COLLABORATION FOR ENVIRONMENTAL EVIDENCE

England & Wales · Charity number 1157607

Details

Other names	CEE
Status	Registered
Legal form	CIO
Registered	2014-06-26
Register	View on the Charity Commission register

Contact

Address	Lytchett House 13 Freeland Park Wareham Road Dorset BH16 6FA
Phone	01492623201
Email	info@environmentalevidence.org
Website	www.environmentalevidence.org

Activities

Objects: TO ADVANCE THE EDUCATION OF THE PUBLIC IN THE SUBJECT OF THE PROTECTION OF THE ENVIRONMENT AND CONSERVATION OF BIODIVERSITY THROUGH THE PREPARATION, MAINTENANCE, PROMOTION AND DISSEMINATION OF SYSTEMATIC REVIEWS OF THE EFFECTS AND IMPACTS OF ENVIRONMENTAL MANAGEMENT INTERVENTIONS, FOR THE PUBLIC BENEFIT”

Activities: CEE is a global, independent, not-for-profit organisation promoting the use of evidence to inform decisions in the environmental sector. We are a network of individuals and organisations with a mission to provide an open-access evidence service and support for conduct and dissemination of high quality evidence syntheses on issues relevant to practice and policy.

Downloaded from opencharities.uk/ew/1157607

Classification

- **How:** Provides Services, Provides Advocacy/advice/information, Sponsors Or Undertakes Research, Acts As An Umbrella Or Resource Body
- **What:** Education/training, Arts/culture/heritage/science, Environment/conservation/heritage
- **Who:** Other Charities Or Voluntary Bodies, Other Defined Groups, The General Public/mankind

Geography

- **Area of benefit:** NOT DEFINED - IN PRACTICE WORLDWIDE.
- Australia
- Canada
- Chile
- France
- South Africa
- Sweden
- United States
- Throughout England And Wales

Finances

Period end	Income	Expenditure	Assets	Employees
2025-03-31	£7,421	£4,878	-	-
2024-03-31	£2,000	£1,027	-	-
2023-03-31	£15,704	£6,802	-	-
2022-03-31	£4,899	£11,859	-	-
2021-03-31	£12,330	£4,021	-	-

Downloaded from opencharities.uk/ew/1157607

Trustees

Name	Role	Appointed
Prof. KATHRYN MONK	Chair	2017-05-01
Bentval Ravindra Prabhu		2024-09-18
Dave Stone		2023-02-01
Dr Matthew Grainger		2022-05-01
Dr Rodrigue Gbedomon		2026-02-20
Dr Sini Savilaakso		2026-05-04
Dr Steven Cooke		2021-01-01
Henrik Smith		2018-08-30
Prof Ruth Garside		2021-01-01

Downloaded from opencharities.uk/ew/1157607

COLLABORATION FOR ENVIRONMENTAL EVIDENCE

England & Wales - Charity number 1157607

Accounts

Collaboration for Environmental Evidence

2024 ANNUAL REPORT

www.environmentalevidence.org

Collaboration for Environmental Evidence

Our 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.

Our 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.

Copyright © 2025 Collaboration for Environmental Evidence

Table of Contents

1 A Message from the Board
3 A Message from the CEO
5 Strategic Highlights
11 Evidence Highlights
19 Operations

A Message from the Board

The Collaboration for Environmental Evidence (CEE) has continued to grow and evolve in 2024, reinforcing its role as a leader in advancing evidence-informed decision-making for environmental policy and practice. This year has seen significant progress in expanding our global reach, strengthening our partnerships, and enhancing the accessibility and impact of our work.

A key highlight in 2024 was increased recognition of CEE's evidence synthesis approaches and standards as a cornerstone of effective environmental management. Through systematic reviews, evidence maps, and methodological advancements, our Centres and individual colleagues continued to provide policymakers, practitioners, and researchers with reliable evidence to address complex environmental challenges. A growing emphasis on global evidence infrastructure — reflected in international events such as the What Works Climate Solutions Summit and the Global Evidence Summit in 2024 — continues to demonstrate the critical role of high-quality synthesis in shaping solutions for key challenges such as biodiversity conservation, climate resilience, and sustainable development.

A significant development this year was the announcement of transformative funding proposals focused on evidence synthesis at the United Nations Summit for the Future, a high-level event held at United Nations headquarters in New York in September. The Summit aimed to forge a new international consensus on delivering a better present and safeguarding the future. During this event, the UK's Economic and Social Research Council launched a call for artificial intelligence (AI)-driven evidence synthesis to support policymaking, highlighting the growing demand for rigorous, transparent, and scalable approaches to synthesising global knowledge. The results of this call, expected in 2025, will further shape the future of evidence synthesis. Meanwhile, the global foundation Wellcome, also based in the UK,

announced plans to financially support the development of a new global framework for evidence synthesis infrastructure, reinforcing the importance of collaboration and methodological innovation in addressing urgent environmental and health challenges. These initiatives underscore the increasing recognition of evidence synthesis as an essential tool for informed decision-making in global challenges, all underpinned by environmental issues and validating CEE's mission and approach.

The Trustees were pleased to welcome Dr. Ravi Prabhu to the Board this year. Dr. Prabhu brings extensive experience in forestry, environmental governance, and sustainable development, having previously held senior leadership roles at the World Agroforestry Centre and Centre for International Forestry Research and World Agroforestry. His expertise in evidence-informed policy, natural resource management, and global environmental governance will be invaluable as we continue to advance our mission. We are delighted to have him join the Board and look forward to his contributions to CEE's strategic direction.

Looking ahead, the Board remains committed to fostering innovation in evidence synthesis methods, broadening the uptake of our work, and supporting our global community of stakeholders dedicated to rigorous, transparent, and impactful environmental evidence.
The Board extends heartfelt thanks to our network of researchers, practitioners, funders, and partners who make our work possible. Most of CEE's work is done by a dedicated community of volunteers, whose contributions in these challenging times are increasingly inspiring. You drive our mission forward, and together, we continue to make evidence count for the environment.

Kathryn Monk
Board Chair, Trustee
Collaboration for Environmental Evidence

A Message from the CEO

This year began with the launch of our 10-year Strategic Plan, setting clear objectives that reflect rapid growth in both the demand for evidence and the technology enabling evidence synthesis to be more responsive and relevant to decision-makers' needs.

The Strategic Plan will guide the work of our volunteer teams, and implementation is underway in key areas such as Communications and Training. However, given the rapid rate of growth in evidence synthesis activity, the plan also reflects an urgent need for transformational change towards a new business model, requiring significant funding and professional staff working alongside volunteers.

This year also marked a transition to a new editorial team for the journal, with joint Editors-in-Chief Dr. Biljana Macura and Dr. Steven Cooke taking over at the beginning of 2025. Along with this change, there are plans for the journal to include areas of evidence implementation and to extend the subject scope of evidence syntheses.

The CEE Database of Evidence Reviews (CEEDER), passed a milestone of 2,000 articles available to users this year, thanks to the dedication of volunteers in the Review College and the editorial team led by our CEEDER Manager, Dr. Barbara Livoreil. The structure of CEE as an open community of practice presents a constant challenge to maintain our services to the environmental evidence synthesis community, and I am personally very grateful to all the volunteers working in our Teams and Centres that keep the CEE ship afloat.

Meanwhile, collaborative work with our partners in the global evidence synthesis community, led by the Global Commission on Evidence, has provided a 'once in a generation' opportunity to reshape and repurpose the global evidence synthesis infrastructure. In the latter part of 2024, CEE volunteers joined many others in the launch of the Evidence Synthesis Infrastructure Collaborative (ESIC), funded by Wellcome Trust, that forms the planning stage of an initiative to achieve a step

change in the production and use of rigorous evidence synthesis across sectors (e.g., health, education, environment) and build capacity for production in poorly resourced areas in the global south. This process has brought together an impressive diversity of contributors, both in terms of organisations and individuals. The development of ESIC is both a huge opportunity and a challenge for CEE as the leading organisation promoting environmental evidence synthesis. Change is likely to be rapid, and we must be ready to move ahead with new methodologies provided by AI and new evidence synthesis products such as Living Systematic Reviews and Maps.

Looking forward, the next two years will see big changes in the way the evidence synthesis community is organised and in the services it provides to both producers and end users. CEE is an important contributor to this global and cross-sectoral process, ensuring the environmental sector benefits from more relevant and timely evidence to inform decision-making.

Andrew Pullin
Chief Executive Officer
Collaboration for Environmental Evidence

Photo by Ernest Boyd on Unsplash

Strategic Highlights

6 Strategic Plan
7 Evidence Synthesis Infrastructure
8 CEE Centres
9 Centre Snapshots
10 Communications Strategy

CEE Strategic Plan (2024 - 2033)

Evidence synthesis plays a crucial role in environmental decision-making by providing a comprehensive, accessible, and integrated understanding of causes and effects of interventions and impacts. In 2023, CEE Trustees, Centre, and group leaders came together to develop a 10-year strategic plan to guide the next phase of CEE's growth. Implementation of the plan began in January 2024.

The strategic plan centres on three pivotal themes (see Box) that drive our mission to catalyze evidence-informed decision-making in environmental management. These focal areas will direct our efforts to expand the scope and efficacy of evidence-informed decision-making in the user community by increasing evidence synthesis in the academic community, delivering crucial evidence services to users, and strengthening our organisational capacity for effective, sustainable action.

CEE 2024-2033 Strategic Plan: Driving Better Environmental Choices

Strategic foci:

1. Expanding evidence synthesis and evidence-informed decision-making in environmental management
2. Providing evidence services to the academic and user communities that enable more efficient production and use of reliable evidence to inform decision-making
3. Strengthening CEE organisational resilience and capacity

The following teams will lead implementation of the strategic plan's components:

- **The Board of Trustees** – governance and oversight
- **Guidelines and Standards Team** - producing the next version of CEE Guidelines
- **Journal Team** – management of the CEE journal *Environmental Evidence*
- **Training Team** – development and coordination of CEE trainings
- **Meetings Team** – organisation of CEE symposia, conferences, and presence at global meetings
- **Communication Team** – management of CEE website, communication, and engagement
- **CEEDER Team** – management of the CEE Database of Evidence Reviews
- **PROCEED Team** – management of CEE registration of environmental evidence synthesis protocols

The CEE Strategic Plan 2024-2033: Driving Better Environmental Choices is available on the CEE website.

CEE Joins the Evidence Synthesis Infrastructure Collaborative

The Evidence Synthesis Infrastructure Collaborative (ESIC) is a new initiative supported by Wellcome that focuses on developing global frameworks for a more coordinated and collaborative approach to delivering evidence synthesis.

CEE joins partners from across the evidence community to support ESIC's planning process, which brings together the demand, supply, and intermediary communities to identify innovative solutions that can advance evidence use across sectors. ESIC builds on "SHOW ME the evidence: Features of an approach to reliably deliver research evidence to those who need it," co-published in the journals of the Campbell Collaboration, Cochrane, CEE, Guidelines International Network, and JBI in November 2024. This collaborative approach represents a significant advancement in mobilising the global evidence synthesis community.

