



Collaboration for  
Environmental  
Evidence

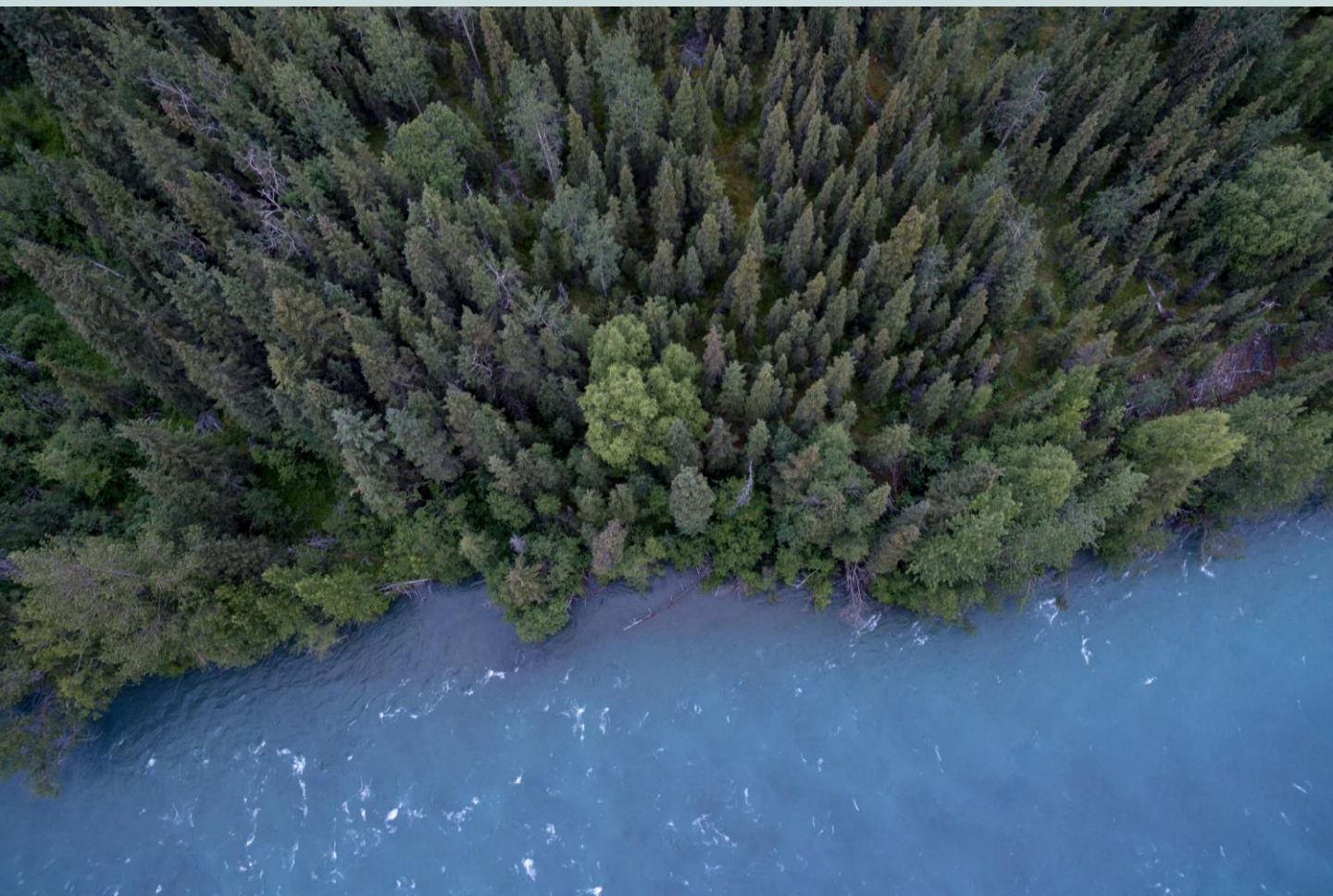
# 2018 ANNUAL REPORT

[www.environmentalevidence.org](http://www.environmentalevidence.org)



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# A Message from the Chief Executive Officer



If I had to pick one element of CEE's work that has developed most significantly during 2018 it would be networking. The growing influence of CEE as a platform to support rigorous environmental evidence synthesis has seen us become part of a fast-growing global network of organisations and groups interested in generating, assessing, communicating and using evidence to inform decision making. Some examples of project involvement are ongoing such as the Global Evidence Synthesis Initiative (GESI), which has developed a network of synthesis centre throughout the lower and middle-income countries seeking to develop their capacity for evidence synthesis, and the Evidence Synthesis Initiative (ESI), which is a cross sector body seeking to improve methodology and standards for the discipline. This year saw the beginning of other networking projects such as the Environmental Evidence for the Future.

Programme funded by the Natural Environment Research Council (NERC) in the UK that has funded a number of systematic maps to identify where there are gaps and gluts in the evidence base in order to prioritise future research. At the end of the year we established an agreement with the Stockholm Environment Institute (SEI) to establish an 'international CEE Centre' involving the SEI network of centres across the globe that we hope will provide even more exciting opportunities.

CEE 2018 conference held in Paris in April was a great success bringing together those active in CEE with key representatives from the wider network to discuss a very wide range of challenging subjects for the development of evidence synthesis. My personal thanks go to Barbara Livoreil and Ludivine Boursier from our French Centre at FRB for providing such a great venue and local organisation.

CEE Training events continue to be in demand. This year we finished a series funded by the Natural Environment Research Council (UK) and started a series contracted by the Green Climate Fund. One-off courses have also been provided by our Centres.

The CEE journal, *Environmental Evidence*, completed publication of its first Special Issue on stakeholder engagement in 2018 and started a second on the use of animal behaviour research in conservation management. The journal is now indexed by Web of Science and continues to be an important income generator for CEE.

The CEEDER Evidence Service demonstration phase was launched this year and all evidence reviews published across the globe in 2018 are being collated, appraised and made available on a new demonstration website. This will continue with user testing in 2019.

All of these developments are the result of much hard work and dedication of CEE Trustees and volunteers within our global network. My personal thanks to all those who have contributed in 2018. CEE's increasing influence and impact in the field of environmental evidence synthesis is due to you.

# CEE Officers and Board of Trustees



**Andrew Pullin**  
Chief Executive Officer  
Professor of Evidence-Based  
Conservation, Bangor University, UK



**Jessica Taylor**  
Secretary & Communications Officer  
Research Biologist,  
Carleton University, Canada



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Sweden



**Ruth Stewart**  
Trustee  
Director, Africa Centre for  
Evidence, South Africa<sup>4</sup>



# The Collaboration

## CEE Mission

To effectively promote an evidence-based approach to environmental management by facilitating the conduct and dissemination of high-quality syntheses of evidence that will inform decision making and better conserve biodiversity and ecosystem services for global benefit.

