

Personal Details

Name of Firm: Centre for Ecology & Hydrology
Name of Person: Christopher Evans
Nationality: British
Date of Birth: 05/09/1971
Profession/specialisation: Biogeochemist
Position in firm: Band 4 Research Scientist
Years with firm: 14

Qualifications

PhD in Environmental Sciences (hydrochemistry of upland streams). University of East Anglia (1996)
BSc (1st) in Environmental Sciences. University of East Anglia (1993)

Career Outline

2006 – present Band 4 Research Scientist, Centre for Ecology and Hydrology, Bangor
2001 – 2006 Band 5 Research Scientist, Centre for Ecology and Hydrology, Bangor
1998 – 2001 Band 6 Research Scientist, Centre for Ecology and Hydrology, Wallingford

Summary

My research spans a range of biogeochemical issues, including terrestrial and freshwater carbon and nitrogen cycling, greenhouse gas budgets, water quality, and linkages between biogeochemistry and biodiversity in semi-natural ecosystems. I have particular interests in the interactions between different environmental drivers (e.g. climate, atmospheric deposition, land-management) and different biogeochemical cycles (e.g. C, N, S) in semi-natural ecosystems. My research combines field-based experiments with collection and analysis of long-term and large-scale data, and the development and application of process-based models. Research activities have included detecting and attributing long-term increases in surface water dissolved organic carbon (DOC); improving understanding of climate impacts on soil and water quality; determining the effects of sulphur and nitrogen deposition on terrestrial and freshwater biogeochemistry; and improving knowledge of peatland management effects on carbon and greenhouse gas fluxes. Outside the UK I have contributed to various published international assessments, and am currently involved in research projects in Borneo and Svalbard. In recent years I have led the development of a major peatland research platform in the Conwy catchment, one of four CEH Carbon Catchments, which also forms a part of the Conwy Source to Sea observatory, and secured external income in the region of £2 million to support embedded field experiments, modelling and policy-oriented projects. I have led the Defra Critical Loads and Dynamic Modelling consortium since 2004, which supports UK and European policy in relation to atmospheric impacts on terrestrial and aquatic ecosystems, and either led or been involved in projects for NERC, Defra, JNCC, EU, Welsh Assembly Government, EA, CCW, the Scottish Government and utility companies. I recently contributed to the National Ecosystem Assessment and Defra Review of Transboundary Air Pollution, and am currently participating in an IPCC expert group tasked with developing new guidance on greenhouse gas emissions from wetlands. I am a member of the CEH Bangor Senior Management Team with responsibility for section financial and staff management, line manage 5 CEH staff members, and currently supervise 5 PhD students and 2 postdocs. I have published over 75 papers in peer reviewed journals including Nature, Global Change Biology, Environmental Science and Technology and Geophysical Research Letters, and have been a member of the editorial board of Biogeochemistry since 2008..

Membership of expert groups, editorial boards etc

- UK scientific representative, Intergovernmental Panel on Climate Change expert group developing new IPCC guidance for wetlands, 2010-present.
 - Honorary lecturer, Bangor University, 2010-present.
 - Associate Editor, Biogeochemistry, 2008-present.
 - Section lead author (Water Quality Regulating Services), National Ecosystem Assessment, 2009-10.
 - Member of the Defra Review Group on Transboundary Air Pollution, 2008-2010.
 - Contributor to the UK Foresight Review on Land Use Futures (Land use and carbon sequestration), 2009-10.
 - Member of the NERC Carbon Landscapes and Drainage Network, 2009-2011.
 - Joint chair of the UNECE Joint Expert Group on Dynamic Modelling, 2005.
 - Member of UNECE Joint Expert Group on Dynamic Modelling, 2000-present.
 - Member of the International Scientific Committee and session chair, Prague Acid Rain conference, 2005.
 - Guest Editor, Special Issue on Recovery from Acidification in the UK, Environmental Pollution. 2004.
 - Editorial Board Member, Environmental Pollution, 2002-2005.
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Research experience

