clark
- Anna Kusmer, NRS. E4A Fellow. (2014-2016). Watershed buffering of anthropogenic phosphorus pressure: landscape and legacy.
- Isabella Boushey, NRS (2017-2019). Evaluation of Aboveground Forest Carbon Sequestration for Climate Change Mitigation Targets: A Case Study on McGill University Properties.
- Julie Botzas-Coluni, NRS. NSERC-PGSM (2017 – 2019). The effects of farmland heterogeneity on ecosystem service provision.

<u>In progress</u>
- Dalal Hanna, NRS, PhD2. NSERC Vanier Scholar. (Started Fall 2015, expected end june 2019)
- Erin Crockett, NRS, PhD 2. NSERC PGS. Co-supervised with Mark Vellend. (Started Fall 2015, expected completion june 2019)
- Eranga Galappaththi, Geography, PhD 2 (I've been his supervisor since Fall 2017, expected completion Fall 2020)
- J Garrah, MSc (2018 - expected Aug 2020)
- P Morrison, MSc (2019 – expected Aug 2021)

Postdoctoral Fellows and Visiting Scientists
- Dr. Marie Dade, co-supervised with Brian Robinson, September 2018 -)
- Dr. Karina Bennesaiah, Banting Fellow, September 2018 –)
- Dr. Klara Winkler, September 2018 – 2020
- Dr. Amaia Albizua, December 2017 – 2019
- Dr. Luz Martinez, December 2014 – 2019
- Dr. Barbara Frei, September 2014 – July 2018
- Dr. Sylvestre Delmotte, 2013 – 2015
- Dr. Delphine Renard, 2012 – 2016 (co-supervised with Dr. Jeanine Rhemtulla)
- Dr. Shelby Riskin, Summer 2014
- Dr. Thomas Nesme. McGill Visiting Scholar (2013-2014)
- Dr. Veronique Chillo, 2013 – 2014 (Primary supervision by Diego Vasquez)
- Dr. Cheikh Sadibou Sakho, January - September 2012
- Dr. Marta Terrado-Casanovas, 2012
- Dr. Amy Villamagna. 2011-2012. (Supervised by Dr. Paul Angermeier, Virginia Tech)
- Dr. Meaghan Schipanski. . 2009-2010. MacDonald Agricultural Research Fellow

- Dr. Bronwyn Keatley. 2007-2008. Tomlinson Fellow. (Co-supervised by Rene Gregory-Eaves)
- Vicky Shaw, Fullbright Scholar. 2009-2010. (Co-supervised by Rene Gregory-Eaves)

UNIVERSITY AND DEPARTMENTAL SERVICE[2]

University Activities

- University Tenure Committee (Faculty of Engineering) (2020)
- McGill Advisory Council on Sustainability (2019-)
- McGIll EWR Steacie review committee (2019, 2020)
- University Tenure Committee (Faculty of Medicine) (2019)
- Task Force of Academic Experts on Carbon Neutrality (2017)
- Advisory committee, Sustainability Sciences and Technologies Initiative (2016 - 2019)
- Selection Committee, Trottier Institute for Science and Public Policy (2015)
- Adjudication Committee - Lifetime Achievement Award for Leadership in Learning (2015)
- Director, McGill Net Positive (2013-2014)
- Chair, search committee for the selection of the MSE Director (2014)
- Advisory Committee for the Selection of the Dean of Science (2014)
- Vision 2020. (2012-2014)
    - Vision 2020 Steering Committee (2012-2014)
    - Vision 2020 Subcommittee to develop the situational analysis (2012-current)
- MSE representative, McGill Senate Subcommittee on Environment (2006-2010)
- Member, Provost's Working Group on Environment at McGill (2007-2008)

Faculty Activities

- Member, Strategic Research Plan Development Team, Theme 1 (Environment, Ecology, and Sustainability) (2018-2019)
- Member, Steering Committee of the The McGill Institute for Global Food Security (Fall 2017)
- Chair FAES Faculty Planning Committee (Fall 2015 – Fall 2016; abbreviated term due to sabbatical)
- FAES CFI-9 internal review board (Winter 2016)
- Faculty Search, "Social Innovation" position (Fall 2014)
- FAES Environment Committee (April 2011 – current)
- FAES Library Committee (2011 – 2014)
- Macdonald Scholarships Committee (Fall 2006 – April 2011)
- Member, Information Technologies Committee (Winter 2010 – Winter 2011)
- Environmental Biology Major Program Development (Fall 2006-Spring 2008)
- Leader, with Caroline Begg, of development of Applied Ecosystem Sciences specialization within the Environmental Biology Major (2007-2008)
- Specialization Coordinator, Applied Ecosystem Sciences and Design (Fall 2009 - present)
- Member, Bioresource Engineering search committee, hydrologist position, (Winter 2009)

[2] Note that I did not participate in most committee work while on maternity leave (September 2007 to September 2008, July 2009-April 2010), but continued service upon returning to my regular position.