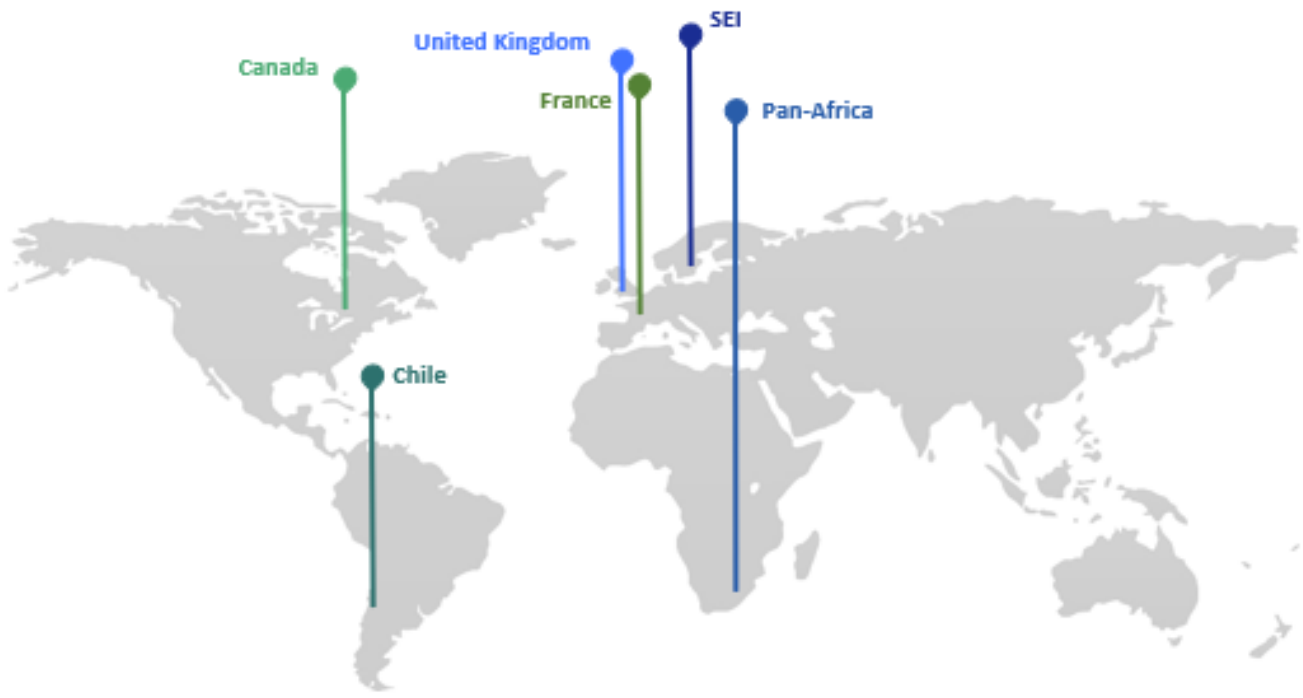
CEE works to ensure that the environmental sector is represented in ESIC's work by publicising outreach and engagement opportunities to the environmental evidence community and through active involvement in ESIC's technical and governance working groups.

CEE Centres in 2024

CEE is a global collaboration supported by a network of Centres around the world.

Centres contribute to the work of the CEE by encouraging evidence-informed practice and evidence synthesis activity within their geographic region. At present, there are four regional CEE Centres, based in Canada, Chile, France, and the United Kingdom, one Pan-Africa Centre, and one international CEE Centre, Stockholm Environment Institute (SEI). Centres obtain their own funds to perform centre functions.

Learn more about the functions of CEE Centres on the CEE website.



CEE Centre Snapshots

Canadian Centre for Evidence-Informed Conservation (CCEIC)

2024 was a productive and collaborative year with several evidence synthesis projects involving national and international partners. The Centre rebranded in 2024 as the CCEIC. Centre members contributed to CEE in several key roles: serving on the Board (1 member), as Editor-in-Chief for the journal (1), providing support for the Executive Office (1), and on the CEEDER Editorial Board and Review College (3).

CEE Chile

This year, CEE Chile underwent significant internal restructuring and is now part of the NaturalInvest Initiative. With new team members and projects starting at the Centre, CEE Chile looks forward to reactivating collaboration with the broader CEE community.

Fondation pour la Recherche sur la Biodiversité (FRB)

FRB continues to provide financial and institutional support to researchers using systematic review methods. This year marked the third delivery of a five-day training course provided by FRB's synthesis centre. The training was a success with 20 early-career researchers receiving training. FRB continues to support the CEE Training Team.

Stockholm Environmental Institute (SEI)

SEI had an active year in 2024, providing leadership and management at CEE's journal *Environmental Evidence*, representing CEE as part of the Cochrane-Campbell-JBI-CEE AI Methods Working Group and contributing to Responsible use of AI in evidence synthesis (RAISE) guidelines

Communications Strategy

In 2024, the CEE Communications Team prioritised refining the Communications Plan and finalising the Team Strategic and Implementation Plan.

Efforts focused on ensuring the sustainability of communications activities and on maximising impact. This included leveraging initiatives from other CEE Teams, maintaining a consistent social media presence, expanding our YouTube channel, and launching a new quarterly newsletter. The Communications Team worked closely with CEEDER, the Training Team and the Meetings Team throughout the year to support and promote CEE activities and strengthen relationships with new and existing partners.

Under the direction of the CEE Communications Team, Dr. Morgan Piczak (website and social media) and Dr. Andrew Kadykalo (Plain Language Summaries) continued their role as joint Communications Officer until mid-2024. We thank Morgan and Andrew for their service in this role as Communications Officers since 2023. Since their departure, communication activities have been carried out by members of the Communications Team and the Executive Office.

CEE Communications and Engagement Strategy

Aims to:

- Ensure effective communication among CEE Centres and beyond
- Provide a strategy to share knowledge and coordinate activity among 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
- Define review and evaluation processes

Communications Highlights

- New YouTube playlists
  - CEESAT
  - CEEWatch
- New presence on Bluesky
- Newsletter launch (CEEConnections)
- Migrated to new website host

Evidence Highlights

12 CEE in the Community
14 Evidence Services
15 Introducing Our New Editors-in-Chief
16 Environmental Evidence Journal
17 Featured Reviews
18 Featured Maps

CEE in the Community

As part of CEE's mission to promote rigorous evidence synthesis for environmental management through its global network, CEE members attended the What Works Climate Climate Solutions Summit in Berlin and the Global Evidence Summit in Prague in 2024.

The **What Works Climate Solutions Summit** brought together researchers, decision-makers, and practitioners to share the latest developments in evidence synthesis methods, practices, and research. The Summit had 335 participants from 50 countries and provided an opportunity to showcase CEE's activities, help the broader community learn about our training, tools, and other resources, and position CEE as an integral part of the "new what works movement in climate." CEE was recognised for playing a key role in efforts to build a rigorous evidence bank of climate solutions.

The Summit covered diverse topics, including artificial intelligence, the value of qualitative evidence synthesis and the need for nature-based solutions. Drs. Ruth Stewart, Ruth Garside, and Matthew Grainger (Board Trustees), Dr. Biljana Macura (Editor-in-Chief, *Environmental Evidence*), and Dr. Samantha Cheng (CEE team member), represented CEE by hosting or presenting in sessions, sitting on several panels, and hosting round tables about the Collaboration.

Selected presentations and events:

- Round Table: On Collaborative Living Evidence for Climate Solutions (Ruth Stewart)
- Round Table: Introduction to CEE (Biljana Macura, Ruth Garside, Samantha Cheung)
- Panel Discussion: The Role of Nature Based Solutions in International Climate Policy (Biljana Macura, Samantha Cheng, Ruth Garside, Matt Grainger)
- Talk: Applying Qualitative Evidence Synthesis in Environment & Development: Challenges & Lessons Learned (Biljana Macura)

CEE at the What Works Climate Solutions Summit
Left - Right: B. Macura, R. Stewart, S. Cheng, M. Grainger, R. Garside

The **Global Evidence Summit** provided additional opportunities for outreach and networking. Over 1,800 participants from 73 countries attended the Summit to discuss six central themes - the sustainable development agenda, research integrity, making evidence accessible, synergy in evidence synthesis and synthesis products, evidence translation and implementation, advocating for evidence communication and use, and bridging global evidence to local impact. CEE representatives presented talks and posters on a range of topics, from AI in evidence synthesis, to living evidence and evidence syntheses support for sustainable development goals. CEE participation provided opportunities to increase awareness of the organisation's standards, training opportunities, CEEDER, PROCEED, and more.

Selected presentations and events:

- Plenary session: Evidence Community Perspective on Priority Challenges and Opportunities for Addressing the SDGs: An Intersectional Dialogue (Matt Grainger)
- Special Session: Living Evidence: Innovations and Applications (Ruth Stewart)
- Talk: Artificial Intelligence in Evidence Production: Critical Reflections and Lessons Learned (Biljana Macura)

Evidence Services

Published in *Environmental Evidence*

- 5 Systematic Map protocols
- 3 Systematic Review protocols
- 16 Systematic Maps
- 5 Systematic Reviews
- 1 Evidence in Action paper

New Training Videos for Evidence Users and Producers

- Interpreting CEESAT Criteria - Parts 1 - 7
- Meet the Makers and Users of Environmental Evidence
  - 2 videos hosted by Barbara Livoreil

Articles Added to CEEDER - Assessing quality of new syntheses

- 66 Evidence Overviews
- 343 Evidence Reviews

New Protocols Registered in PROCEED

- 15 Systematic Map protocols
- 9 Systematic Review protocols
- 1 Rapid Review protocol
- 7 other review (configurative or aggregative) protocols

Environmental Evidence Journal
Introducing our New Editors-in-Chief

Dr. Biljana Macura
Senior Research Fellow at Stockholm Environment Institute, Sweden

Dr. Steven Cooke
Director of the Institute of Environmental and Interdisciplinary Science, Carleton University, Canada

CEE welcomed new leadership for *Environmental Evidence* in 2024 with the appointment of Dr. Biljana Macura from Stockholm Environment Institute and Dr. Steven Cooke from Carleton University as co-Editors-in-Chief. Under their leadership, *Environmental Evidence* is positioned to remain the leading open-access journal dedicated to publishing systematic evidence syntheses on various questions relevant for environmental policy and practice. We extend our deepest thanks to Dr. Andrew Pullin, our former Editor-in-Chief, for his invaluable leadership and vision in establishing the journal and guiding its development. His contributions continue to shape the journal's direction.

This editorial transition marks an important milestone in the journal's continued evolution as a leading platform for evidence synthesis for environmental policy and practice. The editorial team has already organised a collection of articles on the use of artificial intelligence in systematic evidence synthesis. Under their leadership, CEE will continue to champion transparency and methodological rigor, while welcoming new Systematic Reviews and Maps, related methodological contributions, and commentaries. Additionally, the journal's "Evidence in Action" articles highlight real world examples of how evidence syntheses have been used—or overlooked—in evidence-informed environmental management.

Environmental Evidence Journal

The official journal of the CEE is *Environmental Evidence*, an open-access journal that accepts submissions of Systematic Reviews, Systematic Maps, Rapid Reviews, review and map protocols, Evidence in Action articles, commentaries, and research and methodological papers related to the conduct of Systematic Reviews, evidence generation, synthesis, use, and impact.

Annual Journal Metrics

Citation Impact*
3.4 - 2-year Impact Factor
4.6 - 5-year Impact Factor
1.116 - SNIP (Source Normalized Impact per Paper)
0.947 - SJR (SCImago Journal Rank)

Speed
8 days submission to first editorial decision for all manuscripts (Median)
152 days submission to accept (Median)

Usage
599,028 downloads
309 Altmetric mentions

*Clarivate and Scopus release citation impact metrics mid-calendar year. 2024 metrics will be available in mid-2025.

Editors-in-Chief
- Steven Cooke, PhD, Carleton University, Canada
- Biljana Macura, PhD, Stockholm Environment Institute, Sweden

Editor Emeritus
- Andrew Pullin, PhD, Bangor University, UK

Associate Editors
- Ruth Garside, PhD, University of Exeter, UK
- Nicola Randall, PhD, Harper Adams University College, UK

Editorial Board
- Péter Batáry, PhD, Georg-August University, Germany
- Monique Borgerhoff-Mulder, PhD, UC Davis, USA
- Samantha Cheng, PhD, American Museum of Natural History, USA
- Carly Cook, PhD, Monash University, Australia
- Mélanie Douziech, PhD, Agroscope, Switzerland
- Adam Felton, PhD, Swedish University of Agricultural Sciences, Sweden
- Geoff Frampton, PhD, Southampton University, UK
- Louise Glew, PhD, World Wildlife Fund, USA
- Elena Kulinskaya, PhD, University of East Anglia, UK
- Malgorzata Lagisz, PhD, University of New South Wales, Australia
- Barbara Livoreil, PhD, Fondation pour la Recherche sur la Biodiversité, France
- Gabor Lovei, PhD, DSc, Dr. habil., University of Aarhus, Denmark
- Alejandro Martinez-Abrain, PhD, University of A Coruña, Spain
- Gillian Petrokofsky, PhD, University of Oxford, UK
- Carina van Rooyen, PhD, University of Johannesburg, South Africa
- Karen E. Smokorowski, PhD, Carleton University, Canada
- Yefeng Yang, PhD, University of New South Wales, Australia

Featured Reviews

Photo by Martijn Baudoin

Biochar improves the nutrient cycle in sandy-textured soils and increases crop yield: a systematic review

Bekchanova M, Campion L, Bruns S. et al.
Environ Evid 13, 3 (2024).
https://doi.org/10.1186/s13750-024-00326-5

In this systematic review, the authors provide evidence of the effect of biochar additions to crop yields in sandy soils. By compiling over 1,600 observations on the responses of soil and plant properties, the authors found that biochar influenced nutrient cycling in sandy soils and contributed to increased plant yields by increasing total and available nutrient levels. The systematic review identified several limitations of the current literature, such as uneven distribution of studies across regions and many studies being excluded due to high risk of bias. However, the findings of the review show that biochar has the potential to contribute to agricultural productivity and sustainability.