- Co-PI, EU FP7 ECLAIRE project, 'Effects of climate change on air pollution impacts and response strategies for European ecosystems', 2011-2014 (total budget €10.7m)
 - PI, Defra project 'Greenhouse gas emissions associated with non gaseous losses of carbon from peatlands', 2010-2013 (£300k)
 - Co-PI, Defra project, 'Investigation of peatland restoration techniques to achieve best outcomes for methane and greenhouse gas balances' 2010-2015 (£1.1m)
 - Co-I, NERC Sensor Network project, 'A United Kingdom Lake Ecological Observatory Network', 2011-2013 (£687k)
 - Co-PI, JNCC project 'Designing a Programme to Address Evidence Gaps in Greenhouse Gas and Carbon Flux from UK Peatlands' (lead author responsible for development of peat carbon monitoring programme). 2010-2011 (£45k)
 - PI, Defra Critical Loads and Dynamic Modelling Programme, 2004-2011(~£1.5m)
 - Co-PI, Defra Freshwater Umbrella research programme, 2004-2011 (£75k)
 - PI, NERC EHFI grant 'Acidity controls on organic matter cycling and nitrogen saturation in organic soils', 2007-2010 (£433k)
 - Co-PI, Marie Curie Initial Training Network 'NSINK' (impacts of N deposition in the Arctic), 2008-2011 (CEH €190k)
 - Co-I, NERC ERA-Net Env Health project, 'Environmental change and rising DOC: implications for health, 2009-2011 (CEH £119k)
 - PI, Welsh Assembly review of carbon monitoring in Wales, 2009 (£5k)
 - Project partner, NERC Urgency grant, 'Quantifying fluvial C losses following the catastrophic 2009 peat swamp forest fires of Kalimantan, Borneo', 2009-2010 (£30k)
 - Co-PI, Defra project 'Ecosystem services of peat', 2008-2009 (£100k)
 - Co-PI, Welsh Assembly ECOSSE-Wales project, 2008-2009 (£17k)
 - Co-PI, NERC standard grant 'Influence of recovery from acidification on the dynamics of dissolved organic carbon in organic soils, 2006-2009 (£350k)
 - Task leader (climate controls on DOC, acid episodes), EU Eurolimpacs project, 2004-present (£200k)
 - Co-I, Scottish Executive/Welsh Assembly Government ECOSSE project, 2003-2007 (CEH £177k)
 - Co-PI, process and modelling studies of nitrogen transport and transformation in upland systems. NERC GANE thematic programme, Defra. 2000 – 2004 (£239k)
 - Co-PI, CEH 5-year research theme, Carbon Exchange at the Catchment Scale, 2005-present
 - Co-PI, CEH 5-year research theme, Source to Sea Observatories, 2005-2010.
 - CEH lead for Defra UK Acid Waters Monitoring Network, 1998-present.
 - Responsible for development of dynamic acidification and nitrogen modelling for UK terrestrial and
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- freshwater ecosystems, Defra. 1998-present.
- Line-manager for 5 CEH current staff members.
 - Supervisor for 9 PhD students (4 completed, 5 ongoing) and 4 post-doctoral researchers, 2002-present
 - External PhD examinations: University of Stirling (2007), Swedish Agricultural University (2008), University of Sheffield (2011).
 - Reviewer for over 10 grant applications (NERC, NSF, NSERC, Swiss NSF, Royal Society etc) and over 70 papers.
 - Media activities include interviews for BBC, Radio Wales, Manchester Evening News and American Chemical Society online news. Press release accompanying 2007 Nature paper covered by Daily Telegraph, BBC, US Public Radio, Canadian television.
 - 77 papers published or in press in peer-reviewed journals, including 3 in Nature.
 - H-Index 20, average of 30 citations per paper, 11 papers with over 50 citations. Total citations 1756.
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Publications