## CEE Vision

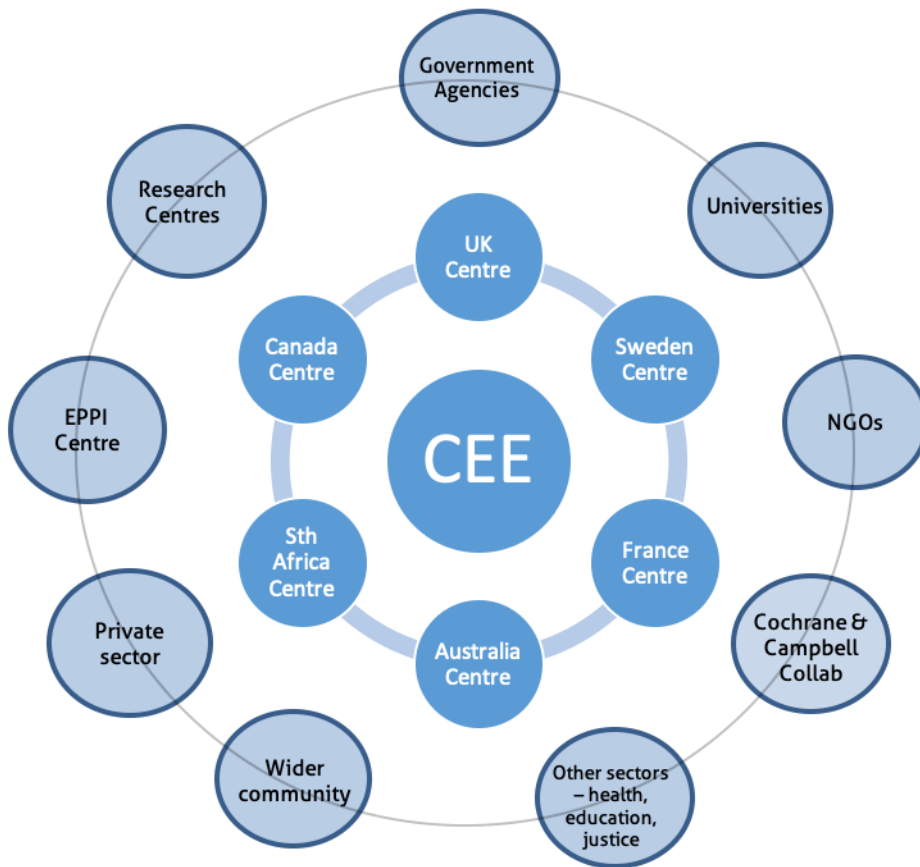
- Effective environmental management resulting from policy and management decisions that are informed by the best available evidence on questions of concern.
- A culture of scientific evaluation of environmental management through objective assessment and synthesis of available evidence.
- A society that appreciates and is supportive of the role of science in informing decisions that affect the environment and human wellbeing.



# Communications Strategy

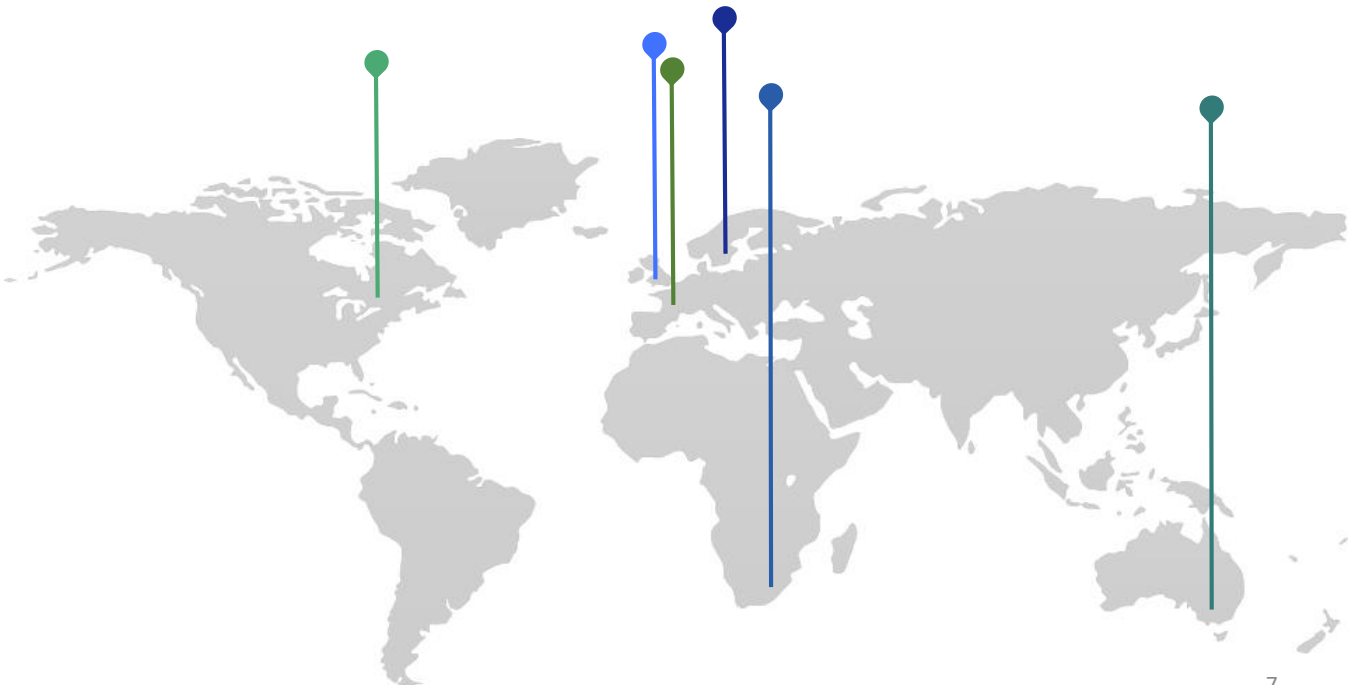
The CEE Communications and Engagement Strategy aims to:

- ensure effective communication among the CEE Centres;
- provide a strategy to share knowledge and coordinate activity among the CEE Centres;
- provide clarity and consistency in the development and delivery of key messages;
- provide a framework to build awareness of the CEE and celebrate achievements;
- define roles and scope with respect to communications; and
- define review and evaluation processes.



In 2018, Jessica Taylor continued as Communications Officer to conduct the communications work set out in the CEE Strategic Plan and oversee activities across various communications channels and functions. Jessica is a research biologist at the Canadian Centre and is responsible for maintaining the CEE's website, Twitter account (@envidence), Facebook page, the production of the Annual Report, and overall, acting as a 'brand guardian' ensuring consistency across all internal and external communications.

