

**Personal Details**

Name of Organisation:	UK Centre for Ecology & Hydrology
Name of Person:	Prof Bridget Anne EMMETT
Nationality:	British
Profession/specialisation:	Soil and Ecosystem Scientist
Position in organisation:	Principal Scientist
Specialisation in organisation:	Ecosystem science, soil health; climate change, air pollution, land use, national and agri-environment monitoring; natural capital.

**Qualifications / Awards / Honours.**

ENDS 100 most influential environmental professional scientists 2024  
 Officer of the Order of the British Empire (OBE) for Services to Soil and Ecosystem Sciences, 2023  
 President, British Ecological Society, 2024 - date  
 Marsh Award for Climate Change Research, British Ecological Society, 2016  
 Fellow of the Learned Society of Wales, 2015  
 Fellow of the British Society of Soil Science, 2015  
 AGI Award for Geospatial Excellence (team award) 2014  
 Fellow of the Royal Society of Biology, 2010  
 Honorary Professorship, Bangor University, 2009  
 PhD (Soil Ecology) University of Exeter 1990.  
 Bachelor of Science (First Class Honours, Plant Science) University of Aberdeen 1985.

**Career Outline**

2024 -	Principal Scientist (Band 3[S])
2017 - 2023	UKCEH Head of Soils and Land Use (Band 3[S])
2009 - 2017	CEH Science Area Lead for Soil Head of 'Emmett' Section (Band 3[S])
2008 - 2008	CEH Acting Director Biogeochemistry (Band 2 [S]) (6 months)
2004 - 2008	CEH Deputy Director of Biogeochemistry Head of 'Emmett' Section (Band 3[S])
2001 - 2022	Director of CEH-Bangor – change of title to Head of Site from 2004 (Band 3[S])
2001 - 2004	Leader of the CEH Pollution Programme
1998 - 2001	Principal Scientific Officer (Band 4 [S]O, Centre for Ecology and Hydrology (CEH - a organisation formed from 4 NERC Institutes: ITE, IFE, IH and IVEM)
1994 - 1998	Senior Scientific Officer Band 5 [S], ITE Bangor
1988 - 1994	Higher Scientific Officer Band 6 [S], Institute of Terrestrial Ecology (ITE), Bangor

**Selection of Membership of committees, boards etc.**

2024 – date	Scientific Advisory Board, EU Integrated Research Infrastructure Services for Climate Change Risks (IRISCC)
2024 - date	EU Mission Board Member for the EU Mission: 'A Soil Deal for Europe'
2023	NERC Innovation in Environment Monitoring Assessment Panel
2022 – date	Defra E.L.M Ecology and Ecosystems Services Expert Panel
2022	British Ecological Society 'The Future of Ecological Research in the UK' Panel
2022 - 2023	British Ecological Society Welsh Policy Group
2022 – date	EU Soil Observatory Monitoring Working Group
2022 - date	Leibniz Centre for Agricultural Landscape Research (ZALF), Germany Scientific Advisory Board
2021 - date	The Royal Society's University Research Fellowship Scheme - Appointment Panel B
2021 - date	Rothamsted Research - Board of Trustee-Directors and Science Advisory Group Board.
2021 - date	Biological Diversity and Ecosystem Service in a Changing Climate (BECC) Scientific Advisory Panel. Swedish Government Strategic Research Initiative.
2021 – 2023	Environment Platform Wales Management Board