Departmental Activities – MSE

- Chair, Space Committee (2014 –2016)
- Member, Graduate Affairs Committee (2011 –2013)
- Member, search committee urban sustainability position (Fall 2010)
- MSE Executive Committee member (2008 –2011, sustained during maternity leave)
- MSE Undergraduate Affairs Committee (2006-2010)
- Participated in MSE planning retreats in Fall 2005, (reviewing undergraduate domains), Winter 2008, and Spring 2008 (developing an MSE graduate program)
- Academic advisor – Sustainability, science, and society (2010 – current)

Departmental Activities – NRS

- Member, NRS Executive Committee (2019)
- NRS Tenure Committee (2012-2013)
- NRS Graduate Affairs Committee (Winter 2011 – 2015)
- NRS Vision Committee (Fall 2010)
- NRS Computer Committee (Fall 2006)
- Academic advisor – Environmental Biology (Fall 2006 – 2009)
- Academic advisor – Applied Environmental Sciences specialization (2009 – 2011)
- NRS Seminar series coordinator (Fall 2008 – Fall 2009)
- Member, search committee fish/fisheries biologist position (Winter 2009)

PROFESSIONAL ACTIVITIES AND EXTERNAL AND PUBLIC SERVICE

- International Scientific Advisory Council, Stockholm Resiience Centre, Vice Chair (2019-2022)
- Editorial Board, *One Earth* (2018 -)
- Editorial Board, *Environmental Research Letters* (2019 -)
- Advisor, EQUIVAL (2019 -)
- Advisory Board, Resilience Alliance (2018 -)
- Board of Directors, Beijer Institute of Ecological Economics (2017 -)
- Development Team, Natural Assets Knowledge Action Network, Future Earth (2017 -)
- IPBES Global Report Lead Author, Ch 3 (SDGs and Aichi targets)
- IPBES Regional Report (Americas), Lead Author, Ch 1 (Overview)
- GEOBON (the Group on Earth Observations Biodiversity Observation Network) Working Group 6 (Ecosystem Services (2016 -)
- OPERAs (Operational Potential of Ecosystem Research Applications) advisory board(2014-2018)
- Science Advisory Council, SNAPP (Science for Nature and People Partnership) (2015 - 2018)
- Advisory Board, Leopold Leadership Program (2015 -)
- Advisory Board, Sustainable Phosphorus Alliance (2014 - 2017)
- Member, Ecological Society of America Science Committee (2014 – 2018)
- Co-Chair, EcoSERVICES, a FutureEarth project (2014-2019)
- Science Leadership Team for Bioversity's Agriculture and Conservation Initiative (2013 - 2015)

- Editorial board member, *Frontiers in Ecology and Environment* (2010 -)
- Team member Biogeochemistry Theme, Goldschmidt Meeting 2014
- Editorial Advisory Board, *Global Food Security*, 2012-2015
- Senior editorial board member, *Regional Environmental Change*, 2011- 2015
- Member, Ecological Society of America Rapid Response Team, 2010 – current
- Member. Expert panel on 'The Sustainable Management of Water in Agricultural Landscapes of Canada. Council of Canadian Academies. (2011-2012)
- Editorial board member, *Regional Environmental Change*, 2008-2010
- Member, Faculty of 1000 Biology, Ecosystem Ecology section, 2008-present
- Member, Ecological Society of America Public Affairs Committee, 2007-2009
- Editorial board member, *Ecology and Society*, 2004-2007, 2010
- Reviewer for: Science, Nature, Proceedings of the National Academy of Science, Landscape Ecology, Ecology Letters, Journal of Ecology, Ecosystems, Global Biogeochemical Cycles, Journal of Applied Ecology, Conservation Biology, Biogeochemistry, Ecological Applications, Environmental Management, Philosophical Transactions: Biological Sciences, Rangeland Ecology and Management, Journal of Plant Nutrition and Soil Science, Aquatic Sciences, Global Environmental Change, Regional Environmental Change, Science of the Total Environment
- Reviewer for scholarships and grants: WWF Kathryn Fuller Fellowship for postdoctoral scholars, NSF Ecosystems Division, The Swedish Governmental Agency for Innovation Systems and Formas on "Sustainable Use of Natural Resources", and NSERC, FQRNT.

SOCIETIES

- Ecological Society of America
- International Society of Landscape Ecology
- Resilience Alliance
- Groupe de Recherche Interuniversitaire en Limnologie et en environnement (GRIL)
- Quebec Centre for Biodiversity Science (QCBS)