# CEE Centres in 2018





# Canada

## Canadian Centre for Evidence-Based Conservation

The Canadian Centre for Evidence-Based Conservation (CEBC) had another significant year of achievements in 2018. One of our main centre priorities was to continue to build capacity for and interest in evidence synthesis activities within our community, Canadian government agencies and NGOs. In this regard, we secured seven new contracts/grants extending into 2020. We also made significant progress on a number of systematic reviews/maps with anticipated submissions to the journal “Environmental Evidence” or other relevant outlets in early/mid 2019.

In April 2018, four Canadian CEBC members traveled to Paris for the 2<sup>nd</sup> Annual CEE conference, where three gave presentations, and attended the introduction to meta-analysis in environmental sciences workshop. Members also delivered a number of presentations on review specific topics and general presentations on the importance of evidence-based conservation and environmental management. In June 2018, we had three of our members endorsed as CEE trainers for the delivery of Introductory level courses in CEE Systematic Review Methodology. Related to this, another major highlight has been training and mentoring six new (casual) hires, mostly recent undergraduates and graduate students. We also continue to host the position of the CEE Communications Officer (Jessica Taylor).

Priorities for the Canadian Centre for 2019 include: (1) completing the systematic reviews/maps for four projects currently on-going; (2) supporting the completion of four other systematic maps being lead by researchers in Sweden and the UK, and a Canadian government agency (Fisheries and Oceans Canada); (3) formalizing our status as a “Centre” within Carleton University (application submitted in fall 2018); (4) exploring additional broader funding and partnership opportunities to ensure long term stability and enable us to engage more fully in realizing evidence-based conservation in Canada and beyond; (5) delivering workshop, presentations, and training opportunities for partners and undergraduate/graduate students to build further appreciation and understanding of the role of evidence-based conservation; and (6) preparing to host the 3<sup>rd</sup> International Conference of the CEE in Ottawa, Ontario, Canada June 1-5, 2020!



Members of the the Canadian CEE Centre: (left to right) Trina Rytwinski, Kent Prior (Parks Canada), Steven Cooke, Lisa Donaldson, Jessica Taylor

**CANADIAN CENTRE FOR  
EVIDENCE-BASED  
CONSERVATION**



**Carleton**  
UNIVERSITY



# Canada



## Publications

- Rytwinski T, Taylor JJ, Donaldson LA, Bennett JR, Hinch SG, Cooke SJ (2018) [Do fish passage facilities and culverts promote fish movement at barriers? A systematic review protocol](#). Open Science Framework.
- Cooke SJ, Rous AM, Donaldson LA, Taylor JJ, Rytwinski T, Prior KA, Smokorowski KE, Bennett JR (2018) [Evidence-Based Restoration in the Anthropocene – From Acting with Purpose to Acting for Impact](#). Restoration Ecology 26:201-205.
- Eales J, Haddaway NR, Bernes C, Cooke SJ, Gunnar Jonsson B, Kouki J, Petrokofsky G, Taylor JJ (2018) [What is the effect of prescribed burning in temperate and boreal forest on biodiversity, beyond tree regeneration, pyrophilous and saproxylic species? A systematic review](#). Environmental Evidence 7:19.
- Haddaway NR, Rytwinski T (2018) [Meta-analysis in not an exact science: call for guidance on quantitative synthesis decisions](#). Environment International 114:357-359.
- Bower SD, Brownscombe JW, Birnie-Gauvin K, Ford M, Moraga AD, Pusiak RJP, Turenne E, Zolderdo AJ, Cooke SJ, Bennett JR (2018) [Making tough choices: Picking the appropriate conservation decision-making tool](#). Conservation Letters 11(2):1-7.

## Book Chapter

- Taylor JJ, Rytwinski T, Bennett JR, Cooke SJ (2018) [Lessons for introducing stakeholders to Environmental Evidence Synthesis](#). In: Haddaway N, Crowe S (eds). Stakeholder engagement in systematic reviews and maps. Mistra EviEm, Stockholm, Sweden

# France

2018 has been characterized in France by the organisation and welcome of CEE2018, the second international conference of CEE, which was held in April near Paris. The other activities of the French Centre of CEE are still mostly focused at providing training and mentoring to people and teams willing to conduct evidence-based activities. The Centre is currently a network of persons who are interested in and/or have conducted systematic reviews in France. We do not benefit from paid staff and all contributions are volunteered. Raising awareness about systematic reviews and maps receives good attention and interest. We also benefit from the experience and feedback of the first evidence reviews that have been conducted and we are adapting our strategy for the future in light of such learning.

There are two very active locations in this network: the FRB, which is officially the French Centre, where B. Livoreil still provides training, either in Paris or by travelling to various places on demand. FRB also welcomes post-doc fellows in charge of systematic reviews or maps commissioned by the Ministry in charge of ecology. This is the outcome of the excellent relationship FRB has with various Ministries and with the French Agency for Biodiversity (AFB). Two major systematic reviews have been progressing in 2018, one about effective solutions to decrease resistance to antibiotics (protocol available in EEJ ), the other about control of infectious diseases by natural management (Lugassy et al. protocol to be submitted early 2019). The need for support by statisticians for meta-analysis regarding resistance to antibiotics allowed us to initiate and develop a collaboration with INRA, the French National Institute for Research on Agriculture, and D. Makowski who is now a member of the CEE Board. Those two reviews are expected early 2019. FRB also welcomed the meeting of the Board of the Evidence-Based Toxicology Collaboration ([www.ebtox.org](http://www.ebtox.org)) and this may lead to future collaborations for evidence synthesis combining toxicology and environment.





# France

FRB is also part of the European Mechanism for Knowledge & Learning on biodiversity and ecosystem services ([www.eklipse-mechanism.eu](http://www.eklipse-mechanism.eu)) and two systematic reviews have been launched, initially as a request from the French Ministry in charge of ecology, and then with the support of WHO. The first one is about the relationship between the types of blue habitats and mental health, and the second is about the relationship between green habitats types and components and mental health and psychological well-being. A consortium of European experts is conducting the work, with the technical mentoring of FRB. They are due by mid- 2019.