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2019 – 2022	EU Mission Board Member for the EU Mission: ‘A Soil Deal for Europe’
2019 - date	Ecological Continuity Trust Board of Trustees
2019 - date	Co-founder and Management Board of uksoils
2017 - date	CREAF (Centre for Research on Ecology and Forestry Applications) International Scientific Committee, Spain.
2017 - date	Sustainable Soils Alliance Scientific Advisory Board
2016 - 2023	Learned Society of Wales – Cellular, Molecular, Evolutionary, Organismal and Ecosystem Sciences Scrutiny Committee
2013 - date	UK Land Use, Land Use Change and Forestry Greenhouse Gas Inventory Steering Committee
2020	International peer review for ESFRI (European Strategic Forum on Research Infrastructures)
2020	International peer review panel for Energy, Climate and Environmental Sciences; Danish Roadmap for Research Infrastructure 2020
2020	Member of UKRI BBSRC “Transforming the UK Food System for Healthy People and a Healthy Environment” Assessment Panel
2020	Member of the UKRI EPSRC “Circular Economy” Assessment Panel
2018 - 2021	EU Mission Board for Soil Health and Food
2016 - 2019	NERC Science Programme Advisory Group (SPAG)
2016 - 2016	Specialist Adviser to the UK House of Commons Environment Audit Committee Inquiry on Soil Health
2015 - 2019	Chair of the NERC Soil Security Programme Advisory Board
2014 - 2014	BBSRC Rothamsted Mid Term Review Panel
2014 - 2016	Defra Smarter Environmental Legislation Working Group
2014 - 2018	UK representative for EU COST Action – ClimMani: Climate Change Manipulation experiments in Terrestrial Ecosystems Networks and Outreach.
2014 - 2014	BBSRC SARISA grant review panel
2014 - 2017	Scientific Advisory Board for Department of Geosciences and Natural Resource Management, University of Copenhagen
2014 - 2017	Welsh Water Independent Environment Advisory Panel
2013 - 2014	RCUK UK Energy Research Centre Phase 3 Commissioning Advisory Group
2012 - 2013	NERC <i>ad hoc</i> Sustainable Use of Natural Resources Advisory Committee (covers Theme Leader duties)
2012 - 2012	BBSRC Rothamsted Research Institute Assessment Panel
2012 - 2013	Welsh Government Chief Scientist Bovine-TB Advisory Group
2012 - 2014	UK National Ecosystem Assessment Follow-on Phase Expert Panel
2012 - 2012	BBSRC Institute Strategic Programme Grant Review Panel
2011 - 2013	INRA Environment, Agro-ecosystem, Biogeochemical Cycles and Biodiversity (SOERE-ACBB) Assessment Panel
2010 - 2018	Science Advisory Council for Wales (Advisory group for Welsh Gov. Chief Scientist)
2010 - 2010	NERC Moderating Panel for Network of Sensors RP call
2009 - 2013	Steering Committee of ESF funded ClimMani project (Climate change – Manipulation experiments in terrestrial ecosystems)
2009 - 2016	UK Government Dept for Environment, Food and Rural Affairs Demonstration Catchment Advisory Panel
2009 - 2011	UK Government Dept for Environment, Food and Rural Affairs National Ecosystem Assessment Expert Panel
2009 - 2015	Welsh Assembly Government Land Use and Climate Change Group
2008 - 2016	Management Board of Wales Environment Research Hub
2007 - 2011	US EPA Review Group on N deposition Effects on Ecosystems
2007 - 2011	Steering Committee for the Centre for Integrated Research in the Rural Environment, Research and Enterprise Partnership, Bangor and Aberystwyth University (CIRRE)
2007 - 2009	BBSRC Review of Environmental Change Research Panel
2006 - 2010	Ecological Continuity Trust Steering Committee
2006 - 2009	UK NERC/BBSRC Soils Research Advisory Committee (SRAC)
2006 - 2013	Ecological Continuity Trust Steering Committee

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2006 - 2008	UK Government Dept for Environment, Food and Rural Affairs Soils Action Plan Forum / Soils Advisory Forum
2005 - 2015	Steering Committee for Danish Climate Change Centre (CLIMAITE)
2004 - 2018	UN/ECE Working Group on Effects, Joint Expert Group on Dynamic Modelling
2002 - 2005	Vice-President British Ecological Society
2001 - 2002	NERC Randall Report Implementation Group and NERC Corporate Development Group
1999 - 2002	Member of NERC Promotion Panel III
1999 - 2005	Member of NERC Global Nitrogen Enrichment Thematic Programme Steering Committee
1997 - 2000	Council member of British Ecological Society

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**Current Research Grants and Contracts:**

- UKRI Land Use for Net Zero, People and Nature. PIs: L. Sutherland (JHI) and H. Baltzer (U. Leicester). Lead Co-I for UKCEH and LUNZ Wales National Team. £638k to UKCEH. (Nov 23 – Mar 27)
- UKRI Greenhouse Gas Removal with UK agriculture via enhanced rock weathering. PI: David Beerling (Sheffield). One of several Co-Is: **B. Emmett (UKCEH)** (May 2021 – Oct 2025) £910k to UKCEH.
- Welsh Government funded Environment and Rural Affairs Monitoring and Evaluation Programme (ERAMMP): PI: **B. Emmett (UKCEH)** (Oct 2022 – Sep 2032) £15,000,000. 24 organisations as subcontractors.