Can linear transportation infrastructure verges constitute a habitat and/or a corridor for vascular plants in temperate ecosystems? A systematic review

Mell H, Fack V, Percevault L. et al.
Environ Evid 13, 4 (2024).
https://doi.org/10.1186/s13750-024-00328-3

In this systematic review, the authors assess the role of verges as corridors for vascular plants. However, there were too few studies available to draw conclusions, and there was high heterogeneity in the literature. Verges did act as habitat for vascular plants, particularly for non-native species. Human activities on transportation infrastructure did not result in loss of plant richness or abundance but did alter plant community composition. More research on this topic is called for, especially as verges may act as a habitat for invasive flora.

Photo by Ries Bosch

Featured Maps

Photo by Jack Bulmer

Evidence on the performance of nature-based solutions interventions for coastal protection in biogenic, shallow ecosystems: a systematic map

Paxton AB, Riley TN, Steenrod CL. et al.
Environ Evid 13, 28 (2024).
https://doi.org/10.1186/s13750-024-00350-5

This synthesis mapped the global evidence base on the performance of 'nature-based solutions' related to coastal protection. The map identified ecosystems where interventions were most often implemented (salt marshes and mangrove forests) and many types of interventions, such as restoration. Pronounced knowledge gaps were identified, with a lack of literature on the performance of 'nature-based solutions' on economic and social outcomes. Future work measuring diverse outcomes is recommended to identify potential co-benefits for people and nature.

Existing evidence on the effects of climate variability and climate change on ungulates in North America: a systematic map

Malpeli KC, Endyke SC, Weiskopf SR. et al.
Environ Evid 13, 8 (2024).
https://doi.org/10.1186/s13750-024-00331-8

This synthesis systematically mapped the current state of knowledge on the effects of climate variability on native ungulates, such as elk (*Cervus canadensis*) in North America. The map identified several topic clusters, including evidence on (1) ungulates in the western U.S. and Canada (2) the effects of precipitation, and (3) the effects of climate on population demographics, habitat and forage, and physiology. Several knowledge gaps were also identified, such as the effects of climate on migration, a lack of studies for several species, and few long-term studies. Future work to fill these knowledge gaps is recommended to inform proactive ungulate management.

Photo by Ernest Boyd

Operations

20 CEE Board of Trustees
21 Executive Office
21 Volunteer Engagement
22 Securing the Future of CEE
23 Thank you

CEE Board of Trustees

Kathryn Monk | Chair
Honorary Professor, Swansea University, UK

Steven Cooke | Trustee
Director of the Institute of Environmental and Interdisciplinary Science, Carleton University, Canada

Ruth Garside |Trustee
Professor in Evidence Synthesis, University of Exeter, UK

Henrik Smith | Trustee
Professor in Animal Ecology, Department of Biology, Lund University, Sweden

Ruth Stewart | Trustee
Director, Alliance for Living Evidence (Alive), Future Evidence Foundation

Gill Shepherd | Trustee
Visiting Professor, Department of the London School of Economics and Political Science, UK

Matthew Grainger | Trustee
Researcher, Norwegian Institute for Nature Research, Norway

Dave Stone | Trustee
Chief Scientist, UK Joint Nature Committee, UK

Ravi Prabhu | Trustee
Senior Advisor, World Agroforestry Centre (CIFOR – ICRAF), India

CEE Executive Office

Andrew Pullin | CEO
Emeritus Professor of Evidence-Based Conservation, Bangor University, UK

Meagan Harper | Volunteer Executive Office Manager Assistant to the Secretary
PhD Candidate, Biology
Carleton University, Canada

Volunteer Engagement

CEE's achievements in 2024 would not have been possible without the dedicated commitment and contributions of our volunteer network and Centres. In 2024, CEE engaged more than 100 volunteers to deliver evidence services used by academic and user communities. Through the work of our volunteers, CEE managed journal operations, completed screening and appraisal of articles for CEEDER, registered protocols in PROCEED, and produced new training videos to increase the visibility and usability of CEE services. Our Centre affiliates delivered training events and implemented CEE guidelines across their projects, expanding CEE's reach into policy and practice. Their combined efforts continue to strengthen capacity for evidence-informed environmental decision-making and position CEE for sustained growth and impact.

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 endeavours of CEE satisfy three 'charitable purposes' under UK Charity Law:

- 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 improve the effectiveness of their work. CEE places no restrictions on who can benefit.

The CEE Constitution sets out how CEE will operate within Charity Law. CEE operates as a 'not-for-profit' organisation and has a Board of Trustees responsible for proper governance of CEE, probity, and adherence to regulations for 'not-for-profit' organisations and charity law. CEE is open to all who wish to contribute to the conduct or use of CEE evidence syntheses and who are committed to the principle of evidence-informed practice. As CEE activity increases through greater engagement in evidence synthesis, Thematic and Methods Groups, and the establishment of new CEE Centres, the demands placed on 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 evidence synthesis activity worldwide.

Potential donors are encouraged to contact us at:
info@environmentalevidence.org

Thank You

The existence and growth of CEE is due in no small part to a wide range of individuals and organisations who have actively supported its vision and aims, either through funding, giving it visibility in key arenas, through giving their time to key CEE activities, or through active involvement in CEE Evidence Synthesis.

Particular thanks for 2024 are due to:

- The Trustees
- CEE Guidelines Editorial Board
- Leaders and staff of CEE Centres
- Leaders and volunteers of CEE Teams
- Leaders and contributors to CEE Groups
- Members of the CEEDER Editorial Board
- Members of the CEEDER Review College
- Members of the PROCEED Editorial Panel
- Commissioners/funders of CEE Evidence Syntheses
- Review authors, stakeholders, and peer reviewers
- Volunteers and supporters
- Springer Nature
- EEJ Editorial Board

Stay connected

www.environmentalevidence.org

info@environmentalevidence.org

Design by Meagan Harper
Front cover photo: Federico Faccipieri on Unsplash

CHARITY COMMISSION FOR ENGLAND AND WALES

Charity Name	No (if any)
Collaboration for Environmental Evidence	

Receipts and payments accounts

CC16a

For the period from	Period start date	To	Period end date
	4/1/2024		3/31/2025

ection A Receipts and payments

A1 Receipts

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £
Balance at year end	38,283	6,051		44,334
BMC Journal APCs 2023	5,421			
Harper Adams	1,000			
BioMed Central	1,000			
Sub total	45,704	6,051		51,755

A2 Asset and investment sales, (see table).

	-	-	-	-
	-	-	-	-
Sub total	-	-	-	-

Total receipts	45,704	6,051	-	51,755

A3 Payments

Exp 157: A.Pullin Reimbursement Kualo	20			
Exp 158: G.Pullin CEEDER screening 2023	224			
Exp 159: M.Harper CEEDER screening 2023	255			
Exp 160: O.Dakis-Yaoba CEEDER screening	313			
Exp 161: B.Livoreil (Coopname) CEEDER	1,285			

Exp 162: N.Cook CEEDER screening 2023	140			
Exp 163: A.Pullin Reimbursement Kualo	19			
Exp 164: N Cook CEEDER screening	100			
Exp 165: T Morenike CEEDER	239			
Exp 166: O.Dakis-Yaoba CEEDER screen	307			
Exp 167: B.Livoreil (Coopname) CEEDER	1,974			
Sub total	4,878			

A4 Asset and investment purchases, (see table)				
	-	-	-	-
	-	-	-	-
Sub total		-	-	-
Total payments Net of	4,878	-	-	
receipts/(payments)	40,827	6,051	-	46,878
A5 Transfers between funds	-	-	-	-
A6 Cash funds last year end	38,283	6,051	-	44,334
Cash funds this year end	40,827	6,051		46,878

ection B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds		-	-	-

	-	-	-
	-	-	-
Total cash funds	**40,827**	**6,051**	
(agree balances with receipts and payments account (s))			

	Unrestricted funds	Restricted funds funds	Endowment
Details	to nearest £	to nearest £	to nearest £
B2 Other monetary assets			
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
B3 Investment assets			
		-	-
		-	-
		-	-
		-	-
		-	-

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
B4 Assets retained for the charity's own use			
		-	-
		-	-
		-	-
		-	-

		-	-
		-	-
		-	-
		-	-
		-	-

B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
		-	
		-	
		-	
		-	

Signed by one or two trustees on behalf of all the trustees

Signature	Print Name	Date of approval
	T M Knight	5/6/2025
	K A Monk	16/12/2025

COLLABORATION FOR ENVIRONMENTAL EVIDENCE

England & Wales - Charity number 1157607

Accounts

Collaboration for Environmental Evidence

2023 ANNUAL REPORT

www.environmentalevidence.org

Photo by Steven Cordes on Unsplash

Photo by sergio medina on Unsplash

Table of Contents

3 A Message from the Board of Trustees
4 A Message from the CEO
5 CEE Officers
6 CEE Board of Trustees
7 The Collaboration
8 CEE Centres in 2023
9 Centre Snapshots 2023
10 Communications Strategy
11 Evidence Services
12 CEE at What Works Global Summit 2023
13 CEE Community Spotlight
14 Environmental Evidence Journal
15 Featured Reviews
17 Featured Plain Language Summaries
18 Securing the Future of CEE
19 Thank You

A Message from the Board of Trustees

The world is facing unprecedented environmental challenges, and the need for effective, evidence-informed solutions has never been more pressing. It is with great pleasure therefore that I present the Board's 2023 Report for the Collaboration for Environmental Evidence (CEE), which outlines the collective efforts, achievements, and challenges faced by our community over the past year to support evidence synthesis researchers, deliver crucial evidence services to users, and expand the scope and efficacy of evidence-informed decision-making in environmental management.

I was delighted to welcome Dave Stone, Chief Scientist of the UK's Joint Nature Conservation Committee, to the Board in February 2023. Dave's wealth of experience in UK research and policymaking, combined with his passion for evidence synthesis, will be invaluable as we continue to enhance the diversity and expertise of the CEE Board. We remain committed to attracting individuals from diverse backgrounds and regions, particularly outside of Europe and North America, who share our dedication to evidence-informed environmental decision-making.

The Board was also pleased to welcome Dr Biljana Macura, from the Stockholm Environment Institute in Sweden, as the new joint Editor-in-Chief for CEE's *Environmental Evidence* journal, to work alongside Andrew Pullin until he retires from his role as founder Editor-in-Chief in late 2024. In addition, Board member Steven Cooke assumed the new role of joint Editor-in-Chief with responsibility for new article types.

The journal is one of CEE's flagship products, providing both research and user communities with quality syntheses and other articles that were downloaded over 700,000 times in 2023. Ten new Plain Language summaries of recent Systematic Reviews were published on our website. CEE continued developing a range of cutting-edge, open-access products to enhance accessibility and quality of environmental evidence. These include a critical appraisal tool for evaluating 'risk of bias' in primary studies assessing effectiveness of interventions or impacts of exposures in environmental management, and PROCEED, a global database of prospectively registered evidence reviews and syntheses in the environmental sector, which should ensure others are alert to environmental evidence reviews/syntheses already in progress, avoiding duplication and allowing more effective planning in decision-making. These initiatives depend on the tireless efforts of a small group of amazing volunteers, and they demonstrate CEE's commitment to driving evidence-informed decision-making in environmental management.