Refereed papers

- Moore, S., Gauci, V., Page, S.E., **Evans, C.D.**, Garnett, M.G., Jones, T.G., Freeman, C., Limin, S. Fluvial organic carbon fluxes reveal deep instability of deforested tropical peatlands. *Nature* (in review)
- Oulehle, F., **Evans, C.D.**, Hofmeister, J., Krejci, R., Tahovska, K., Persson, T., Cudlin, P., Hruska, J. Major changes in forest carbon and nitrogen cycling caused by declining sulphur deposition. *Global Change Biology* (in review)
- Curtis, C.J., **Evans, C.D.**, Goodale, C.L., Heaton, T. What have stable isotope studies revealed about the nature and mechanisms of N saturation and nitrate leaching from semi-natural catchments? *Ecosystems* (accepted).
- Moore, S., Gauci, V., **Evans, C.D.**, Page, S.E., Fluvial organic carbon losses from a Bornean blackwater river. *Biogeosciences* (accepted).
- Evans, C.D.**, Monteith, D.T., Fowler, D., Cape, J.N., Brayshaw, S. (2011). Hydrochloric acid: An overlooked driver of environmental change. *Environmental Science and Technology*, dx.doi.org/10.1021/es103574u.
- McGovern, S., **Evans, C.D.**, Dennis, P., Walmsley, C., McDonald, M. (2011). Identifying drivers of species compositional change in a semi-natural upland grassland over a 40 year period. *Journal of Vegetation Science*, doi: 10.1111/j.1654-1103.2011.01256.x).
- Moldan, F., Hruška, J., **Evans, C.D.**, Hauhs, M. (2011). Experimental simulation of the effects of extreme climatic events on major ions, acidity and dissolved organic carbon leaching from a forested catchment, Gårdsjön, Sweden. *Biogeochemistry*, doi 10.1007/s10533-010-9567-6.
- Roberts, T., Hodson, A., **Evans, C.D.**, Holmén, K. Modelling the impacts of a nitrogen pollution event on the biogeochemistry of an Arctic glacier. *Annals of Glaciology* (accepted).
- Billett M.F., Charman, D.J., Clark, J.M., **Evans, C.D.**, Evans, M.G., Ostle, N.J., Worrall, F., Burden, A., Dinsmore, K.J., Jones, T., McNamara, N.P., Parry, L., Rowson, J.G., Rose, R. (2010). Carbon balance of UK peatlands: current state of knowledge and future research challenges. *Climate Research*, 45, 13-29.
- Clark, J.M., Billett, M.F., Coyle, M. Croft, S., Daniels, S., **Evans, C.D.**, Evans, M. Freeman, C., Gallego-Sala, A.V., Heinemeyer, A. House, J.I., Monteith, D.T., Nayak, D., Orr, H.G., Prentice, I.C., Rose, R. Rowson, J. Smith, J.U., Smith, P. Tun, Y.M., Vanguelova, E., Wetterhall, F., Worrall, F. (2010). Model inter-comparison between statistical and dynamic model assessments of the long-term stability of blanket peat in Great Britain (1940-2099). *Climate Research*, 45, 227-248.
- Smart, S.M., Henrys, P.A., Scott, W.A., Hall, J.R., **Evans, C.D.**, Crowe, A., Rowe, E.C., Dragosits, U., Page, T., Whyatt, J.D., Sowerby, A., Clark, J.M. (2010). Impacts of pollution and climate change on ombrotrophic Sphagnum species in the United Kingdom; analysis of uncertainties in two empirical niche models. *Climate Research*, 45, 163-177.
- Smith, J., Gottschalk, P., Bellarby, J., Chapman, S., Lilly, A. Towers, W., Bell, J., Coleman, K., Nayak, D., Richards, M., Hillier, J., Flynn, H., Wattenbach, M., Aitkenhead, M., Yeluripurti, J., Farmer, J., Milne, R., Thomson, A., **Evans, C.**, Whitmore, A., Falloon, P., Smith, P. (2010). Estimating changes in Scottish soil carbon stocks using ECOSSE. I. Model description and uncertainties. *Climate Research*, 45, 179-192.
- Smith, J., Gottschalk, P., Bellarby, J., Chapman, S., Lilly, A. Towers, W., Bell, J., Coleman, K., Nayak, D., Richards, M., Hillier, J., Flynn, H., Wattenbach, M., Aitkenhead, M., Yeluripurti, J., Farmer, J., Milne, R., Thomson, A.,