The other very active place in terms of conducting evidence synthesis is the UMS PATRINAT at the National Museum of Natural History (MNHN-AFB-CNRS). R. Sordello, in charge of evidence synthesis, stands as the original project leader of the first official CEE systematic review conducted in France (project COHNECS-IT, see <http://cohnecsit.mnhn.fr/>), in close collaboration with IRSTEA (S. Vanpeene), and with training provided by FRB. This project questions the role of linear transport infrastructure verges for biodiversity, as habitats or corridors. A first review on insects was published in 2018 in EEJ. The COHNECS-IT project will be pursued in 2019, with another systematic review on the subset of literature about vertebrates. The protocol of a systematic map about the effects of noise pollution on biodiversity was submitted to EEJ. Besides, the French Natural Reserves organisation (RNF) was selected by the European Commission for a LIFE programme about climate change, including three knowledge synthesis to be carried out by UMS PATRINAT. For several years, UMS PATRINAT has been successfully developing a sustainable team in order to become an evidence synthesis operator on the topic of biodiversity in France.

The French CEE network is also contributing to CEEDER activities, with two rounds of assessments conducted in 2018 by three reviewers (B. Livoreil, S. Vanpeene, R. Sordello). Gathering more and more hands-on experience on evidence synthesis challenges in France, we aim at writing a collaborative paper reporting all this in 2019, to be submitted to EEJ.

## Publications

Goulas A. et al. (2018). [What are the effective solutions to control the dissemination of antibiotic resistance in the environment? A systematic review protocol](#). *Environmental Evidence* 7:3.

Villemey A. et al. (2018). [Can linear transportation infrastructure verges constitute a habitat and/or a corridor for insects in temperate landscapes? A systematic review](#). *Environmental Evidence* 7:1.



# South Africa

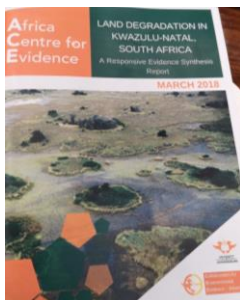
## CEE Joburg

Since late 2016, the South African CEE Centre – CEE Joburg – has been hosted by the Africa Centre for Evidence (ACE) at the University of Johannesburg. The mandate of CEE Joburg is to contribute to the work of the global CEE by encouraging the producing and use of evidence synthesis to inform environmental policy and practice in Africa, and specifically South Africa. Since our establishment in 2012, we have collaborated widely to promote research synthesis for environmental decision-making in South Africa.

In 2018, CEE Joburg was co-directed by Professor Ruth Stewart and Dr Carina van Rooyen, with support from our coordinators Natalie Tannous and Likhwa Ncube. Our main occupation in 2018 was working on the Responsive Evidence Synthesis Service (RESS) project. The RESS project intends to map all South African environmental research evidence to support the co-production of demand-led rapid evidence syntheses with the South African national Department of Environmental Affairs (DEA) and the Department for Planning, Monitoring and Evaluation (DPME).

The overall goal of the RESS project is to enhance the ability of South African environmental policy-makers to undertake and use evidence syntheses to inform any part in the policy process (from agenda setting to framing options to implementation considerations). On completing a pilot rapid evidence synthesis on land degradation for the provincial KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, we realised that we need to first establish an evidence base before we can provide a rapid evidence synthesis service. From here the idea then for an evidence map of South African environmental research. In 2018 we developed a protocol for the map, as well as conducted a scoping review of different models of and methods for rapid evidence synthesis services, to inform our decisions regarding the nature of the responsive evidence synthesis services with DEA.

As in previous years we again in 2018 supported DEA's hosting of the annual Biodiversity and Evidence Indaba on 26-27 July in Pretoria. CEE Joburg gave strategic direction with the programme, facilitated a fishbowl discussion, and had two panel members in the various discussions. In the course of the year, we attended various meetings arranged by DEA to provide input on documents, such as South Africa's response to the documents servicing at the 6<sup>th</sup> plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. CEE Joburg were also present at other gatherings during the year, such as the Academy of Science of South Africa workshops on 'Poverty, inequality and global climate change' and on 'Science, technology and innovation for the SDGs'.



CEE Joburg report on land degradation in KwaZulu-Natal



Carina and Steven Chen, a QES scholar from Canada



# South Africa



We also signed a letter of intent with the provincial Gauteng Department of Agriculture and Rural Development (GDARD) to support them in the development of an environmental register of research done in the Gauteng Province, using systematic evidence mapping. And we provided unfunded consulting services to a South African NGO developing an evidence map on African research regarding birds of prey.

In supporting our CEE colleague Neal Haddaway and others, we agreed in late 2018 to provide mentoring on systematic review methodology to teams of climate scientists who are conducting evidence synthesis for the upcoming assessment of the Intergovernmental Panel on Climate Change. CEE Joburg is supporting four teams on different topics: positive energy options for the building sector, climate change adaptation responses in African cities, indirect impacts of dematerialisation on energy consumption, and modelling in the assessment of energy savings potentials. The outcomes of these syntheses will be published in *Environmental Research Letters*.

In terms of conferences and presentations, we attended the bi-annual CEE conference in April in Paris, where we presented four papers and co-organised a session on rapid evidence synthesis. Two of our staff also served on the scientific committee of the conference that reviewed abstracts submitted for the conference. We also presented two papers at the Africa Evidence Network's bi-annual conference, Evidence2018, in September. And in December we held a Master Class in Pretoria on evidence mapping and rapid response services for evidence-informed decision-making in the food-energy-water nexus in Africa as part of the series of Master Classes arranged by the Joint Research Committee of the European Commission.

In terms of human resources, our CEE Joburg's co-director, Professor Ruth Stewart, now serves on the CEE board of trustees, whilst Dr Carina van Rooyen is a member of the editorial board of the CEE journal *Environmental Evidence*. In addition to some ACE staff members who work part-time on CEE Joburg projects, in 2018 we hosted two interns from the McMaster Health Forum in Canada on Queen Elizabeth Scholarships (QES), namely Steven Chen and Kathy Huang, who each contributed immensely to progressing the RESS project in different ways. (See the [presentation](#) by Steven on his time with us in Johannesburg.) In 2019 CEE Joburg will again host two QES scholars from the McMaster Health Forum.

# South Africa

## 2018 Publications

(research reports available at [www.africacentreforevidence.org](http://www.africacentreforevidence.org))

- Erasmus C & Langer L (2018) [Does governance type in protected areas matter for poverty? A rapid assessment of the evidence from sub-Saharan Africa](#). In Schreckenberg K, Mace G & Poudyal M (eds) *Ecosystem services and poverty alleviation: Tradeoffs and governance*. London: Routledge: 232-234.
- Langer L, Erasmus Y, Tannous N & Stewart R (2018) [How stakeholder engagement has led us to reconsider definitions of rigour in systematic reviews](#). In Haddaway NR & Crowe S (eds) *Stakeholder engagement in environmental synthesis*. Stockholm, Sweden: MISTRA EviEM.
- Snilstveit B, Stevenson J, Langer L, Polanin J, Shemilt I, Evers J & Ferraro P (2018) [Incentives for climate mitigation in the land use sector: A mixed-methods systematic review of the effectiveness of payment for environment services \(PES\) on environmental and socio-economic outcomes in low- and middle-income countries \(Review protocol\)](#). Campbell Collaboration.
- Tannous N, Van Rooyen C & Langer L (2018) [Rapid synthesis of research evidence on land degradation in KwaZulu-Natal](#). Johannesburg: CEE Johannesburg, Africa Centre for Evidence.
- Van Rooyen C & Tannous N (2018) [Marine resource management: Impacts on multi-dimensional poverty in sub-Saharan Africa](#). In Schreckenberg K, Mace G & Poudyal M (eds) *Ecosystem services and poverty alleviation: Tradeoffs and governance*. London: Routledge: 293-294.