The Board, the project teams, and Centres continued to develop the next 10-year strategy for CEE, based on three pivotal themes that will drive our mission to catalyse evidence-informed decision-making in environmental management by governments, NGOs, industry, and similar entities, with plans to publish it in early 2024.

CEE has faced significant resource challenges in recent years, exacerbated by the widespread general financial and political upheavals, longer term impacts of the pandemic, and a changing academic recognition culture that increases pressure on research staff and students. However, CEE continues to demonstrate its resilience and adaptability, thanks to the constant dedication of our volunteers and support of our stakeholders. We remain committed to our mission to see the environment survive and flourish through the most effective interventions, and we are confident that, together, we can overcome these challenges and continue to drive evidence-informed decision-making in environmental management.

- Kathryn Monk (Board Chair)

A Message from the CEO

During this year CEE has engaged in extensive discussions to shape our Strategic Plan for the next ten years (2024-33). Strategic Planning is often viewed as an unexciting exercise resulting in a document that sits on a shelf only to be used to write the next Strategic Plan. I don't see it this way at all, particularly for a volunteer-based organisation like CEE. With limited resources at our disposal, we need to ensure that we concentrate on actions that we can sustain into the future and will continue to have impact. This is a particular challenge for CEE as we are committed to providing free services wherever possible. Our first Strategic Plan implemented in 2013 set goals that were largely achieved in key project areas such as our Journal (Environmental Evidence), Guidance and Standards for evidence synthesis, Meetings and Communications, and new projects, unanticipated in the Strategic Plan, such as our evidence service (CEEDER). These achievements were only possible due to the willingness of many volunteers to devote some of their precious time to work for CEE. For the new Strategic Plan, my personal priorities have been to ensure we can at least sustain these activities as well as responding to key developments in the evidence synthesis field. Like many volunteer-based organisations, our biggest challenge over the last ten years has been to develop an organisational structure that allows sustainable development, resilience and agility, whilst not placing too much burden, or dependence, on individual volunteers. To this end we have developed a structure based on Teams of volunteers responsible for key activities and projects, as well as having the Board of Trustees a small Executive Office and, of course, our Centres. The Teams will take responsibility for both Internal activities such as, Communications, Meetings, and People and Culture (human resources and finance), whilst others focus on projects and services such as our Journal, Guidance & Standards, Training, and CEEDER. Although we have modest sources of funding for some of these and hope to receive more in the future, the ambitious programme of work to be set out in our new Strategic Plan (to be published in 2024) will rely heavily on the success of these Teams. Although we already have some fantastic volunteers, as we expand our activities, ensuring the workload is sufficiently spread across our network means recruiting more individuals prepared to volunteer their time to lead in key areas of activity. This is both a challenge for CEE and also a great opportunity for others to get involved and take leadership of an organisation promoting the synthesis and use of evidence for better environmental management.

- Andrew Pullin

Collaboration for Environmental Evidence

CEE Officers

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

Meagan Harper
Assistant to the Secretary
PhD Student, Biology
Carleton University, Canada

Morgan Piczak
Communications Officer
Website and Social Media
PhD Candidate, Biology
Carleton University, Canada

Andrew Kadykalo
Communications Officer
Plain Language Summaries
Postdoctoral Researcher,
McGill University, Canada

CEE Board of Trustees

Kathryn Monk
Chair
Honorary Professor, Swansea University, UK

Steven Cooke
Honorary Secretary and Trustee
Director of the Institute of Environmental and Interdisciplinary Science, Carleton University, Canada

Ruth Garside
Trustee
Professor in Evidence Synthesis, University of Exeter

Henrik Smith
Trustee
Director of the Centre for Environmental and Climate Research, Lund University, Sweden

Neal Haddaway
Trustee
Senior Research Fellow, Stockholm Environment Institute, Sweden

Ruth Stewart
Trustee
Founding Chair, Africa Evidence Network

Gill Shepherd
Trustee
Visiting Professor, Department of the London School of Economics and Political Science, UK

Matthew Grainger
Trustee
Researcher, Norwegian Institute for Nature Research, Norway

Dave Stone
Trustee
Chief Scientist, UK Joint Nature Committee, UK

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.

CEE Centres in 2023

The CEE is a global collaboration that has a network of Centres around the world

Centres contribute to the work of the CEE by encouraging evidence-based practice and systematic review activity within their geographic region. At present there are seven national CEE Centres, based in Canada, Chile, France, South Africa, the United Kingdom, the United States of America, and one international CEE Centre (SEI). Centres obtain their own funds to perform centre functions.

https://environmentalevidence.org/cee-centres/

Centre Snapshots 2023

Canadian Centre for Evidence-Based Conservation

2023 was a productive and collaborative year with several Evidence Syntheses with national and international partners, including some significant projects with the U.S. Fish & Wildlife Service and Parks Canada. Centre members attended the "What Works Global Summit" in Ottawa. Members support CEE on the Board (1 member), the Executive Office (1), the CEEDER Editorial Board and Review College (3) and as communications officers (2).

Fondation pour la Recherche sur la Biodiversité (FRB)

FRB ran two systematic review courses in 2023, an introductory methods workshop, and a 4-day in-depth course in collaboration with IRN Wan@bi: West African Network on Biological Invasions. Additionally, calls for research projects were produced, with work continuing into 2024. FRB continues to support the CEE Trainings Team.

Stockholm Environmental Institute (SEI)

The SEI CEE Centre continues to be involved in evidence synthesis activities in a variety of topics relevant to the environment and development. This year Dr. Biljana Macura took on the coordination of the SEI CEE, and will be joining *Environmental Evidence* as co-Editor-in-Chief in 2024.

CEE South Africa (Formerly CEE Joburg)

In 2023 CEE Joburg became CEE South Africa and has a new organizational host at the Pan-African Collective for Evidence. Members were participants at Evidence 2023, the biennial event of the Africa Evidence Network, the What Works Global Summit in Ottawa, and are on the Scientific Steering Committee for the "What Works Climate Solutions Summit" (Berlin 2024). CEE South Africa team members serve on the board (1 member) and the Editorial Board of *Environmental Evidence* (1).

CEE Centre UK

The Centre continued to be involved in many CEE activities in 2023. As well as acting on the Training Team (2 members), CEE Centre UK hosted two 4-day CEE evidence synthesis courses (funded by NERC) and rapid review training with UK bodies including Environment Agency, among others. Members are on the CEE board (1), are *Environmental Evidence* and PROCEED handling editors (2) and PROCEED rolling editor-in-chief (2).

U.S. Centre based at the Center for Biodiversity and Conservation

This year saw the U.S. Centre transition to Affiliated Group status. CEE thanks the Centre for Biodiversity and Conservation for their continued involvement within the CEE community and looks forward to working with them in their new capacity.

Communications Strategy

CEE Communications and Engagement Strategy

Aims to:
Ensure effective communication among the CEE Centres and beyond

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

Define review and evaluation processes.

Under the direction of the CEE Communications Team, Morgan Piczak (website and social media) and Andrew Kadykalo (Plain Language Summaries) continued the role of joint Communications Officers. Their responsibilities included conducting the communications work set out in the CEE Strategic Plan and overseeing activities across various communications channels and functions.

The priority for the CEE Communication Team in 2023 has been to further refine the Communication Plan and develop the Team Strategic Plan to ensure that limited resources are best focused on activities with maximal output. Leveraging journal outputs including the summaries and maintaining an active social media presence remain essential activities. Efforts to further expand CEE's YouTube Channel and to highlight the activities of the CEE (such as External Meetings and CEEDER) were top priorities.

Evidence Services

Environmental Evidence

New and upcoming evidence

5 Systematic Map protocols

6 Systematic Review protocols

11 Systematic Maps

5 Systematic Reviews

https://environmentalevidencejournal.biomedcentral.com/

Plain Language Summaries

New evidence to save users valuable time

10 Systematic Map summaries

5 Systematic Review summaries

https://environmentalevidence.org/policy-briefs/

CEEDER

Assessing quality of new syntheses

65 Evidence Overviews

223 Evidence Reviews

https://environmentalevidence.org/ceeder-search/

PROCEED

New registered protocols

12 Systematic Map protocols

11 Systematic Review protocols

1 Rapid Review

3 Other reviews (configurative or aggregative)

https://environmentalevidence.org/proceed/

CEE at What Works Global Summit 2023

Part of the Collaboration for Environmental Evidence mission as a global network is to promote rigorous evidence synthesis for environmental management. CEE joined over 300 delegates at the What Works Global Summit 2023, co-hosted by the Campbell Collaboration and the Bruyère Research Institute in Ottawa Canada. The theme of the 3-day summit was 'Evidence for Global Challenges' and covered diverse topics ranging from climate change solutions to equity and inclusion, to evidence synthesis capacity building. The summit brought together researchers, evidence-based decision makers and practitioners to share the latest in evidence synthesis methods, practices, and research.

Ruth Stewart (CEE Board Trustee), Ruth Garside (Board Trustee), Steven Cooke (Board Trustee and WWGS2023 Science Advisor), Trina Rytwinksi (Canadian CEBC research associated) and Meagan Harper (Assistant Secretary to the Board), represented CEE by attending and presenting in sessions on a variety of topics, sitting on several panels, and hosting workshops. CEE was able to build on its visibility among the wider evidence synthesis community during the summit by participating as an exhibitor. During WWGS2023, the Communications Team used *X* (formerly Twitter) and LinkedIn to promote sessions with CEE members and Centre involvement, highlighting talks on evidence syntheses done in environmental management and conservation, to CEE standards.

There were many synergies and opportunities for potential future activities with other Collaborations identified during the Summit, such as synergies on environment, health and climate change, or Sustainable Development Goals. It is encouraging to see how open other Collaborations, such as Campbell, are to building on these synergies in the future. Continued efforts to foster these collaborations will be an ongoing goal for the CEE. CEE plans on attending additional external meetings in the coming year, such as the What Works Climate Solutions Summit in Berlin, to help foster these connections and increase CEE's influence on the evidence community.

Selected presentations and workshops:

- Plenary: Lessons learned from COVID-19 for rapid evidence synthesis (Ruth Stewart)
- Workshop: Introduction to Qualitative Evidence Synthesis: what, why, when and how? (Ruth Garside)
- Presentation: Amplifying the impact of environmental research and institutionalizing evidence-based decision-making: the Canadian experience (Steven Cooke)
- Presentation: Evidence syntheses to support hydropower management and policy (Meagan Harper)

CEE Community Spotlight

*The CEE Database of Evidence Reviews **(CEEDER)** is an open access Evidence Service aiming to help policy makers, managers, funders, and the general public in finding reliable evidence syntheses to inform environmental decisions. In 2023 Barbara Livoreil became CEEDER Manager, welcoming new members to the CEEDER teams and Review College. Barbara's efforts have increased CEEDER's visibility and community interest. She took some time to describe her experience and the future of CEEDER:*

The first time I heard about the Collaboration for Environmental Evidence was at an international conference of the Society for Conservation Biology, more than 15 years ago. Working as a scientific officer in field-based conservation, I found systematic reviews so relevant I progressively learnt, promoted and taught evidence synthesis and kept doing so since then. I joined CEEDER first as a Review College member, then contributed to Title &Abstract screening and finally joined the Full text screening and metadata extraction team. In 2022, Andrew Pullin proposed that I take over the management of the CEEDER programme, succeeding Jessica Taylor who had been there since the beginning. Thanks to the efficient mentoring from Jessica and Andrew, I discovered all the steps underlying the development of the database.

The main activity of the CEEDER manager is to oversee preparation and conduct of the Rounds of assessments of reviews and overviews. Challenges are to keep the Rounds on time throughout the year, motivate volunteers, and train new ones. We aim at updating the CEEDER database within 6 months after relevant reviews are published, but we need to increase the number of volunteers, and make the processes more efficient. In 2023 we have developed material for training new volunteers willing to join Title and Abstract, Full Text Metadata extraction, and the Review College. A registration form and a series of videos were created to introduce CEEDER and its various teams. Meetings have been organised regularly to answer questions and keep volunteers informed about any advancements.