**Other notable grants and contracts recently completed:**

- Defra E.L.M Quality Impact Assessment of Land Management Interventions on Ecosystem Services. P.I.: **B. Emmett**. 8 other organisations as subcontractors. (UKCEH) (Sep 21 – Mar 23) £500k total for all partners.
  - Natural England funded England Ecosystem Survey – refinement of soil field and laboratory methods, and input to data analysis framework. P.I. **B. Emmett**. (UKCEH) (July 22 – Mar 23). £48k.
  - Welsh Government funded Environment and Rural Affairs Monitoring and Evaluation Programme (ERAMMP): PI: **B. Emmett (UKCEH)** (Oct 2017 – Sep 2022) £6,000,000. 18 organisations as subcontractors.
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**Current Role and Research Areas**

Bridget is a Principal Scientist at UK Centre for Ecology and Hydrology recently stepping down after 22 years on the UKCEH Management Board. Most recently this was as UKCEH's Science Area Head for Soils and Land Use (SLU). This involved leadership and management of more than 120 research staff and 40 postgraduate students across three UKCEH sites – Bangor, Lancaster and Wallingford. Bridget's personal policy-orientated research is wide ranging including: the impact of land management on natural capital and ecosystem services; drivers of change in soil structure, function and soil health; impacts of air pollution and climate change; and new knowledge and modelling systems to support policy development. Her fundamental research expertise has included exploration of the nitrogen cycle, carbon cycle, vegetation composition, water quality and greenhouse gas emissions and their integration at the ecosystem level. She has published over 170 papers and has a H index of 64.

Bridget's current role is as PI/lead for projects involving a large number of partners to improve integration across different disciplines and sectors from catchment/landscape to national scale to improve the evidence base and support national policy development and outcome reporting in the areas of e.g. soil health, ecosystem services, agri-environment schemes and natural capital. Her research team is responsible for a large national-scale integrated monitoring and modelling programmes –ERAMMP (Wales <https://erammp.wales/en>) and she recently coordinated a large inter-disciplinary team of 46 experts from 11 organisations to review over 700 agri-environment actions being considered for inclusion in the England ELM schemes across 33 ecosystem services and 53 outcomes indicators ([Evidence Assessment | UK Centre for Ecology & Hydrology \(ceh.ac.uk\)](https://www.ceh.ac.uk/evidence-assessment)). Income generation for her research has come from a wide range of funders including UKRI (NERC, BBSRC, EPSRC), DEFRA,

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Welsh Government, Environment Agency, SEPA, and the EU.

Bridget is a member of many national and international committees and science advisory panels. These currently include membership of the EU Mission Board on 'A Soil Deal for Europe' and the UK Land Use, Land Use Change and Forestry Greenhouse Gas Inventory Steering Committee. Currently she is a Trustee and Board member of Rothamsted Research and the Ecological Continuity Trust and serves on the Scientific Advisory Boards for research organisations in Germany, Spain and Sweden. Outreach activities include a founding member and Chair of the community initiative 'uksoils' which aims to create a community hub to inspire us all to learn more about soil and help build communities to take action to improve soil health <https://uksoils.org/>. A member of the award winning team who developed the online community soil digital platform - the UK Soil Observatory <http://www.ukso.org/> to improve community access to soil data and maps. Co-author and narrator of BBC Ideas/Royal Society animation film on "The wonders of Soil" <https://www.bbc.co.uk/ideas/videos/why-soil-is-one-of-the-most-amazing-things-on-earth/p090cf64> and contributions to podcast and regular contribution to media articles and interviews regarding the importance of soil health.

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## PUBLICATIONS

H-index = 77 (Google Scholar)

Total ISI publications = 173

Citations = 23,895

ORCID identifier: <http://orcid.org/0000-0002-2713-4389>

Researcher id: D-6199-2011; <https://publons.com/researcher/2793788/bridget-a-emmett/>