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- Evans, C.**, Whitmore, A., Falloon, P., Smith, P. (2010). Estimating changes in Scottish soil carbon stocks using ECOSSE. II. Application in Scotland. *Climate Research*, 45, 193-205.
- Evans, C.D.**, Cooper, D.M., Monteith, D.T., Helliwell, R.C., Moldan, F., Hall, J., Rowe, E.C., Cosby, B.J. (2010). Linking monitoring and modelling: can long-term datasets be used more effectively as a basis for large-scale prediction? *Biogeochemistry*, 101, 211-227.
- Toberman, H., Laiho, R., **Evans, C.D.**, Artz, R.E., Fenner, N., Vavrova, P., Freeman, C. (2010). Long-term drainage for forestry inhibits extracellular phenol oxidase activity in Finnish boreal mire peat. *European Journal of Soil Science*, 61, 950-957.
- Sowerby, A., Emmett, B.A., Williams, D., Beier, C., and **Evans, C.D.** (2010) The response of dissolved organic carbon (DOC) and the ecosystem carbon balance to experimental drought in a temperate shrubland. *European Journal of Soil Science*, 61, 697-709
- Smart, S.M., Scott, W.A., Whittaker, J., Hill, M.O., Roy, D.B., van Hinsberg, A., Critchley, C.N., Marrs, R.H., Marina, L., **Evans, C.**, Emmett, B.A., Rowe, E.C., Le Duc, M. (2010). Empirical realised niche models for British higher and lower plants – development and preliminary testing. *Journal of Vegetation Science*, 21, 643-656.
- Clark, J.M., Bottrell S.H., Evans, C.D., Monteith, D., Bartlett, R., Rose, R., Newton, R.J., Chapman, P.J. (2010) The importance of the relationship between scale and process in understanding long-term DOC dynamics. *Science of the Total Environment*, 408, 2768-2775.
- De Vries, W., Wamelink, G.W.W., van Dobben, H., Kros, J., Reinds, G.J., Mol-Dijkstra, J.P., Smart, S.M, **Evans, C.D.**, Rowe, E.C., Belyazid, S., Sverdrup, H.U, van Hinsberg, A., Posch, M.Hettelingh, J-P., Spranger, T., Bobbink, R. (2010) Use of dynamic soil-vegetation models to assess impacts of nitrogen deposition on plant species composition and to estimate critical loads: an overview. *Ecological Applications*, 20, 60-79.
- Austnes, K., **Evans, C.D.**, Eliot-Laize, C., Naden, P.S., Old, G.H. 2009. Effects of storm events on mobilisation and in-stream processing of dissolved organic matter (DOM) in a Welsh peatland catchment. *Biogeochemistry*, 99, 157-173.
- Ostle N.J., Levy, P.E., **Evans, C.D.**, Smith, P. (2009). UK land use and soil carbon sequestration. *Land Use Policy*, 26S, S274-283.
- De Vries, W., Solberg, S., Dobbertin, M.D., Sterba, H., Laubhann, D., van Oijen, M., **Evans, C.**, Gundersen, P., Kros, H., Wamelink, G.W.W., Reinds, G.J., Sutton, M.A. The impact of nitrogen deposition on carbon sequestration by terrestrial ecosystems. *Forest Ecology and Management*, 258, 1814-1823.
- Frogbrook, Z.L., Bell, J., Bradley, R.I., **Evans, C.**, Lark, R.M., Reynolds, B., Smith, P, and Towers, W. (2009) Quantifying terrestrial carbon stocks: Examining the spatial variation in two upland areas in the UK and a comparison to mapped estimates of soil carbon. *Soil Use and Management*, 25, 320-332
- Clark, J.M., Ashley, D., Wagner, M., Chapman, P.J., Lane, S.N., **Evans, C.D.**, Heathwaite A.L. (2009). Increased temperature sensitivity of net DOC production from ombrotrophic peat due to water table draw-down. *Global Change Biology*, 15, 794-807.
- Evans, C.D.**, Goodale, C.L., Caporn, S.J.M., Dise, N.B., Emmett, B.A., Fernandez, I.J., Field, C.D., Findlay, S.E.G., Lovett, G.M., Meesenburg, H., Moldan, F., Sheppard, L.J. (2008) Does elevated nitrogen deposition or ecosystem recovery from acidification drive increased dissolved organic carbon loss from upland soil? A review of evidence from field nitrogen additions experiments. *Biogeochemistry*, 91, 13-35.