From this experience we aim to develop self-training online modules to facilitate the process. Another challenge is the future of CEEDER. We started to write a strategic plan that encompasses both internal concerns and the challenge of making CEEDER useful to a large community of users (i.e., researchers, decision makers and policymakers, students…). First, the database had to be developed based on the rigour and transparency that CEE promotes for evidence synthesis. Now that CEEDER is a well-populated database, with already 2000 reviews and overviews, we need to explain how it can be used for training, teaching, and decision making. This may require transforming the interface (currently the website) into something more convenient for users, with more explanations regarding the assessments and their consequences for decision-making. Developing a new interface, presentations, videos, and new tools will be the challenges for future years. CEEDER sustains the efforts of CEE in developing and highlighting high quality evidence synthesis.

Working freelance since 2021, I have more time to dedicate to CEEDER and environmental endeavours, which I really enjoy. Nothing would be possible without the dedication of many people from various parts of the world, various backgrounds and professional skills. Developing a more visible community of contributors and users and integrating technological advances such as AI will be major goals of the CEEDER strategic plan over the next 10 years.

- Barbara Livoreil

Environmental Evidence Journal

The official journal of the CEE is *Environmental Evidence*, an open-access journal that accepts submission of Systematic Reviews, Systematic Maps, Rapid Reviews, review and map protocols, Evidence in Action articles, commentaries, research and methodological papers related to the conduct of Systematic Reviews, evidence generation, synthesis, use and impact.

Editors-in-Chief

- Prof Andrew Pullin, Bangor University, UK

Senior Editors

- Prof Paul Ferraro, John Hopkins University, United States of America
- Prof David B Lindenmayer, Australian National University, Australia
- Prof Hugh Possingham, University of Queensland, Australia

Associate Editors

- Ruth Garside, PhD, University of Exeter, UK
- Nicola Randall, PhD, Harper Adams University College, UK
- Steven Cooke, PhD, Carleton University, Canada
- Biljana Macura, PhD, Stockholm Environment Institute, Sweden

Editorial Board

- Péter Batáry, Georg-August University, Germany
- Monique Borgerhoff-Mulder, UC Davis, USA
- András Báldi, Hungarian Academy of Sciences, Hungary
- Samantha Cheng, American Museum of Natural History, USA
- Carly Cook, Monash University, Australia
- Mélanie Douziech, Agroscope, Switzerland
- Adam Felton, Swedish University of Agricultural Sciences, Sweden
- Geoff Frampton, Southampton University, UK
- Louise Glew, World Wildlife Fund, USA
- Elena Kulinskaya, University of East Anglia, UK
- Malgorzata Lagisz, University of New South Wales, Australia
- Barbara Livoreil, Fondation pour la Recherché sur la Biodiversité, France
- Gabor Lovei, University of Aarhus, Denmark
- Alejandro Martinez-Abrain, University of A Coruna, Spain
- Gillian Petrokofsky, University of Oxford, UK
- Carina van Rooyen, University of Johannesburg, South Africa
- Karen E. Smokorowski, Carleton University, Canada
- Yefeng Yang, University of New South Wales, Australia

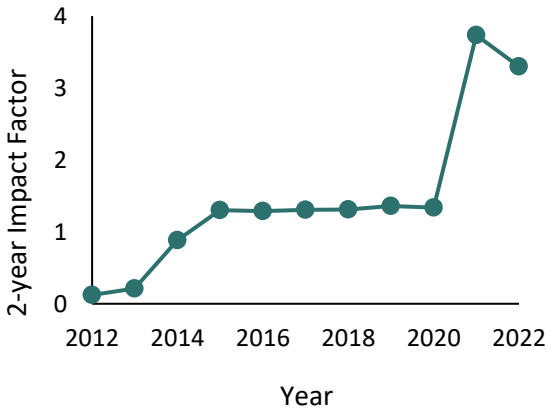
Annual Journal Metrics

Citation Impact*
3.3 - 2-year Impact Factor
5.1 - 5-year Impact Factor
1.084 - SNIP (Source Normalized Impact per Paper)
0.967 - SJR (SCImago Journal Rank)

Speed
4 days submission to first editorial decision for all manuscripts (Median)
150 days submission to accept (Median)

Usage
659,656 downloads
2,781 Altmetric mentions

**Citation impact details are updated in the middle of the calendar year following the release of these metrics by both Clarivate Analytics and Scopus. (2023 metrics will be released in mid-2024)*



Environmental Evidence

Featured Reviews

Photo by Jason Blackeye on Unsplash

Evidence on the efficacy of small unoccupied aircraft systems (UAS) as a survey tool for North American terrestrial, vertebrate animals: a systematic map

Elmore, J.A., Schultz, E.A., Jones, L.R. et al. Evidence on the efficacy of small unoccupied aircraft systems (UAS) as a survey tool for North American terrestrial, vertebrate animals: a systematic map. Environ Evid 12, 3 (2023). https://doi.org/10.1186/s13750-022-00294-8

This synthesis systematically mapped the current state of knowledge on the efficacy and use of small unoccupied aircraft systems (UAS) to replace or supplement occupied aircraft and ground surveys in animal monitoring. The map describes the distribution of evidence and provides a searchable database to information future decision-making on the topic. The map identified several topic clusters, including: (1) evidence on the types of factors and constraints influencing UAS imagery (e.g., resolution and obstruction); (2) evidence on the types of UAS and sensors used; (3) evidence on the types of ecosystems and species studied. In addition to determining that many studies considered single species, other areas with high abundance of articles were those considering large mammals and birds in open landscapes. The systematic map identified several gaps in the current research on UAS, such as research on best practices for conducting standardized surveys and surveying whole wildlife communities. Another gap was identified in the types of sensors used, with thermal and nocturnal surveys much less represented than those conducted with visible (RGB) sensors. Further to improve image quality and automating surveys is recommended.

Effects of mosquito control using the microbial agent Bacillus thuringiensis israelensis (Bti) on aquatic and terrestrial ecosystems: a systematic review

Land, M., Bundschuh, M., Hopkins, R.J. et al. Effects of mosquito control using the microbial agent Bacillus thuringiensis israelensis (Bti) on aquatic and terrestrial ecosystems: a systematic review. Environ Evid 12, 26 (2023). https://doi.org/10.1186/s13750-023-00319-w

In this systematic review, authors provide evidence of the direct and indirect effects of a mosquito control microbial agent (Bti) on non-target organisms and the ecosystems where they occur. By compiling over 200 studies on the responses of non-target taxa to Bti exposure, the authors identified 119 different response variables. Many studies considered metrics such as non-target organism abundance and life history, but the authors note that other metrics such as diversity and community composition were also well represented in the literature. The authors found that Chironomidae and Crustacea consistently respond negatively in terms of abundance to exposure to Bti, with additional negative effects on emergence in Chironomideae. The systematic review identified several limitations of the current literature, including poor reporting and high risk of bias. However, the authors recommend that the risks of non-target effects should still be considered as potentially damaging, even in the face of these limitations. Future work to improve study rigour and the development of extensive monitoring to reduce uncertainty is encouraged.

Photo by Syed Ali on Unsplash

Featured Reviews

Existing evidence on the effects of photovoltaic panels on biodiversity: a systematic map with critical appraisal of study validity

Lafitte, A., Sordello, R., Ouédraogo, DY. et al. Existing evidence on the effects of photovoltaic panels on biodiversity: a systematic map with critical appraisal of study validity. Environ Evid 12, 25 (2023). https://doi.org/10.1186/s13750-023-00318-x

This systematic mapping exercise of photovoltaic panels and solar thermal installations considered the primary question: "what evidence exists regarding the effects of PV installations, whatever their scales (i.e. cells, panels, arrays, USSE facilities), on wild terrestrial and semi-aquatic species?". The authors collated the global evidence of the impacts of PV installations on any terrestrial or semi-aquatic species, resulting in 158 relevant articles. Authors provided an assessment of the risk of bias for each study through critical appraisal of internal validity. The majority of included studies had either low or high risk of bias. The authors identified three knowledge clusters with sufficient evidence for future systematic reviewing of the effects of PV. These include PV effects on 1) plants, 2) arthropod communities and 3) ecosystem scale effects on overall species abundance. Future research should investigate other environmental components such as non-flying mammals or amphibians and reptiles. There is also a need to consider different types of PV installations and designs, such as floating PV installations, or solar thermal panels. Additional research is required to help provide accurate and reliability information to managers and decision-makers.

Climate change and the global redistribution of biodiversity: substantial variation in empirical support for expected range shifts

Rubenstein, M.A., Weiskopf, S.R., Bertrand, R. et al. Climate change and the global redistribution of biodiversity: substantial variation in empirical support for expected range shifts. Environ Evid 12, 7 (2023). https://doi.org/10.1186/s13750-023-00296-0

Read the Plain Language Summary

In this systematic review, authors compiled and synthesized evidence on range-shifts in response to climate change across plants and animals in terrestrial, freshwater and marine ecosystems. Expected temperature driven range shifts included shifts to higher latitude, elevation and deeper marine depth. The authors found that of studies that considered these types of range shifts, species had significant shifts towards higher latitudes and elevation, but there was not significant evidence for shifts to greater marine depth. Support for common range shifts was most common in freshwater systems, followed by terrestrial and marine systems. However, results were mixed, with less than half of all observed shifts occurring as expected, implying that other processes may contribute to global re-distribution of biodiversity. Plants, insects and birds were the most commonly studied taxonomic groups, with limited information available for other taxonomic groups. The authors note that it was difficult to determine uncertainty as most studies lacked reporting of standard error. Studies on range shifts should aim to compare to historical range variability to decrease uncertainty. The authors provide evidence to managers and policy makers to help improve understanding of unpredictable range shifts and the need for flexible monitoring and management policies.

Featured Plain Language Summaries

Regulatory values set to protect marine organisms from chemical pollutants do appear to protect corals, except for the metal copper and the pesticides 'diuron' and 'irgarol 1051'

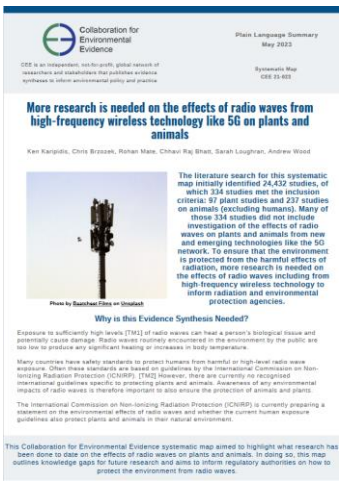
Read the Plain Language Summary

Read the Article: Ouédraogo, DY., Mell, H., Perceval, O. et al. What are the toxicity thresholds of chemical pollutants for tropical reef-building corals? A systematic review. Environ Evid **12**, 4 (2023). https://doi.org/10.1186/s13750-023-00298-y

There is no behavioural test or predator cue that is most effective for quantifying anti-predator responses in mammals, but accounting for variation in behaviour between males and females, and using appropriate control treatments is critical

Read the Plain Language Summary

Read the Article: Harrison, N.D., Steven, R., Phillips, B.L. et al. Identifying the most effective behavioural assays and predator cues for quantifying anti-predator responses in mammals: a systematic review. Environ Evid **12**, 5 (2023). https://doi.org/10.1186/s13750-023-00299-x



More research is needed on the effects of radio waves from high-frequency wireless technology like 5G on plants and Animals

Read the Plain Language Summary

Read the Article: Karipidis, K., Brzozek, C., Mate, R. et al. What evidence exists on the impact of anthropogenic radiofrequency electromagnetic fields on animals and plants in the environment: a systematic map. Environ Evid **12**, 9 (2023). https://doi.org/10.1186/s13750-023-00304-3

For more, go to CEE's list of Plain Language Summaries and the CEE Evidence Synthesis Library.

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' under UK Charity Law:

- 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 evidence synthesis, 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 evidence synthesis activity worldwide.

Potential donors are encouraged to contact us at:
info@environmentalevidence.org

Photo by Muhammadh Saamy on Unsplash

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 activities, or through active involvement in CEE Evidence Synthesis.