<http://www.ceh.ac.uk/staff/bridget-emmett>

## Refereed ISI Journal Papers

1. Perry W.B., Seymour M., Orsini L., Jåms I.B., Milner N., Edwards F., Harvey R., de Bruyn M., Bista I., Walsh K., **Emmett B.**, Blackman R., Altermatt F., Lawson Handley L., Mächler E., Deiner K., Bik H.M., Carvalho G., Colbourne J., Cosby B.J., Durance I., Creer S. (2024) An integrated spatio-temporal view of riverine biodiversity using environmental DNA metabarcoding. *Nature Communications* 15(1) 4372
2. Reinsch S., Lebron I., Brentegani M., Brooks M., Busi S.B., Cagnarini C., Cooper D., Day J., **Emmett B.A.**, Fitos E., Goodall T., Griffiths R., Jones B., Keenan P., Keith A., Lopes-Mazzetto J.M., Mason K.E., Pallett D., Pereira M.G., Pinder A., Robinson D.A., Smart S.M., Thomas A., Benham S., Vanguelova E., Cosby B.J. (2024) Co-located ecological data for exploring top- and subsoil carbon dynamics across grassland-woodland contrasts. *Scientific Data* 11(1) 478
3. Feeney C.J., Bentley L., De Rosa D., Panagos P., **Emmett B.A.**, Thomas A., Robinson D.A. (2024) Benchmarking soil organic carbon (SOC) concentration provides more robust soil health assessment than the SOC/clay ratio at European scale. *Science of the Total Environment* 951: 175642
4. Levy P., Bentley L., Danks P., **Emmett B.**, Garbutt A., Heming S., Henrys P., Keith A., Lebron I., Mcnamara N., Pywell R., Redhead J., Robinson D., Wickenden A. (2024) The effects of land use on soil carbon stocks in the UK. *Biogeosciences* 21 19 4301 - 4315
5. Robinson D.A., Bentley L., Jones L., Feeney C., Garbutt A., Tandy S., Lebron I., Thomas A., Reinsch S., Norton L., Maskell L., Wood C., Henrys P., Jarvis S., Smart S., Keith A., Seaton F., Skates J., Higgins S., Giuffrè G., **Emmett B.A.** (2024) Five decades' experience of long-term soil monitoring, and key design principles, to assist the EU soil health mission. *European Journal of Soil Science* 75(5) e13570
6. Seaton F.M., George P.B.L., Alison J., Jones D.L., Creer S., Smart S.M., **Emmett B.A.**, Robinson D.A. A diversity of diversities: Do complex environmental effects underpin associations between below- and above-ground taxa? (2024) *Journal of Ecology* 112(7) 1550 - 1564
7. Thomas A., Seaton F., Dhiedt E., Cosby B.J., Feeney C., Lebron I., Maskell L., Wood C., Reinsch S., **Emmett B.A.**, Robinson D.A. (2024) Topsoil porosity prediction across habitats at large scales using environmental variables. *Science of the Total Environment* 922: 171158
8. Lebron I., Cooper D.M., Brentegani M.A., Bentley L.A., Dos Santos Pereira G., Keenan P., Cosby J.B., **Emmett B.**, Robinson D.A. (2024) Soil carbon determination for long-term