- Evans, C.D.**, Norris, D., Ostle, N., Grant, H., Rowe, E.C., Curtis, C.J., Reynolds, B. (2008). Rapid immobilisation and leaching of wet-deposited nitrate in upland organic soils. *Environmental Pollution*, 156, 636-643.
- Evans, C.D.**, Monteith, D.T., Reynolds, B, and Clark, J.M. (2008). Buffering of recovery from acidification by organic acids. *Science of the Total Environment*, 404, 316-325.
- Evans, C.D.**, Reynolds, B., Hinton, C., Hughes, S., Norris, D., Grant, S. and Williams, B. (2008) Effects of decreasing acid deposition and climate change on acid extremes in an upland stream. *Hydrology and Earth System Sciences*, 12, 337-351.
- Neal, C., Lofts, S., **Evans, C.D.**, Reynolds, B., Tipping, E., Neal, M. (2008). Increasing iron concentrations in UK upland waters. *Aquatic Geochemistry*, 14, 263-288.
- Rowe, E.C., Smart, S.M., Kennedy, V.H., Emmett, B.A., **Evans, C.D.** (2008). Nitrogen deposition increases the acquisition of phosphorus and potassium by heather *Calluna vulgaris*. *Environmental Pollution*, 155, 201-207.
- Toberman, H., Freeman, C., Artz, R.E., **Evans, C.D.**, Fenner, N. (2008). Impeded drainage stimulates extracellular phenol oxidase activity in riparian peat cores. *Soil Use and Management*, 24, 357-365.
- Toberman, H., Freeman, C., **Evans, C.D.**, Fenner, N., Artz, R.E. (2008). The effects of summer drought on the soil fungal diversity of an upland *Calluna* heathland and correlation with the drought inhibition of soil extracellular phenol oxidase activity. *Environmental Microbiology*, 66, 426-436
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- Toberman H., **Evans, C.D.**, Freeman, C., Fenner, N., White, M., Emmett, B., Artz, R. (2008). Summer drought effects upon soil and litter extracellular phenol oxidase activity and soluble carbon release in an upland Calluna heathland. *Soil Biology and Biochemistry*, **40**, 1519-1532.
- Lapworth, D.J. Shand, P., Abesser, C., Darling, W.G., Haria, A.H., **Evans, C.D.**, and Reynolds, B. (2008). Groundwater nitrogen transformations within a moorland catchment, mid-Wales. *Science of the Total Environment*, **390**, 241-254.
- Monteith D.T. Stoddard J.L., **Evans C.D.**, de Wit H., Forsius M., Høgåsen T., Wilander A., Skjelkvåle B.L., Jeffries D.S., Vuorenmaa J., Keller B., Kopáček J. and Vesely J. Rising freshwater dissolved organic carbon driven by changes in atmospheric deposition. *Nature* **450**, 537-540.
- Helliwell, R.C., Davies, J.J.L., Jenkins, A., **Evans, C.D.**, Coull, M.C., Reynolds, B., Norris, D. and Ferrier, R.C. Spatial and seasonal variations in nitrogen leaching and acidity across four acid-impacted regions of the UK. *Water Air and Soil Pollution*, **185**, 3-19.
- Kowalik, R. A., Cooper, D.M., **Evans, C.D.**, and Ormerod, S.J. (2007). Acidic episodes retard the biological recovery of upland British streams from chronic acidification. *Global Change Biology*, **13**, 2439-2452.
- Evans, C.D.**, Freeman, C., Cork, L.G., Thomas, D.N., Reynolds, B., Billett, M.F., Garnett, M.H. and Norris, D. (2007) Evidence against recent climate-induced destabilisation of soil carbon from ¹⁴C analysis of riverine dissolved organic matter. *Geophysical Research Letters*, **34**, L07407, doi:10.1029/2007GL029431.
- Helliwell, R.C. Coull, M.C., Davies, J.J.L., **Evans, C.D.**, Norris, D., Ferrier, R.C., Jenkins, A., and Reynolds, B. (2007). The role of catchment characteristics in determining surface water nitrogen in four upland regions in the UK. *Hydrology and Earth System Sciences*, **11**, 356-371.