Particular thanks for 2023 are due to:

- The Trustees
- CEE Guidelines Editorial Board
- Leaders and staff of CEE Centres
- Leaders and volunteers of CEE Teams
- Leaders and contributors to CEE Groups
- Members of the CEEDER Editorial Board
- Members of the CEEDER Review College
- Members of the PROCEED Editorial Panel
- Commissioners/funders of CEE Evidence Syntheses
- Review authors, stakeholders, and peer-reviewers
- Volunteers and supporters
- Springer Nature
- EEJ Editorial Board

More information:
www.environmentalevidence.org
Email:
info@environmentalevidence.org

Stay connected:

Collaboration for Environmental Evidence

CHARITY COMMISSION FOR ENGLAND AND WALES

Charity Name	No (if any)
Collaboration for Environmental Evidence	

Receipts and payments accounts

CC16a

For the period from	Period start date	To	Period end date
	2023-04-01		2024-03-31

Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £
A1 Receipts				
Balance at year end	**37,310**	**6,051**		**43,361**
BMC Editor in Chief Stipend for 2023	**2,000**			
Sub total	**39,310**	**6,051**		**45,361**
A2 Asset and investment sales, (see table).				
	-	-	-	-
	-	-	-	-
Sub total	-	-	-	-
Total receipts	**39,310**	**6,051**	-	**45,361**
A3 Payments				
Exp155: CEEDER Manager B. Livoreil	**1,003**			
Exp 156: Kualo Ltd Website hosting	**24**			

Sub total	1,027			

A4 Asset and investment purchases, (see table)				
	-	-	-	-
	-	-	-	-
Sub total		-	-	-
Total payments	1,027	-	-	
Net of receipts/(payments)	38,283	6,051	-	
A5 Transfers between funds	-	-	-	-
A6 Cash funds last year end	-	-	-	-
Cash funds this year end	38,283	6,051		44,334

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds		-	-	-
		-	-	-

	-	-	-
Total cash funds (agree balances with receipts and payments account(s))	**38,283**	**6,051**	**44,334**

B2 Other monetary assets

Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

B3 Investment assets

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-

B4 Assets retained for the charity's own use

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-

		-	-
		-	-
		-	-

B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
Payment to Carleton University for Office Manager	Unrestricted	5,000	2023/24
		-	
		-	
		-	
		-	

Signed by one or two trustees on behalf of all the trustees

Signature	Print Name	Date of approval
	K. Monk	May 13th 2024

COLLABORATION FOR ENVIRONMENTAL EVIDENCE

England & Wales - Charity number 1157607

Accounts

Collaboration for Environmental Evidence

2022 ANNUAL REPORT

www.environmentalevidence.org

Photo by Tim Nieland on Unsplash

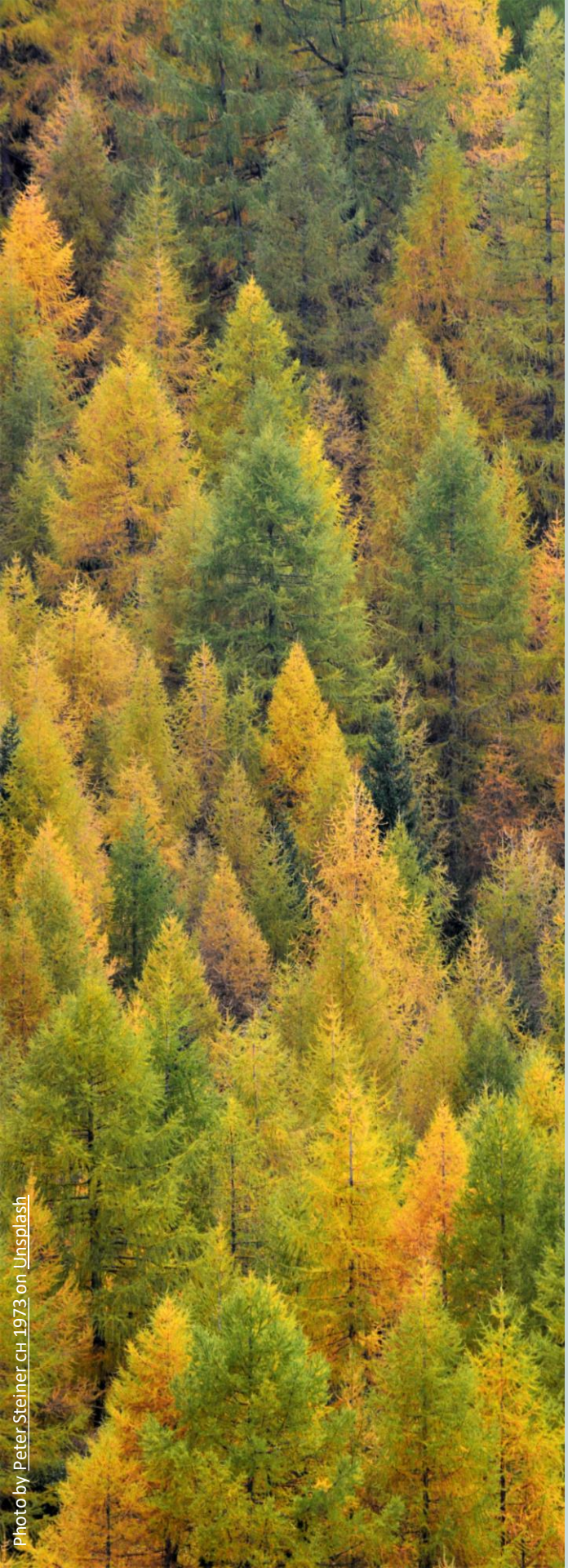


Photo by Peter Steiner CH 1973 on Unsplash

Table of Contents

3 A Message from the Board of Trustees
6 A Message from the CEO
7 CEE Officers
8 CEE Board of Trustees
9 The Collaboration
10 CEE Centres in 2022
11 Centre Snapshots 2022
12 Communications Strategy
13 Evidence Services
14 PROCEED
15 CEE Rapid Review Guidelines
16 Journal Developments
17 Environmental Evidence Journal
18 Featured Reviews
20 Securing the Future of CEE
21 Thank You

A Message from the Board of Trustees

As Chair of the Collaboration for Environmental Evidence (CEE), I am pleased to present our annual report for 2022. It was a year of slow recovery for everyone around the world from the impact of Covid-19 and CEE's commitment to promote the use of evidence-based approaches to address complex environmental challenges has never seemed so necessary. For CEE, 2022 was a year of review, reflection, and development. We extended our debate around governance – we are an international network of a ceaselessly changing research community-, what and who we should focus on over the next decade, and what our main communication and fund raising activity, CEE's journal *Environmental Evidence* should become. I would like to extend my sincere thanks to all our Board members, Team and Project committee members, reviewers, editors, and volunteers for your continuing generosity to CEE. Without your dedication, our collaborative organization would not be able to make the positive impact we do, and will do, on both the research and the evidence user communities.

Our organization has continued to foster collaborations between researchers, practitioners, and policymakers to promote the use of rigorous and transparent evidence in decision-making processes. We have also worked to strengthen the capacity of our members to conduct high-quality environmental research. Our initiatives, led by different centres and individuals, have included the development of new tools and resources to support evidence synthesis and implementation, the delivery of training workshops and webinars, and the organization of conferences and other events to promote knowledge-sharing and networking. I am proud to report that our communities' efforts continue to result in the publication of high-quality Systematic Reviews and Evidence Syntheses that have informed policy and practice in various environmental domains. Our work has also contributed to advancing the field of environmental evidence synthesis and implementation.

I was delighted to welcome two new members to the CEE Board in 2022, Prof. Gill Shepherd and Dr Matthew Grainger. Gill, a Visiting Professor in Development Practice in the Department for Anthropology, London School of Economics, brings a wealth of experience in global development, especially in local people's forest management and conservation. Matt is an applied ecologist at the Norwegian Institute for Nature Research improving the use of evidence in decision making for threatened species in Norway and globally. We continue to look to increase the Board's balance of evidence providers and users, and its regional diversity.

We also continued to highlight opportunities to contribute to CEE's professional services roles. We are again grateful to Teri Knight for continuing as co-opted Hon. Treasurer and managing our important albeit minimal central funds. In November, we sadly said goodbye to Jess Taylor from the Canadian Centre for Evidence-based Conservation (CEBC), one of our unsung heroes for many years.

Continued…

Jess ran our Secretariat and was Communications Officer, chairing the Communications Team. To replace her, Steve Cooke, Board Member and CEBC Director, became Honorary Secretary to the Board, and brought in Meagan Harper, a Senior Research Assistant in CEBC and a member of the CEEDER Review College, to provide Board Secretariat support, and for the Communications roles, Morgan Piczak, a PhD candidate with Steve, and Dr Andrew Kadykalo, a Postdoctoral Researcher in the Department of Natural Resource Sciences, McGill University, who has been concentrating on the publication of our Plain Language Summaries. This is a great contribution from one of our member Centres to the management of CEE and a model that we are exploring in our strategy discussions.

Within our Centres network, we also said farewell to Dr Sam Cheng, who represented our first affiliated centre in the United States, the Center for Biodiversity and Conservation at the American Museum of Natural History and welcomed Dr Amanda Sigouin as her replacement.

The Board and Centres continued to develop our new Strategy 2023-2033. This has been challenging but emerging is a sense of evolution not revolution in the development and support for evidence synthesis. CEE and its Centres, and innumerable individual volunteers, want to continue to produce innovative and valuable products and systems. The journal, *Environmental Evidence*, is our main source of finance, however, and we must enact significant changes to ensure we have the management resources to oversee and deliver all our current and planned activities. The Board and the Centres are once again therefore extremely grateful to Andrew Pullin, who continues to function as CEE CEO, main executive office resource, and Editor-in-Chief of CEE's journal. The Journal flourished during 2022, with increasing submissions of Systematic Reviews, Maps, and protocols. The Board welcomed the ever improving metrics of editorial decision speed and downloads and the continuing diversity of the Editorial Board and senior Editors and was pleased to see the Guidance for conduct and reporting of Rapid Reviews developed and published by the Guidance and Standards Team, together with our Journal Editors. The Guidance is consistent with Cochrane and WHO Guidance on Rapid Reviews and is an important step in bringing CEE more in line with policy needs and broadening the appeal of the journal for both authors and evidence users.

More widely, CEE Board, executive, and members continued to promote CEE and more use of rigorous evidence synthesis as the first step in any effective decision-making process. We gained observer status at CoP27, with me, Andrew Pullin, and Barbara Livoreil (Past-CEE Centre Director) as virtual observers. It was a frustrating CoP and whilst the climate science itself was much less contested, the availability and use of the evidence for what practical interventions may be most appropriate is still poor. This is a great challenge and opportunity for CEE.

The Board thanks all the CEE Centres who promoted their collaborative activities with CEE. Dr Joseph Langridge, CEE Centre representative for La Fondation pour la Recherche sur la Biodiversité, in France, for example, initiated a collaborative workshop for EcologyMetz2022, International Conference on Ecological Sciences & Evolution on Comparing non-systematic and systematic review methods for environmental evidence: an introduction to

Continued…

different literature review approaches, their advantages and limitations with UK-CEE Centres collaborators, Dr Nicola Randall, Director of the Centre for Evidence Based Agriculture at Harper Adams University and Mr. Ko Konno at the Centre for Evidence-Based Conservation at Bangor University.

Through collaboration, we have continued to expand our reach and make an even greater impact on the community. In particular, the Board is proud that CEE is the only partner representing environmental perspectives in the Global Commission on Evidence to Address Societal Challenges, or the Evidence Commission, which evolved from the COVID-END initiative. The release of the Evidence Commission report and recommendations in January 2022 was an exciting development in advocating for the domestic evidence infrastructures and global evidence architecture required address the societal challenges we face now and in the future. The Evidence Commission Report A wake-up call and path forward for decision-makers, evidence intermediaries, and impact-oriented evidence producers is available on the Evidence Commission's website.

Looking ahead, we are committed to building on our successes and continuing to promote the use of evidence in environmental decision-making. We will continue to work with our partners and collaborators to develop new initiatives, tools, and resources to support evidence-based approaches to environmental management.

In closing, I would like to thank once again all our members, partners, and collaborators for their contributions to the Collaboration for Environmental Evidence. Your dedication and support have been vital in CEE's success, and we look forward to continuing to work together to address the pressing environmental challenges of our time.