## 2018 Blog Posts

- Langer L & Tannous N (2018) How to produce evidence that is useful – and used. [ACE general blog. Available at: <https://africacentreforevidence.org/2018/01/16/how-to-produce-evidence-thats-useful-and-used/>
- Ncube L (2018) Reflection on evidence mapping workshop. *Africa Evidence Network blog*. Available at: <http://www.africaevidencenetwork.org/reflection-on-evidence-mapping-workshop/>
- Van Rooyen C & Tannous N (2018) Connect with other African environmentalists interested in evidence. *Africa Evidence Network blog*. Available at: <http://www.africaevidencenetwork.org/connect-with-other-environmentalists-interested-in-evidence/>

## Plans for 2019

For 2019 CEE Joburg aims to accomplish the following:

- (1) Complete the South African environmental evidence map, agree with DEA on the nature of the model and methods to provide a rapid evidence synthesis service to them, and then offer that service in the second part of the year.
- (2) Continue growing our database of people in Africa working on environmental evidence. Achieving this will involve working in partnership with the Africa Evidence Network (which constitutes well over 2000 members in 41 African countries) to ensure our database is both online and open-access.
- (3) Submit applications for securing further funding for the work of CEE Joburg.
- (4) Continue with mentoring on evidence synthesis methodology to four teams of climate change scientists.
- (5) Publish peer-reviewed academic articles.



# Sweden

## Mistra EviEM

2018 sadly marked the end of 6.5 years of core funding generously provided by Mistra. The Swedish Foundation for Strategic Research and Mistra EviEM wrapped up its portfolio of projects early 2018. Fortunately, all EviEM reports will still be available at [www.eviem.se](http://www.eviem.se) for many years supported by the Foundation Mistra.

In January 2018, Mistra EviEM was invited by the Swedish Forest Agency to present our systematic map and reviews on how biodiversity is affected by different methods managing protected forests. The results were presented by the review team chair Bengt Gunnar Jonsson and the project manager Claes Bernes to the Agency's annual meeting for those working on protected forests.

Neal Haddaway arranged the Evidence Synthesis Hackthon in April 2018 to initiate a network of people interested in developing tools to facilitate the process for conducting systematic reviews. The invited participants were very productive and the report from the meeting is available at [www.eviem.se](http://www.eviem.se) and <http://evidencesynthesishackathon.com>.

In May Mistra EviEM and the non-profit organisation Public and Science co-arranged a dialog seminar "Future environment based on science". Invited speakers were scientists, politicians and representatives from both agencies and NGOs. The Minister for Environment and Energy, Karolina Skog, gave a very straightforward presentation on the need for a solid scientific base for decisions, even if many other factors have to be considered in the final decision.



The Evidence Synthesis Hackathon group in Stockholm, Sweden



Goodbye from Mistra EviEM: (left to right) Andrew Pullin, Claes Bernes, Johan Edman, Jerry Melillo, Katherine Richards, Kjell Asplund, Lisa Sennerby Forsse, Sif Johansson, Eva Thörnelöf, Magnus Land, Biljana Macura, Neal Haddaway, Henrik Smith, Filippa Ek.

# Sweden

## Mistra EviEM Systematic Reports and Maps

- [What is the effect of phasing out long-chain per- and polyfluoroalkyl substances on the concentration of perfluoroalkyl acids and their precursors in the environment? A systematic review](#) Land, M. de Wit, C.A., Bignert, A., Cousins, I.T., Herzke, D., Johansson, J.H., Martin, J.W. *Environmental Evidence* 2018
- [Manipulating ungulate herbivory in temperate and boreal forests: effects on vegetation and invertebrates. A systematic review](#) Bernes, C., Macura, B., Jonsson, B.G., Juuinen, K., Müller, J., Sandström, J., Lömus, A., Macdonald, E. *Environmental Evidence* 2018
- [The multifunctional roles of vegetated strips around and within agricultural fields. A systematic map](#) Haddaway, N.R., Brown, C., Eales, J., Eggers, S., Josefsson, J., Kronvang, B., Randall, N.P. and Uusi-Kämpä, J. *Environmental Evidence* 2018
- [What is the effect of prescribed burning in temperate and boreal forest on biodiversity, beyond pyrophilous and saproxylic species? A systematic review](#) Eales, J., Haddaway, N. R., Bernes, C., Cooke, S. J., Jonsson, B. G., Kouki, J., Petrokofsky, G., Taylor, J. J. *Environmental Evidence* 2018

## Additional Mistra EviEM Publications

- [ROSES RepOrting standards for Systematic Evidence Syntheses: pro forma, flow-diagram and descriptive summary of the plan and conduct of environmental systematic reviews and systematic maps](#) Haddaway, N.R., Macura, B., Whaley, P. and Pullin, A.S. *Environmental Evidence*, 2018.
- [Software support for environmental evidence synthesis](#) Westgate, M.J., Haddaway, N.R., Cheng, S.H., McIntosh, E.J., Marshall, C., L and Lindenmayer, D.B. *Nature Ecology and Evolution*, 2018.
- [Rethinking communication: integrating storytelling for increased stakeholder engagement in environmental evidence synthesis](#) Sundin, A., Andersson, K. and Watt, R. *Environmental Evidence*, 2018
- [Online tools supporting the conduct and reporting of systematic reviews and systematic maps: a case study on CADIMA and review of existing tools](#) Kohl, C., McIntosh, E., Unger, S., Haddaway, N.R., Kecke, S., Schiemann, J. and Wilhelm, R. *Environmental Evidence*, 2018





# Stockholm Environment Institute

2018 was an exciting year for the Stockholm Environment Institute (SEI) – although not formally a CEE Centre until early 2019, we were busy working towards this goal, continuing a number of evidence synthesis projects, applying for funding, providing CEE-endorsed evidence synthesis methods training, and raising awareness and capacity for CEE systematic reviews and maps across our network of collaborators.