- monitoring revisited using thermo-gravimetric analysis. *Vadose Zone Journal* 23(1) e20300
9. Thomas A., Bentley L., Feeney C., Lofts S., Robb C., Rowe E.C., Thomson A., Warren-Thomas E., Emmett B. (2023) Land degradation neutrality: Testing the indicator in a temperate agricultural landscape. *Journal of Environmental Management* 346: 118884
  10. Feeney C.J., Robinson D.A., Keith A.M., Vigier A., Bentley L., Smith R.P., Garbutt A., Maskell L.C., Norton L., Wood C.M., Cosby B.J., **Emmett B.A.** (2023) Development of soil health benchmarks for managed and semi-natural landscapes. *Science of the Total Environment* 886: 163973
  11. Seaton F.M., Robinson D.A., Monteith D., Lebron I., Bürkner P., Tomlinson S., **Emmett B.A.**, Smart S.M. (2023) Fifty years of reduction in sulphur deposition drives recovery in soil pH and plant communities. *Journal of Ecology* 111 (2) 464-478
  12. Ferrín M., Márquez L., Petersen H., Salmon S., Ponge J.-F., Arnedo M., **Emmett B.**, Beier C., Schmidt I.K., Tietema A., de Angelis P., Liberati D., Kovács-Láng E., Kröel-Dulay G., Estiarte M., Bartrons M., Peñuelas J., Peguero G. (2023) Trait-mediated responses to aridity and experimental drought by springtail communities across Europe. *Functional Ecology* 37(1) 44-56.
  13. Qiao, L., Wang, X., Smith, P., Fan, J., Lu, Y., **Emmett, B.**, Li, R., Dorling, S., Chen, H., Liu, S., Benton, T.G., Wang, Y., Ma, Y., Jiang, R., Zhang, F., Piao, S., Müller, C., Yang, H., Hao, Y., Li, W., Fan, M. (2022) Soil quality both increases crop production and improves resilience to climate change. *Nature Climate Change*, 12 (6), pp. 574-580. DOI: 10.1038/s41558-022-01376-8
  14. Robinson, D.A., Thomas, A., Reinsch, S., Lebron, I., Feeney, C.J., Maskell, L.C., Wood, C.M., Seaton, F.M., **Emmett, B.A.**, Cosby, B.J. (2022) Analytical modelling of soil porosity and bulk density across the soil organic matter and land-use continuum. *Scientific Reports*, 12 (1), art. no. 7085. DOI: 10.1038/s41598-022-11099-7
  15. Feeney, C.J., Cosby, B.J., Robinson, D.A., Thomas, A., **Emmett, B.A.**, Henrys, P. (2022) Multiple soil map comparison highlights challenges for predicting topsoil organic carbon concentration at national scale. *Scientific Reports*, 12 (1), art. no. 1379. DOI: 10.1038/s41598-022-05476-5
  16. Seaton, F.M., Reinsch, S., Goodall, T., White, N., Jones, D.L., Griffiths, R.I., Creer, S., Smith, A., **Emmett, B.A.**, Robinson, D.A. (2022) Long-Term Drought and Warming Alter Soil Bacterial and Fungal Communities in an Upland Heathland. *Ecosystems*, 25 (6), pp. 1279-1294. DOI: 10.1007/s10021-021-00715-8
  17. McGuire, R., Williams, P.N., Smith, P., McGrath, S.P., Curry, D., Donnison, I., **Emmett, B.**, Scollan, N. (2022) Potential Co-benefits and trade-offs between improved soil management, climate change mitigation and agri-food productivity. *Food and Energy Security*, 11 (2), art. no. e352. DOI: 10.1002/fes3.352
  18. Proesmans, W., Andrews, C., Gray, A., Griffiths, R., Keith, A., Nielsen, U.N., Spurgeon, D., Pywell, R., **Emmett, B.**, Vanbergen, A.J. (2022) Long-term cattle grazing shifts the ecological state of forest soils. *Ecology and Evolution*, 12 (4), art. no. e8786. DOI: 10.1002/ece3.8786
  19. Seaton, F.M., Robinson, D.A., Monteith, D., Lebron, I., Bürkner, P., Tomlinson, S., **Emmett, B.A.**, Smart, S.M. (2022) Fifty years of reduction in sulphur deposition drives recovery in soil pH and plant communities. *Journal of Ecology*. DOI: 10.1111/1365-2745.14039
  20. Misselbrook, T., Bai, Z., Cai, Z., Cao, W., Carswell, A., Cowan, N., Cui, Z., Chadwick, D.R., **Emmett, B.**, Goulding, K., Jiang, R., Jones, D.L., Ju, X., Liu, H., Lu, Y., Ma, L., Powlson, D., Rees, R.M., Skiba, U., Smith, P., Sylvester-Bradley, R., Williams, J., Wu, L., Xu, M., Xu, W., Zhang, F., Zhang, J., Zhou, J., Liu, X. (2022) Progress on improving agricultural nitrogen use efficiency: UK-China virtual joint centers on nitrogen economy. *Frontiers of Agricultural Science and Engineering*, 9 (3), pp. 475-489. DOI: 10.15302/J-FASE-2022459
  21. Alison, J., Botham, M., Maskell, L.C., Garbutt, A., Seaton, F.M., Skates, J., Smart, S.M., Thomas, A.R.C., Tordoff, G., Williams, B.L., Wood, C.M., **Emmett, B.A.** (2022) Woodland, cropland and hedgerows promote pollinator abundance in intensive grassland landscapes, with saturating benefits of flower cover. *Journal of Applied Ecology*, 59 (1), pp. 342-354. DOI: 10.1111/1365-2664.14058
  22. Thomas, A.; Cosby, B. J. ... **Emmett, B. A.** (2021) Rapid adaptive modelling for policy support towards achieving Sustainable Development Goals: Brexit and the livestock sector in Wales. *Environmental Science & Policy*. DOI: 10.1016/J.ENVSCI.2021.08.009
  23. Seaton, Fiona M.; Reinsch, Sabine ... **Emmett, B.A.**, Robinson, David A. (2021) Ecosystems Long-Term Drought and Warming Alter Soil Bacterial and Fungal Communities in an Upland Heathland DOI: 10.1007/S10021-021-00715-8
  24. Wood, Claire M.; Alison, Jamie ... **Emmett, Bridget A.** (2021) Integrated ecological