- Evans, C.D.**, Chapman P.J., Clark J.M., Monteith, D.T., and Cresser, M.S. (2006). Alternative explanations for rising dissolved organic carbon export from organic soils. *Global Change Biology*, **12**, 2044-2053
- Evans, C.D.**, Caporn, S.J.M., Carroll, J.A, Pilkington, M.G. Wilson, D.B., Ray, N., Cresswell, N. (2006) Modelling nitrogen saturation and carbon accumulation in heathland soils under elevated nitrogen deposition. *Environmental Pollution*, **143**, 468-478.
- Evans, C.D.**, Reynolds, B., Jenkins, A., Helliwell, R.C., Curtis, C.J., Goodale, C.L., Ferrier, R.C., Emmett, B.A., Pilkington, M.G., Caporn, S.J.M., Carroll, J.A., Norris, D., Davies, J., Coull, M.C. (2006) Evidence that soil carbon pool determines susceptibility of semi-natural ecosystems to elevated nitrogen leaching. *Ecosystems*, **9**, 453-462.
- Evans, C.D.**, Cooper, D.M., Juggins, S., Jenkins, A., and Norris, D. (2006). A linked spatial and temporal model of the chemical and biological status of a large, acid-sensitive river network. *Science of the Total Environment*, **365**, 167-185
- Rowe, E.C., **Evans, C.D.**, Emmett, B.A., Reynolds, B., Helliwell, R.C., Curtis, C.J., and Coull, M.C. (2006). Vegetation type affects the relationship between soil carbon to nitrogen ratio and nitrogen leaching. *Water, Air and Soil Pollution*, **177**, 335-347
- Wright, R.F., Aherne, J., Bishop, K., Camarero L., Cosby, B.J., Erlandsson, M., **Evans C.D.**, Forsius, M., Hardekopf, D.W., Helliwell, R., Hruska, J., Jenkins, A., Kopáček, J., Moldan, F., Posch, M., and Rogora, M. F. (2006). Modelling the effect of climate change on recovery of acidified freshwaters: relative sensitivity of individual processes in the MAGIC model. *Science of the Total Environment*, **365**, 154-166.
- Evans, C.D.**, Monteith, D.T., Cooper, D.M. (2005) Long-term increases in surface water dissolved organic carbon: Observations, possible causes and environmental impacts. *Environmental Pollution*, **137**, 55-71.
- Evans, C.D.** (2005) Modelling the effects of climate change on an acidic upland stream. *Biogeochemistry*, **74**, 21-46.
- Curtis, C.J., **Evans C.D.**, Helliwell, R.C., Monteith, D.T. (2005). Nitrate leaching as a confounding factor in chemical recovery from acidification in UK upland waters. *Environmental Pollution*, **137**, 73-82.
- Davies, J.J.L, Jenkins, A., Monteith, D.T., **Evans, C.D.** and Cooper, D.M. (2005). Trends in surface water chemistry of acidified UK freshwaters, 1988-2002. *Environmental Pollution*, **137**, 27-39.
- Battarbee, R.W., Monteith, D.T., Juggins, S., **Evans, C.D.**, Jenkins, A. and Simpson, G.L. Reconstructing pre-acidification pH for an acidified Scottish loch: a comparison of palaeolimnological and modelling approaches. *Environmental Pollution*, **137**, 135-149.
- Monteith, D.T. and **Evans, C.D.** The United Kingdom Acid Waters Monitoring Network: A review of the first 15 years and introduction to the Special Issue. *Environmental Pollution*, **137**, 3-13.
- Evans, C.D.**, Reynolds, B., Curtis, C.J., Crook, H.D., Norris, D., and Brittain, S.A. (2004). A conceptual model of spatially heterogeneous nitrogen leaching from a Welsh moorland catchment. *Water, Air and Soil Pollution: Focus*, **4**, 97-105.
- Worrall, F., Harriman, R., **Evans, C. D.**, Watts, C.D., Adamson, J., Neal, C., Tipping, E., Burt, T., Grieve, I., Monteith, D., Naden, P.S., Nisbet, T., Reynolds, B., and Stevens, P. (2004). Trends in dissolved organic
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- Sjkelkvale, B.L., **Evans, C.D.**, Larssen, T., Hindar, A., and Raddum, G.G. (2003) Recovery from acidification in European surface waters: a view to the future. *Ambio*, **32**, 170-175