Kathryn Monk (Board Chair)

Photo by Olena Sergienko on Unsplash

A Message from the CEO

If there could possibly be positive outcomes from the COVID pandemic one such might be that the demand for rapid evidence provision to support decisions during the crisis has demonstrated how valuable evidence synthesis can be. During 2022 I was able to observe, as CEE representative of the COVID-END coalition, how quickly the global evidence synthesis community organized itself to meet the demand from decision makers. Although the focus was on the health sector for this particular emergency, it demonstrated what a well-established evidence network, with good capacity for rapid response, can do to inform decision making. Of course, the ongoing crises of climate change and global biodiversity loss have much greater relevance to CEE and the environmental sector and so far we have very low capacity for rapid delivery of rigorous evidence synthesis. This needs to change and there is hope on the horizon with the formation in 2022 of the Global Evidence Commission, a coming together of collaborations across sectors to raise awareness of the need for evidence synthesis. CEE is a partner organization and we will be lobbying hard for the Commission to recognize the need for capacity building in the environmental sector. More optimism comes from strong signals that the IPCC is beginning to recognize the role of evidence synthesis in providing evidence to inform climate change mitigation options. During 2022 CEE became involved in the planning of a 'What Works Climate Solutions Summit', supported by IPCC groups, that is now planned for 2024.

Within CEE, 2022 has been a time of further expansion of our journal, *Environmental Evidence*. New article types have been introduced alongside our main Evidence Syntheses to reflect our wider interest in the way evidence is generated, translated and used. An updated version of CEE Guidance and Standards was published during 2022 to further help all authors and commissioners achieve the highest standards of rigour and reliability. Beside setting standards for CEE Evidence Syntheses we also have an objective of increasing standards for all evidence reviews. A Report from our CEEDER team, published in *Environmental Evidence* this year, shows the reliability of recently published evidence reviews in all journals and gives clear cause for concern regarding general standards of practice. However, one clear finding is that standards of reliability can be raised by some basic changes in practice, such as registration of a protocol and tools for critical appraisal. To facilitate the former, CEE, in partnership with the Julius Kuhn Institute, has launched a free protocol registration service 'PROCEED'. Regarding critical appraisal, CEE is trialling a tool, available on our website, to help authors standardize this critical stage of Systematic Review.

CEE is nearly at the end of its ten-year strategic plan, and looking back it is remarkable how much of the plan has been achieved with so few resources. This would not have been possible without the support a global network of volunteers and collaborating organization. My thanks go to them all for their commitment to the CEE mission.

Andrew Pullin

Collaboration for Environmental Evidence

CEE Officers

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

Meagan Harper
Assistant to the Secretary
Senior Research Assistant
Carleton University, Canada

Morgan Piczak
Communications Officer - Website and Social Media
PhD Candidate, Biology
Carleton University, Canada

Andrew Kadykalo
Communications Officer - Plain Language Summaries
Postdoctoral Researcher,
McGill University, Canada

CEE Board of Trustees

Kathryn Monk
Chair
Honorary Professor, Swansea University, UK

Steven Cooke
Honorary Secretary and Trustee
Director of the Institute of Environmental and Interdisciplinary Science. Carleton University, Canada

Ruth Garside
Trustee
Associate Professor in Evidence Synthesis, University of Exeter

Henrik Smith
Trustee
Director of the Centre for Environmental and Climate Research, Lund University, Sweden

Neal Haddaway
Trustee
Senior Research Fellow, Stockholm Environment Institute, Sweden

Ruth Stewart
Trustee
Founding Chair, Africa Evidence Network

Gill Shepherd
Trustee
Visiting Professor, Department of the London School of Economics and Political Science, UK

Matthew Grainger
Trustee
Researcher, Norwegian Institute for Nature Research, Norway

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.

CEE Centres in 2022

The CEE is a global collaboration that has a network of Centres around the world

Centres contribute to the work of the CEE by encouraging evidence-based practice and systematic review activity within their geographic region. At present there are seven national CEE Centres based in Canada, Chile, France, South Africa, the United Kingdom, the United States of America, and one international CEE Centre (SEI). Centres obtain their own funds to perform centre functions.

https://environmentalevidence.org/cee-centres/

Centre Snapshots 2022

Canadian Centre for Evidence-Based Conservation

2022 was a significant year for the CCEBC with several major Evidence Syntheses completed for federal government partners. The Centre hosted several multi-day workshops, including one on critical appraisal training, and have started several new projects with (inter)national teams. Members continue to support CEE on the Board (2 members), in the CEEDER Editorial Board and Review College (4) and as communications officers (2).

Fondation pour la Recherche sur la Biodiversité (FRB)

FRB ran several successful training courses and workshops, including introductions to meta-analyses and systematic review for 15 young researchers, and a half-day workshop on comparing non-systematic and systematic evidence reviews during the French Ecological Societies International Conference (Fall 2022). Additionally, several Systematic Maps and calls for research projects have been conducted over the past year, with work continuing into 2023.

CEE Joburg, South Africa

In addition to serving on the Scientific Steering Committee for the "What Works Global Summit on Climate Change", to be held 2024, members developed a short-learning program on Sustainable Development Goals, with over 500 participants in 2022. Members actively participate on the CEE Board (1 member), the Advisory Board for *Environmental Evidence* (1) and CEE Meetings Committee (1).

UK CEE Centre

The UK Centre has continued to develop introductory guidance for qualitative synthesis and has promoted CEE Synthesis Assessment Tool (CEESAT) to colleagues for use in Evidence Syntheses on health interventions and has used CEESAT for categorizing reviews in several policy facing Systematic Maps. The Centre has applied to manage the CEE Training team, and members participate as editors for PROCEED and *Environmental Evidence*.

U.S. Centre based at the Center for Biodiversity and Conservation

The Centre has been involved in numerous evidence-related projects using and promoting CEE principles. Examples include rapid scoping reviews for the United States Agency for International Development, the World Wildlife Fund, and the USA National Estuarine Research Reserve System. Members actively participate in the CEEDER Review College (2 members), contribute PROCEED as handling editor (1), and the Communications team (1).

Communications Strategy

CEE Communications and Engagement Strategy

Aims to:
Ensure effective communication among the CEE Centres and beyond

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

Define review and evaluation processes.

The priority for the CEE Communication Team in 2022 has been to develop a Communication Plan to ensure that limited efforts are best focused on activities with maximal output. Leveraging journal outputs, including the summaries, and maintaining an active social media presence remain high priority. Revisions to the CEE webpage have also helped to modernize communications.

Under the direction of the CEE Communications Team, the role of Communications Officer was transferred from Jessica Taylor to Morgan Piczak (website and social media) and Andrew Kadykalo (plain language summaries). The joint Communications Officers conduct the communications work set out in the CEE Strategic Plan and oversee activities across various communications channels and functions. Morgan is responsible for maintaining the CEE's website, LinkedIn group, Twitter account (@envevidence) while Andrew is responsible for the production and management of plain language summaries for Evidence Syntheses published by *Environmental Evidence*. The Communications Officers are responsible for acting as 'brand guardians', ensuring consistency across all internal and external communications. We thank Jessica for her outstanding role as Communications Officer since 2017 and welcome Morgan and Andrew in their new roles.

Evidence Services

Environmental Evidence

New and upcoming evidence

17 Systematic Map protocols

5 Systematic Review protocols

7 Systematic Maps

5 Systematic Reviews

Plain Language Summaries

Saving evidence users valuable time

4 Systematic Review summaries

6 Systematic Map summaries

https://environmentalevidence.org/policy-briefs/

CEEDER

Assessing quality of syntheses

308 Evidence overviews

55 Evidence reviews

Of the over 1000 syntheses assessed for the years 2018 - 2020, most have low reliability to inform decision-making

Pullin et al. 2022

PROCEED

The CEE's New Evidence Service

7 Systematic Map protocols registered

5 Systematic Review protocols registered

257 new followers, 635 page views
272 reactions

105 new followers
57 889 impressions

PROCEED

Editorial Team

Andrew Pullin (Acting EiC)
Amanda Sigouin
Biljana Macura
Ruth Garside
Jacqualyn Eales
Tracy Ainsworth
Christian Kohl
Stefan Unger

Additional support from:

Julius Kühn-Institut

In 2022, CEE launched PROCEED, a global database of prospectively registered evidence reviews and syntheses in the environmental sector. This is an open-access free resource provided by the CEE and allows the registration of protocols of upcoming evidence reviews. This encourages protocol development, reducing risk of bias in conduct and findings in reviews, and helps to avoid duplication of research effort. This service also provides free and rapid registration.

Authors can register titles and protocols based on the type of review (e.g., Systematic Reviews, Systematic Maps and Rapid Reviews) and synthesis (e.g., narrative, meta-analysis, qualitative) through a simple, web-based platform using provided templates. Authors retain rights of their protocol and can publish in the journal of their choice.

All submissions are checked by the PROCEED Editorial Team and are searchable and accessible through the online platform https://www.proceedevidence.info/

Examples of Evidence Synthesis protocols registered with PROCEED in 2022

What is the evidence that reports on the interactions between human resilience, human wellbeing and environmental sustainability in marine and coastal areas around the UK?

What are the effects of chronic oil exposure on the survival, reproduction, and performance of marine organisms? What evidence exists on the potential of Technosols constructed from mineral wastes to host biodiversity?

How effective are perches in promoting bird-mediated seed dispersal for natural forest regeneration? A systematic review protocol

CEE Rapid Review Guidelines

In recognition of the increasing interest of policy-makers and practitioners in Rapid Evidence Syntheses, the CEE has incorporated guidance for the conduct of Rapid Reviews in the newest update of the Guidelines and Standards for Evidence Synthesis in Environmental Management (Version 5.1, 2022). Authors now have the option to conduct and publish Rapid Reviews in environmental management using rigorous, objective and transparent methodologies, with the additional opportunity to publish Rapid Reviews in *Environmental Evidence*.

CEE acknowledges that Systematic Reviews are resource and time intensive and may not provide evidence in a timely manner in some circumstances. These guidelines provide standards for conduct and reporting when more rapid methods are required. The CEE considers Rapid Reviews as Evidence Syntheses that would ideally be conducted as a Systematic Review, but where methodology needs to be accelerated (and potentially compromised) to meet the demand for evidence that precludes full systematic reviewing using CEE or other standards.

The guidance follows the same process-based structure as the CEE Guidance and Standards for Systematic Reviews but provides opportunities for speeding up the process, such as narrow eligibility criteria, limiting search to key databases, the use of machine learning, or limiting the data extracted. Some short-cuts run the risk of increased bias and should be carefully considered during the synthesis process. The guidelines also provide suggestions for allowing a Rapid Review to be "upgraded" to a Systematic Review in the future, providing a starting point for future Systematic Reviews if more resources become available at a later date.

For publication in *Environmental Evidence*, Rapid Review Protocols must be registered in PROCEED and follow the CEE process. Additionally, Rapid Reviews are only considered for publication with *Environmental Evidence* if they are submitted within 6 months of protocol registration.