- monitoring in Wales: the Glastir Monitoring and Evaluation Programme field survey Earth System Science Data DOI: 10.5194/ESSD-13-4155-2021
25. Jones, Briony; Goodall, Tim., **Emmett, B.A.**, Griffiths, Robert, I (2021) Beyond Taxonomic Identification: Integration of Ecological Responses to a Soil Bacterial 16S rRNA Gene Database. *Frontiers in Microbiology*. DOI: 10.3389/FMICB.2021.682886
  26. Simfukwe, Paul; Hill, Paul W; **Emmett, B.A**, Jones, Davey L. (2021) Identification and predictability of soil quality indicators from conventional soil and vegetation classifications *Plos One*. DOI: 10.1371/JOURNAL.PONE.0248665
  27. Thomas, A., Cosby, B.J., Henrys, P. and **Emmett B.** 2020. Patterns and trends of topsoil carbon in the UK: Complex interactions of land use change, climate and pollution. *Science of the Total Environment* 729 138330.
  28. Thomas, Amy; Masante, Dario; Jackson, Bethanna; Cosby, Bernard; **Emmett, Bridget**; Jones, Laurence. 2020. Fragmentation and thresholds in hydrological flow-based ecosystem Services. *Ecological Applications* 30:
  29. De Boeck, Hans J.; Bloor, Juliette M. G.; Aerts, Rien; Bahn, Michael; Beier, Claus; **Emmett, Bridget A.**; Estiarte, Marc; Gruenzweig, Jose M.; Halbritter, Aud H.; Holub, Petr; Jentsch, Anke; Klem, Karel; Kreyling, Juergen; Kroel-Dulay, Gyorgy; Larsen, Klaus Steenberg; Milcu, Alexandru; Roy, Jacques; Sigurdsson, Bjarni D.; Smith, Melinda D.; Sternberg, Marcelo; Vandvik, Vigdis; Wohlgemuth, Thomas; Nijs, Ivan; Knapp, Alan K. 2020. Understanding ecosystems of the future will require more realistic climate change experiments – A response to Korell et al. 2020. *Global Change Biology* 26:E6-E7.
  30. Seaton, Fiona M.; Barrett, Gaynor; Burden, Annette; Creer, Simon; Fitos, Eleonora; Garbutt, Angus; Griffiths, Rob I.; Henrys, Pete; Jones, Davey L.; Keenan, Patrick; Keith, Aidan; Lebron, Inma; Maskell, Lindsay; Pereira, M. Gloria; Reinsch, Sabine; Smart, Simon M.; Williams, Bronwen; **Emmett, Bridget A.**; Robinson, David A. 2020. Soil health cluster analysis based on national monitoring of soil indicators. *European Journal of Soil Science*. 10.1111/ejss.12958
  31. Head, Josephine S.; Crockatt, Martha E.; Didarali, Zahra; Woodward, Mary-Jane; **Emmett, Bridget A.** 2020. The role of citizen science in meeting SDG targets around soil health. *Sustainability* 12: 10.3390/su12241025.
  32. Cagnarini, Claudia; Blyth, Eleanor; **Emmett, Bridget A.**; Evans, Chris D.; Griffiths, Robert, I; Keith, Aidan; Jones, Laurence; Lebron, Inma; McNamara, Niall P.; Puissant, Jeremy; Reinsch, Sabine; Robinson, David A.; Rowe, Edwin C.; Thomas, Amy R. C.; Smart, Simon M.; Whitaker, Jeanette; Cosby, Bernard J. 2019. Zones of influence for soil organic matter dynamics: A conceptual framework for data and models. *Global Change Biology* 25:3996 – 4007.
  33. Seaton, Fiona M.; Jones, Davey L.; Creer, Simon; George, Paul B. L.; Smart, Simon M.; Lebron, Inma; Barrett, Gaynor; **Emmett, Bridget A.**; Robinson, David A. 2019. Plant and soil communities are associated with the response of soil water repellency to environmental stress. *Science of the Total Environment* 687:929-938.
  34. L.C. Maskell; M. Botham; P. Henrys; S. Jarvis; D. Maxwell; D.A. Robinson; C.S. Rowland; G. Siriwardena; S. Smart; J. Skates; E.J. Tebbs; G.M. Tordoff; **B.A. Emmett.** 2019. Exploring relationships between land use intensity, habitat heterogeneity and biodiversity to identify and monitor areas of High Nature Value farming. *Biological Conservation* 231:30-38.
  35. George, Paul B. L.; Creer, Simon; Ths, Robert I. Grif Fi; **Emmett, Bridget A.**; Robinson, David A.; Jones, Davey L. 2019. Primer and database choice affect fungal functional but not biological diversity findings in a national soil survey. *Frontiers in Environmental Science* 01.
  36. Nundloll, Vatsala; Porter, Barry; Blair, Gordon S.; **Emmett, Bridget**; Cosby, Jack; Jones, Davey L.; Chadwick, Dave; Winterbourn, Ben; Beattie, Philip; Dean, Graham; Shaw, Rory; Shelley, Wayne; Brown, Mike; Ullah, Izhar. 2019 The design and deployment of an end-to-end IoT infrastructure for the natural environment [in special issue: Cloud computing and internet of things] *Future Internet*, 11 (6), 129. 27, pp. <https://doi.org/10.3390/fi11060129>  
<http://nora.nerc.ac.uk/id/eprint/524468>
  37. Peguero, Guille; Sol, Daniel; Arnedo, Miquel; Petersen, Henning; Salmon, Sandrine; Ponge, Jean-François; Maspons, Joan; **Emmett, Bridget**; Beier, Claus; Schmidt, Inger K.; Tietema, Albert; De Angelis, Paolo; Kovács-Láng, Edit; Kröel-Dulay, György; Estiarte, Marc; Bartrons, Mireia; Holmstrup, Martin; Janssens, Ivan A.; Peñuelas, Josep. 2019. Fast attrition of springtail communities by experimental drought and richness-decomposition relationships across Europe. *Global Change Biology*, 25 (8). 2727-2738. <https://doi.org/10.1111/gcb.14685>