SEI is a global organisation with 10 centres across 7 countries and 5 continents. The organisation is an independent research institute, working to bridge science and policy for topics related to environment and development: the sustainable development goals are central to all of our work. As SEI increases its capacity for conducting evidence syntheses, our reviews are expanding into exciting new areas, including qualitative synthesis, climate change, international development and sustainability. Our review projects involve colleagues from across the world, with ongoing reviews collaborating with colleagues in our Bangkok and Nairobi offices.

Of course, we attended CEE2018 in Paris in April, presenting on a range of different topics and leading sessions on qualitative synthesis and on evidence synthesis technology.

Perhaps the most exciting development for us in 2018 was the new collaboration with leading researchers working on climate change and their connections to the Intergovernmental Panel on Climate Change. We provided evidence synthesis methods training to a group of c. 75 social scientist IPCC authors in October, and following on from this, we initiated an exciting new mentoring scheme to match 20 novice review teams with systematic review and map experts to support upcoming reviews to feed into the next IPCC Assessment Report.

So far, 2019 looks exciting and busy for us – we look forward to continuing to engage with colleagues across SEI, building interest and capacity for rigorous systematic reviews and maps. We are also excited to start working with IPCC chapters more formally with generous funding from the Swedish Governmental Agency for Innovation Systems (Vinnova). Neal Haddaway will spend 3 months of 2019 on a visiting fellowship with the Global Evidence Synthesis Initiative (GESI) in Beirut, working on evidence synthesis in low- and middle- income countries, and building SEI capacity for evidence synthesis on health-related topics with funding from Forte (the Swedish Research Council for Health, Working Life and Welfare). And of course, we will be running several exciting Evidence Synthesis Hackathons over the course of the year. Finally, we will also be working on several ongoing systematic reviews and maps across a variety of different topics.



Members of the SEI: (left to right) Claes Bernes, Neal Haddaway, Biljana Macura at CEE2018 in Paris.

# Stockholm Environment Institute

## Publications

- Shackelford, G. E., Haddaway, N. R., Usieta, H. O., Pypers, P., Petrovan, S. O., Sutherland, W. J. (2018) [Cassava farming practices and their agricultural and environmental impacts: a systematic map protocol](#). Environmental Evidence, 7:30.
- Haddaway, N. R., McConville, J., Piniewski, M. (2018) [How is the term 'ecotechnology' used in the research literature? A systematic review with thematic synthesis](#). Ecohydrology and Hydrobiology, 18(3):247-261.
- Haddaway, N. R. (2018) [Open Synthesis: on the need for evidence synthesis to embrace Open Science](#). Environmental Evidence, 7:26.
- Haddaway, N. R., Rytwinski, T. (2018) [Meta-analysis is not an exact science: Call for guidance on quantitative synthesis decisions](#). Environment International, 114:357-359.
- Haddaway, N. R., Westgate, M. J. (2018) [Predicting the time needed for environmental systematic reviews and systematic maps](#). Conservation Biology, (in press, early view).
- Nakagawa, S., Samarasignhe, G., Haddaway, N. R., Westgate, M. J., O'Dea, R. E., Noble, D. W. A., Lagisz, M. (2018) [Research Weaving: Visualizing the Future of Research Synthesis](#). Trends in Ecology and Evolution, 34:224-238.
- Haddaway, N. R., Macura, B., Whaley, P., Pullin, A. S. (2018) [Response to "Every ROSE has its thorns"](#). Environmental Evidence, 7:21.
- Haddaway, N. R., Macura, B. (2018) [The role of reporting standards in producing robust literature reviews](#). Nature Climate Change, 8(6):444.
- Haddaway, N. R., Crowe, S. (2018) [Experiences and lessons in stakeholder engagement in environmental evidence synthesis: a truly special series](#). Environmental Evidence, 7:11.



# United Kingdom

The CEE UK Centre expansion in 2017 was consolidated in 2018 with joint projects and training events. The three linked institutions, The Centre for Evidence-Based Agriculture (CEBA) at Harper Adams University Led by Dr Nicola Randall, The European Centre for Environment and Human Health (ECEHH) at Exeter University led by Dr Ruth Garside, and the Centre for Evidence-Based Conservation at Bangor University, led by Prof Andrew Pullin, provide combined expertise, capacity and enhanced ability to support evidence synthesis across the spectrum of environmental decision-making.

As part of a Natural Environment Research Council (NERC) funded evidence synthesis training programme, the UK Centre ran CEETOP (CEE Training Opportunities) conducting two, week long training courses in 2017/18 and a series of in-house placements. The training was completed in March 2018 having trained 30 participants, and having hosted 4 placements between Harper Adams University and Exeter University.

In 2018 the UK Centre commenced a series of systematic review training programmes funded by the Green Climate Fund (GCF) in support of their evidence synthesis work on climate change adaptation and mitigation. Up to 4 courses are being provided in both basic evidence synthesis methods and meta-analysis, with contributions from the CEE Statistical Methods Group. The first set of training was delivered in South Korea by CEE staff in December, with further training programmes to take place in 2019.

Ruth Garside is leading a joint CEE-Campbell working group to develop guidance for systematic review and synthesis of qualitative research evidence. The UK Centre has also been contributing to an NERC-funded research programme called Environmental Evidence for the Future (EEF) in which CEE a partner providing the platform for the conduct of systematic evidence maps to on key environmental challenges for the UK. Exeter is also conducting one of the maps.

Staff from the CEE UK centre also continue to act as the core editorial team for Environmental Evidence Journal and are also lead co-ordinators of the CEEDER Evidence Service project that was trialled during 2018 and will be tested by users in 2019.



Members of the UK CEE Centre: (left to right)  
Andrew Pullin, Ruth Garside, Nicola Randall

# CEE 2018

## From Knowledge to Environmental Action



**FROM  
KNOWLEDGE  
TO ENVIRONMENTAL  
ACTION**

16-20 APRIL 2018



In April of 2018, CEE's second international conference was hosted by the French Centre and held outside of Paris thanks to the in-kind contribution of Ecole des Ponts which donated the venue and facilities. CEE2018 was held from April 16-20<sup>th</sup>, and included 2 days of workshops and training and 3 days of presentations.

The conference was a huge success welcoming 90 participants from 16 countries around the world who presented in symposia focused on topics such as evidence for management, computer-assisted technologies, and qualitative environmental research. We were honoured to welcome plenary speakers Howard White (Campbell Collaboration), Madeleine McKinnon (Paul G. Allen Philanthropies), and Kevin Olival (EcoHealth Alliance) and invited speakers Jo Puri (Green Climate Fund) and Nick Salafsky (Foundations of Success).

Preparations for the next CEE conference to be held in Ottawa, Canada in June 2020 have already begun.



Dr. Julia Koricheva & Dr. Elena Kulinskaya begin the conference with a 2-day "Introduction to Meta-analysis in Environmental Sciences" workshop.