- Evans, C.D.**, Freeman, C., Monteith, D.T., Reynolds, B., and Fenner, N. (2002) Climate change (Communication arising): Terrestrial export of organic carbon. *Nature*, **416**, 862.
- Evans, C.D.**, Monteith, D.T. (2002) Natural and anthropogenically-driven changes in the chemistry of six UK mountain lakes, 1988-2000. *Water, Air and Soil Pollution: Focus*, **2**, 33-46.
- Helliwell, R.C., Wright, R.F., **Evans, C.D.**, Jenkins, A., and Ferrier, R.C. (2002). A comparison of loch chemistry from 1955 and 1999 in the Cairngorms, N.E. Scotland *Water, Air and Soil Pollution: Focus*, **2**, 47-59.
- Cooper, D.M., and **Evans, C.D.** (2002) Constrained multivariate trend analysis applied to water quality variables. *Envirometrics*, **13**, 43-53
- Freeman, C., **Evans, C.D.**, Monteith, D.T., Reynolds, B., and Fenner, N. (2001) Export of organic carbon from peat soils. *Nature*, **412**, 785.
- Evans, C.D.**, Cullen, J.M., Alewell, C., Kopáček J., Marchetto, A., Moldan, F., Prechtel, A, Rogora, M., Veselý, J., and Wright, R. (2001) Recovery from acidification in European surface waters. *Hydrology and Earth System Sciences*, **5**, 283-298.
- Evans, C.D.**, and Monteith, D.T. (2001) Chemical trends at lakes and streams in the UK Acid Waters Monitoring Network, 1988-2000: Evidence for recent recovery at a national scale. *Hydrology and Earth System Sciences*, **5**, 351-366.
- Alewell, C., Armbruster, M., Bittersohl, J., **Evans, C.**, Meesenburg, H., Moritz, K., and Prechtel, A. (2001) Are there signs in aquatic recovery after two decades of reduced acid input in the low mountain ranges of Germany? *Hydrology and Earth System Sciences*, **5**, 367-378.
- Wright, R.F., Alewell, C., Cullen, J., **Evans, C.**, Marchetto, A., Moldan, F., Prechtel, A., and Rogora, M. (2001) Trends in nitrogen deposition and leaching in acid-sensitive streams in Europe. *Hydrology and Earth System Sciences*, **5**, 299-310.
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- Evans, C.D.**, Monteith, D.T., Harriman, R., and Jenkins, A. (2001) Assessing the suitability of Acid Neutralising Capacity as a measure of long-term trends in acidic waters based on two parallel datasets. *Water, Air and Soil Pollution*, **130**, 1541-1546.
- Monteith, D.T., **Evans, C.D.**, and Patrick, S. (2001) Monitoring Acid Waters in the UK: analysis of results 1988-1998. *Water, Air and Soil Pollution*, **130**, 1307-1312.
- Evans, C.D.**, Cooper, D.M., Gannon, B. (2001). A novel method for mapping critical loads across a river network. Application to the River Dart, South West England. *Water, Air and Soil Pollution: Focus*, **1**, 437-453.
- Evans, C.D.**, Monteith, D.T., and Harriman, R. (2001). Long-term variability in the deposition of marine ions at west coast sites in the UK Acid Waters Monitoring Network: Impacts on surface water chemistry and significance for trend determination. *The Science of the Total Environment*, **265**, 115-129.
- Monteith, D.T., **Evans, C.D.**, and Reynolds, B. (2000). Are temporal variations in the nitrate content of UK upland freshwaters linked to the North Atlantic Oscillation? *Hydrological Processes*, **14**, 1745-1749.
- Duan, L., Hao, J., Jenkins, A., Collins, R., **Evans, C.**, and Xie, S. (2000). Mapping critical loads of acid deposition for soils in China. *Tsinghua Science and Technology*, **5**, 270-278.
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- Evans, C.D.**, Murdoch, P.S., and Davies, T.D. (1999). Component flow processes at four streams in Catskill Mountains, New York, analysed using episode concentration/discharge relationships. *Hydrological Processes*, **13**, 563-575.
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