<http://nora.nerc.ac.uk/id/eprint/524428>

38. George, P.B., Lallias, D., Creer, S., Seaton, F., Kenny, J.G., Eccles, R.M., Griffiths, R.I., Lebron, I., **Emmett, B.A.**, Robinson, D.A., Jones, D.L. (2019). Divergent national-scale trends of microbial and animal biodiversity revealed across diverse temperate soil ecosystems. *Nature Communications* 10:
39. Maskell, L., G. Tordoff, D. Maxwell, P. Henrys, S. Smart, **B.A. Emmett**, J. Skates, M. Botham, G.M. Siriwardena, E. Tebbs, S. Jarvis, C. Rowland, D. Robinson. 2019. Exploring relationships between land use intensity, habitat heterogeneity and biodiversity to identify and monitor areas of High Nature Value farming (2019) *Biological Conservation*.231
40. Seymour, M, Durance, I, Cosby, BJ, Ransom-Jones, E, Deiner, K, Ormerod, SJ, Colbourne, JK, Wilgar, G, Carvalho, G, De Bruyn, M, Edwards, F, **Emmett, BA**, Bik, HM & Creer, S 2018, Acidity promotes degradation of multi-species environmental DNA in lotic mesocosms. *Communications Biology*, vol. 1, 4. <https://doi.org/10.1038/s42003-017-0005-3>
41. Norton L.R., Smart S.M., Maskell L.C., Henrys P.A., Wood C.M., Keith A.M., **Emmett B.A.**, Cosby B.J., Thomas A., Scholefield P.A., Greene S., Morton R.D., Rowland C.S.(2018). Identifying effective approaches for monitoring national natural capital for policy use. *Ecosystem Services* 30
42. Andresen L.C., Dominguez M.T., Reinsch S., Smith A.R., Schmidt I.K., Ambus P., Beier C., Boeckx P., Bol R., de Dato G., **Emmett B.A.**, Estiarte M., Garnett M.H., Kroel-Dulay G., Mason S.L., Nielsen C.S., Penuelas J., Tietema A. (2018). Isotopic methods for non-destructive assessment of carbon dynamics in shrublands under long-term climate change manipulation. *Methods in Ecology and Evolution*. 9
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