CEE2018 hosts Barbara Livoreil and Ludivine Amdouni-Boursier from the French Centre outside the conference venue.



Plenary speaker Howard White, CEO of the Campbell Collaboration, opens the day with "10 Principles for Evidence-Based Policy and Practice".



Nicola Randall from the UK CEE Centre provides training on systematic maps.



# A Spotlight on: Guidelines and Standards for Evidence Synthesis in Environmental Management Version 5.0



Guidelines Editorial Team: (left to right) Barbara Livoreil, Geoff Frampton, Gillian Petrokofsky

Version 5.0 available online on the CEE website

Version 5.0 of the Guidelines, representing a significant revision of Version 4.2 (2013), was released online early in 2018 as a new *living* document. This new format allows changes and updates to be made in real time so the most up to date guidance is always accessible to users. Included in the Guidelines is a page dedicated to Updates and Corrections so any changes are transparent to users. The online guidelines were accessed over 4000 times in 2018 since their launch in February.

This version was developed over five years, overseen by the Guidelines Editorial Group (Geoff Frampton, Barbara Livoreil and Gillian Petrokofsky) who worked on a part-time voluntary basis under the approval and guidance of the Editor (Andrew Pullin) and the CEE Board of Trustees. The Guidelines Editorial Group called on a large number of people to help in the collaborative process of revision. Thanks are due to all who contributed. In order to keep costs as low as possible, the Guidelines Editorial Group progressed the work through a series of online meetings and email exchanges, and a two-day meeting held in Oxford in November 2016. The revised Guidelines comprise ten sections, which refer to published methods papers in Environmental Evidence, including several papers published by the Guidelines Editorial Group and their co-authors. All sections also take note of developments in systematic evaluations in other Collaborations and guidance produced by organizations with expertise in such evaluations. The guiding principle of the revision has been to identify strengths and limitations of CEE's existing guidelines, clarify previous guidance where this has been lacking or ambiguous, and respond to new developments in the area of evidence synthesis to improve the consistency, transparency and quality of evidence syntheses that are submitted to the CEE and Environmental Evidence journal.

# A Spotlight on: CEE Networks

The CEE has developed a strong network of collaborators from around the world that helps us achieve our goals. Examples of projects within the CEE Networks include:

## **Environmental Evidence for the Future**

Funded by the UK Natural Environment Research Council (NERC), CEE is supporting an evidence synthesis element to this programme that will identify evidence gaps through systematic evidence mapping. At a time when political focus is overwhelmingly on short-term requirements, this programme will define, prioritise and address the medium- to long-term knowledge gaps in the environmental science evidence base. It will identify where NERC investments, the wider environmental research landscape and interdisciplinary knowledge can help address these challenges to inform decisions and pioneer innovative policies and solutions. It will take a holistic, systemic and outcome-driven approach.

See [here](#) for more information on EEF.

## **Evidence Synthesis International**

The ESI mission is to connect and support both the organizations and people that produce evidence syntheses around the world. Their scope is broad, from human health to conservation, and education to veterinary medicine and they function as the global hub where evidence synthesis organization meet to build capacity, and share resources.

ESI as a networking hub brings the diverse global community of evidence synthesis experts together where they can exchange knowledge, and advocate for the use of rigorous evidence synthesis methods as the foundation for evidence informed policy.

CEE contributes to the governance of ESI and you can found out more about activities [here](#).



## **Global Evidence Synthesis Initiative**

The Global Evidence Synthesis Initiative (GESI) was launched to enhance the capacity of Low- and Middle-Income Countries (LMICs) in synthesizing evidence, and using synthesized evidence to support practice and policy across disciplines including, but not limited to, Agriculture, Economics, Education, Environment, and Health. GESI will achieve these aims through supporting Evidence Synthesis Centers based in LMICs.

GESI founding organizations include Cochrane (previously the Cochrane Collaboration), the Campbell Collaboration, the Alliance for Health Policy and Systems Research (AHPSR), the American Institutes for Research (AIR), the EPPI-Centre, the Collaboration for Environmental Evidence (CEE), the Joanna Briggs Institute (JBI), and the International Initiative for Impact Evaluation (3ie).

CEE contributes to the Governing Board and has recently presented workshops and webinars on evidence synthesis methodology. See [here](#) for more information on GESI.



# Environmental Evidence Journal

The official journal of the CEE is Environmental Evidence, an open-access journal that accepts submission of systematic reviews, systematic maps, review and map protocols, commentaries and methodological papers related to the conduct of systematic reviews.

## Editor-in-Chief

Prof Andrew Pullin, Bangor University, United Kingdom

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Dr Carina van Rooyen, University of Johannesburg, South Africa

Dr Cagan Sekercioglu, University of Utah, United States of America



**Environmental Evidence**

# Protocols

## Reviews and Maps in Progress



[Scientific evidence for sustainable plant disease protection strategies for the main arable crops in Sweden. A systematic map protocol](#)

Anna Berlin, Helena Nordström Källström, Anders Lindgren and Åke Olson

[Cassava farming practices and their agricultural and environmental impacts: a systematic map protocol](#)

Gorm E. Shackelford, Neal R. Haddaway, Hope O. Usieta, Pieter Pypers, Silviu O. Petrovan and William J. Sutherland

[Evidence of effects of herbivory on Arctic vegetation: a systematic map protocol](#)

E. M. Soininen, I. Barrio, J. U. Jepsen, D. Ehrich, V. T. Ravolainen and J. D. M. Speed

[What is the impact of continuous cover forestry compared to clearcut forestry on stand-level biodiversity in boreal and temperate forests? A systematic review protocol](#)

Meelis Seedre, Adam Felton and Matts Lindblad

[What spatially explicit quantitative evidence exists that shows the effect of land tenure on illegal hunting of endangered terrestrial mammals in sub-Saharan Africa? A systematic map protocol](#)

Isla Duporge, Timothy Hodgetts and Maria Brett

[What is the available evidence for the application of genome editing as a new tool for plant trait modification and the potential occurrence of associated off-target effects: a systematic map protocol](#)

Dominik Modrzejewski, Frank Hartung, Thorben Sprink, Dörthe Krause, Christian Kohl, Joachim Schiemann and Ralf Wilhelm

[Evidence for the impacts of agroforestry on agricultural productivity, ecosystem services, and human well-being in high-income countries: a systematic map protocol](#)

Sarah E. Brown, Daniel C. Miller, Pablo J. Ordonez and Kathy Baylis

[What do we know about the impacts of the Marine Stewardship Council seafood ecolabelling program? A systematic map protocol](#)

Ashleigh Arton, Anthony Leiman, Gillian Petrokofsky, Hilde Toonen, Francis Neat and

[What evidence is available on the drivers of grassland ecosystem stability across a range of outcome measurements: a systematic map protocol](#)

Stuart Demmer, Kevin Kirkman and Michelle Tedder

[What are the effective solutions to control the dissemination of antibiotic resistance in the environment? A systematic review protocol](#)

Anaïs Goulas, Barbara Livoreil, Nathalie Grall, Pierre Benoit, Céline Couderc-Obert, Christophe Dagot, Dominique Patureau, Fabienne Petit, Cédric Laouénan and Antoine Andremont

[What are the impacts of small-scale dredging activities on inland fisheries productivity? A systematic review protocol](#)

Belinda M. S. Ward-Campbell and Brent Valere

[Impacts of selected Ecological Focus Area options in European farmed landscapes on climate regulation and pollination services: a systematic map protocol](#)

S. Ottoy, V. Angileri, C. Gibert, M. L. Paracchini, P. Pointereau, J.-M. Terres, J. Van Orshoven, L. Vranken and L. V. Dicks



# Systematic Reviews

[What is the effect of prescribed burning in temperate and boreal forest on biodiversity, beyond pyrophilous and saproxylic species? A systematic review](#)

Jacquelyn Eales, Neal R. Haddaway, Claes Bernes, Steven J. Cooke, Bengt Gunnar Jonsson, Jari Kouki, Gillian Petrokofsky and Jessica J. Taylor

[How does roadside vegetation management affect the diversity of vascular plants and invertebrates? A systematic review](#)

Simon Jakobsson, Claes Bernes, James M. Bullock, Kris Verheyen and Regina Lindborg

[To what extent do mesophotic coral ecosystems and shallow reefs share species of conservation interest? A systematic review](#)

Jack H. Laverick, Shanice Piango, Dominic A. Andradi-Brown, Dan A. Exton, Pim Bongaerts, Tom C. L. Bridge, Michael P. Lesser, Richard L. Pyle, Marc Slattery, Daniel Wagner and Alex D. Rogers

[Manipulating ungulate herbivory in temperate and boreal forests: effects on vegetation and invertebrates. A systematic review](#)

Claes Bernes, Biljana Macura, Bengt Gunnar Jonsson, Kaisa Junninen, Jörg Müller, Jennie Sandström, Asko Lohmus and Ellen Macdonald

[Can linear transportation infrastructure verges constitute a habitat and/or a corridor for insects in temperate landscapes? A systematic review](#)

Anne Villemey, Arzhvaël Jeusset, Marianne Vargac, Yves Bertheau, Aurélie Coulon, Julien Touroult, Sylvie Vanpeene, Bastien Castagnérol, Hervé Jactel, Isabelle Witte, Nadine Deniaud, Frédérique Flamerie De Lachapelle, Emmanuel Jaslier, Véronique Roy, Eric Guinard, Eric Le Mitouard, Vanessa Rael and Romain Sordello

[What is the effect of phasing out long-chain per- and polyfluoroalkyl substances on the concentrations of perfluoroalkyl acids and their precursors in the environment? A systematic review](#)

Magnus Land, Cynthia A. de Wit, Anders Bignert, Ian T. Cousins, Dorte Herzke, Jana H. Johansson and Jonathan W. Martin



# Systematic Maps



## [Absence of evidence for the conservation outcomes of systematic conservation planning around the globe: a systematic map](#)

Emma J. McIntosh, Sarah Chapman, Stephen G. Kearney, Brooke Williams, Glenn Althor, Jessica P. R. Thorn, Robert L. Pressey, Madeleine C. McKinnon and Richard Grenyer

## [How have carbon stocks in central and southern Africa's miombo woodlands changed over the last 50 years? A systematic map of the evidence](#)

Davison Gumbo, Jessica Clendenning, Christopher Martius, Kaala Moombe, Isla Grundy, Robert Nasi, Kondwani Y. Mumba, Natasha Ribeiro, Gillian Kabwe and Gillian Petrokofsky

## [The multifunctional roles of vegetated strips around and within agricultural fields](#)

Neal R. Haddaway, Colin Brown, Jacqui Eales, Sönke Eggers, Jonas Josefsson, Brian Kronvang, Nicola P. Randall and Jaana Uusi-Kämpä

## [What specific plant traits support ecosystem services such as pollination, bio-control and water quality protection in temperate climates? A systematic map](#)

Claire J. Cresswell, Heidi M. Cunningham, Andrew Wilcox and Nicola P. Randall



# Securing the Future of CEE



The Collaboration for Environmental Evidence was established in 2007 and is registered for charitable purposes within the UK. In line with legal requirements, the endeavors of CEE satisfy three 'charitable purposes':

- the advancement and improvement of environmental protection
- the advancement of science
- the advancement of education

and the two 'public benefit principles': the general public will benefit from more effective environment management and conservation action because those working in the environmental sector will be able to more easily access information to help them improve the effectiveness of their work. The CEE places no restrictions on who can benefit.

The CEE Constitution sets out how the CEE will operate within Charity Law. The CEE operates as a 'not-for-profit' organization and has a Board of Trustees responsible for proper governance of the CEE, probity, adherence to regulations for 'not for profit' organizations and charity law. The CEE is open to all who wish to contribute to the conduct, or use, of CEE Systematic Reviews and who are committed to the principle of evidence-based practice. As CEE activity increases through greater engagement in systematic reviews, Thematic and Methods Groups, and the establishment of new CEE Centres, the demands placed the CEE infrastructure are also increasing.

The continued success of CEE's 'open-access' strategy is dependent on adequate and sustainable funding of the core infrastructure. Many funding streams, such as environment research grants, do not fund infrastructure costs and environmental funding tends to support direct action. CEE therefore seeks donations to enable it to continue to support and coordinate environmental management systematic review activity worldwide.

Potential donors are encouraged to contact us at: [info@environmentalevidence.org](mailto:info@environmentalevidence.org)



# Thank You

The existence and growth of the CEE is due in no small part to a wide range of individuals and organizations who have actively supported its vision and aims, either through funding, giving it visibility in key arenas, through giving their time to key CEE activity, or through active involvement in CEE Systematic Reviews. Particular thanks for 2018 are due to:

- The Trustees
- CEE Guidelines Editorial Board
- Leaders and staff of CEE Centres
- Leaders and contributors to CEE Groups
- Commissioners and funders of CEE Systematic Reviews
- Review authors, stakeholders and peer-reviewers
- Volunteers and supporters
- BioMed Central and the EEJ Editorial Board

More information: [www.environmentalevidence.org](http://www.environmentalevidence.org)

Email: [info@environmentalevidence.org](mailto:info@environmentalevidence.org)