Rapid Review Guidelines

https://environmentalevidence.org/information-for-authors/10-guidance-on-the-conduct-and-standards-for-rapid-review-of-evidence/

Photo by Agê Barros on Unsplash

Journal Developments

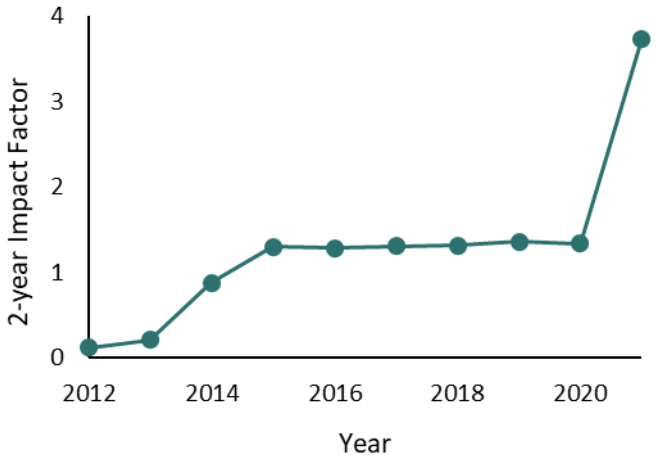
Annual Journal Metrics

Citation Impact*
3.734 - 2-year Impact Factor (2021)
5.827 - 5-year Impact Factor (2021)
1.322 - Source Normalized Impact per Paper (SNIP)
1.339 - SCImago Journal Rank (SJR)

Speed
15 days to first decision for all manuscripts (Median)
41 days to first decision for reviewed manuscripts only (Median)

Usage
640,380 Downloads (2021)
727 Altmetric mentions (2021)

**Citation impact details are updated in the middle of the calendar year following the release of these metrics by both Clarivate Analytics and Scopus. (2022 metrics will be released in mid-2023)*



BMC Part of Springer Nature

Environmental Evidence

There have been a number of key advances with respect to the CEE flagship journal – *Environmental Evidence*

We are pleased to announce a new journal article type called “Evidence in Action”. These articles will be handled by Steven Cooke (as section editor) and will involve a discussion on the impact of evidence-based practice on environmental managers, of Evidence Synthesis on policy making, or a discussion of developments at the science-policy interface. These articles will serve as a useful complement to the Evidence Syntheses that *Environmental Evidence* is already known for. Several CEE community members worked collaboratively to write a commentary article that will serve to launch this section. That paper is currently in review.

Efforts are also underway to launch several special issues and to work more closely with the Springer team to coordinate communication activities.

With a respectable Impact Factor and a strong reputation, we are in a good position to further elevate awareness of the journal thus increasing readership and the number and quality of submissions.

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

Senior Editors

Prof Paul Ferraro, John Hopkins University, United States of America
Prof David B Lindenmayer, Australian National University, Australia
Prof Hugh Possingham, University of Queensland, Australia

Associate Editors

Steven Cooke, Carleton University, Canada
Ruth Garside, University of Exeter, United Kingdom
Biljana Macura, Stockholm Environment Institute, Sweden
Nicola Randall, Harper Adams University College, United Kingdom

Editorial Board

Péter Batáry, Georg-August University, Germany
Monique Borgerhoff-Mulder, UC Davis, United States of America
András Báldi, Hungarian Academy of Sciences, Hungary
Samantha Cheng, American Museum of Natural History, United States of America
Carly Cook, Monash University, Australia
Mélanie Douziech, Agroscope, Switzerland
Adam Felton, Swedish University of Agricultural Sciences, Sweden
Geoff Frampton, Southampton University, United Kingdom
Louise Glew, World Wildlife Fund, United States of America
Elena Kulinskaya, University of East Anglia, United Kingdom
Malgorzata Lagisz, University of New South Wales, Australia
Barbara Livoreil, Fondation pour la Recherché sur la Biodiversité, France
Gabor Lovei, University of Aarhus, Denmark
Alejandro Martinez-Abrain, University of A Coruna, Spain
Gillian Petrokofsky, University of Oxford, United Kingdom
Carina van Rooyen, University of Johannesburg, South Africa
Karen E. Smokorowski, Fisheries and Oceans Canada, Canada
Yefeng Yang, City University of Hong Kong, China

Environmental Evidence

Featured Reviews

Photo by GeoNadir on Unsplash

The scope and extent of literature that maps threats to species globally: a systematic map

Ridley, F.A., Hickinbotham, E.J., Suggitt, A.J. et al. The scope and extent of literature that maps threats to species globally: a systematic map. Environ Evid 11, 26 (2022). https://doi.org/10.1186/s13750-022-00279-7

This synthesis systematically mapped the evidence of 'threats' to wild species from human activities and direct human-initiated processes that impact their survival. The map describes the distribution of evidence and provides a searchable database to inform future decision-making on the topic. The map identified several subtopics that may be amenable to full syntheses via Systematic Reviews or that can directly support spatial planning including: (1) evidence on the threat of agriculture and aquaculture; (2) evidence on the threat of alien invasive species; (3) evidence on the threat of residential development. Additional areas with high abundance of articles include the threats of road and railways, and biological resource use. Further examination of these clusters will be of direct relevance to the Post-2020 Global Biodiversity Framework. The Systematic Map shows that the most studied threats include alien invasive species, aquatic or terrestrial animal exploitation, roads and railways, residential development, and non-timber crop and livestock agriculture. It also identified stark gaps in research for understudied systems (such as freshwater), and taxonomy (such as plants), despite these species being extremely threatened by resource use. Further research on this topic for understudied ecological realms, taxonomy and geographic regions and for combined or cross-realm impacts is encouraged.

Effects of sediment exposure on corals: a systematic review of experimental studies

Tuttle, L.J., Donahue, M.J. Effects of sediment exposure on corals: a systematic review of experimental studies. Environ Evid 11, 4 (2022). https://doi.org/10.1186/s13750-022-00256-0

In this Systematic Review, authors provides evidence of the effects of sediment on corals for managers requiring thresholds for coastal runoff and dredging. This Systematic Review identified exposure levels that adversely affect corals, accounting for whether sediment was deposited or suspended, coral species and coral life-stages. Adverse effects ranged from tissue mortality to reduced growth rates, and bleaching, among others. By compiling experimental studies on the responses of over 140 species of coral in three oceans, the authors determined that the lowest sediment exposure levels that cause adverse effects in corals are lower than levels previously described as normal for reefs, with deposited sediments impacting corals more immediately than suspended sediments. In addition to sediment concentration and delivery method, exposure duration can also influence adverse responses. The thresholds identified in this study support the implementation of conservative sediment thresholds for coral reefs. Future work on the combined effects of sediment and other common co-stressors is recommended.

Photo by Francesco Ungaro on Unsplash

Featured Reviews

Existing evidence on antibiotic resistance exposure and transmission to humans from the environment: a systematic map

Stanton, I.C., Bethel, A., Leonard, A.F.C. et al. Existing evidence on antibiotic resistance exposure and transmission to humans from the environment: a systematic map. Environ Evid 11, 8 (2022). *https://doi.org/10.1186/s13750-022-00262-2*

This paired systematic mapping exercise considered the primary question: "what research evidence is there that humans are exposed to and affected by antimicrobial resistance in the environment?" through a pair of Systematic Maps collating the evidence for 1) transmission of antimicrobial resistance from the environment to humans globally, and 2) the state of antibiotic resistance in the environment in the UK. Authors provide a comprehensive, searchable database of the evidence, and determine that there may be sufficient evidence for a review of antimicrobial resistance in water and soil for map 2. Further research should investigate other environmental components such as air or animals. In contrast, there was a clear lack of global evidence for transmission of antibiotic microbial resistance from the natural environment to humans, although it may be possible to review some small knowledge clusters. In both maps, E. coli was among the most investigated species, and both maps showed geographical clustering of research, indicating knowledge gaps for some environments. Future work should aim to fill these gaps to support public health policies and environmental management of pollutants.

Photo by CDC on Unsplash

Photo by Jesse Gardner on Unsplash

Does the growing of Bt maize change abundance or ecological function of non-target animals compared to the growing of non-GM maize? A systematic review

Meissle, M., Naranjo, S.E. & Romeis, J. Does the growing of Bt maize change abundance or ecological function of non-target animals compared to the growing of non-GM maize? A systematic review. Environ Evid 11, 21 (2022). *https://doi.org/10.1186/s13750-022-00272-0*

In this Systematic Review, authors compiled and synthesized literature on field trials of genetically modified maize that produces insecticidal proteins of the bacterium Bacillus thuringiensis (Bt) for potentially adverse effects on non-target organisms such as spiders or ladybeetles. This Systematic Review confirms that most invertebrate groups were not affected by Bt maize when no insecticides were applied, and that BT maize harboured fewer target parasitoids. In comparison, broad spectrum herbicides caused non-target organism abundance to be reduced. Although some non-target organisms responded positively and others negatively to Bt maize, those effects were not consistent and were often related to individual study conditions. Tests examining authorship and financial support by biotechnology companies indicate that negative effects by Bt maize were found more often in studies with private sector support than in studies where no backing by biotech companies were declared. Limited data was available in forms suitable for meta-analysis. In future, full datasets would facilitate improve meta-analytic results with less uncertainty. This review provides support for the conclusion that Bt maize is a highly selective pest control technology.

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' under UK Charity Law:

- 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 evidence synthesis, 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 evidence synthesis activity worldwide.

Potential donors are encouraged to contact us at:
info@environmentalevidence.org

Photo by Daniel J. Schwarz on Unsplash

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 Evidence Synthesis.

Particular thanks for 2022 are due to:

- The Trustees
- CEE Guidelines Editorial Board
- Leaders and staff of CEE Centres
- Leaders and contributors to CEE Groups
- Members of the CEEDER Editorial Board
- Members of the CEEDER Review College
- Members of the PROCEED Editorial Panel
- Commissioners/funders of CEE Evidence Syntheses
- Review authors, stakeholders, and peer-reviewers
- Volunteers and supporters
- Spring Nature
- EEJ Editorial Board

More information:
www.environmentalevidence.org
Email:
info@environmentalevidence.org

Collaboration for Environmental Evidence

CHARITY COMMISSION FOR ENGLAND AND WALES

Charity Name	No (if any)
Collaboration for Environmental Evidence	

Receipts and payments accounts

CC16a

For the period from	Period start date	To	Period end date
	4/1/2022		3/31/2023

Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £
A1 Receipts				
Balance at year end	28,408	6,051		34,459
BMC Editor in Chief Honorarium 2021	1,500			1,500
BMC APCs 2021	6,384			6,384
BMC Editor in Chief Honorarium 2022	1,800			1,800
BMC APCs 2022	6,020			6,020
Sub total	44,112	6,051		50,163
A2 Asset and investment sales, (see table).				
	-	-	-	-
	-	-	-	-
Sub total	-	-	-	-
Total receipts	44,112	6,051	-	50,163
A3 Payments				
Exp149: CEE website set-up and hosting to	471			
Exp150: CEE website Editorial Manager	407			
Exp151: CEEDER Screening Team G.Pullin	200			
Exp152: CEEDER Screening Team A.Smith	417			
Exp153: CEEDER Screening Team M.Harper	297			

Exp154: Carleton University Comms Officer	5,010			
Sub total	6,802	6,051		50,163
A4 Asset and investment purchases, (see table)				
	-	-	-	-
	-	-	-	-
Sub total		-	-	-
Total payments	6,802	6,051	-	50,163
Net of receipts/(payments)	37,310	6,051	-	
A5 Transfers between funds	-	-	-	-
A6 Cash funds last year end	-	-	-	-
Cash funds this year end	37,310	6,051	-	43,361

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds		-	-	-

	-	-	-
	-	-	-
Total cash funds	**37,310**	**6,051**	**43,361**

(agree balances with receipts and payments account (s))

B2 Other monetary assets

Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

B3 Investment assets

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-

B4 Assets retained for the charity's own use

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-

		-	-
		-	-
		-	-
		-	-
		-	-

B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
		-	
		-	
		-	
		-	
		-	

Signed by one or two trustees on behalf of all the trustees

Signature	Print Name	Date of approval
	T M Knight	4/6/2023

COLLABORATION FOR ENVIRONMENTAL EVIDENCE

England & Wales - Charity number 1157607

Accounts

Collaboration for
Environmental
Evidence

2021 ANNUAL REPORT

www.environmentalevidence.org

Table of Contents

3 A Message from the Board of Trustees
6 A Message from the CEO
7 CEE Officers & Board of Trustees
8 The Collaboration
9 CEE Centres in 2021
10 Communications Strategy
11 Plain Language Summaries
12 Observer Status at COP26
13 CEE Community Spotlight
14 Environmental Evidence Journal
15 Featured Reviews
17 Securing the Future of CEE
18 Thank you

A Message from the Board of Trustees

I am delighted to introduce this 2021 Annual Report on behalf of the Board of Trustees of the Collaboration for Environmental Evidence (CEE). I became Chair in May 2021, so this is my first opportunity to write to all of you who have made such generous contributions of your time, talent, and energy in support of CEE. The Board wants to thank each of you for that support. Your contributions have helped CEE achieve remarkable successes over the past year. Your continued support will help us to reach even greater goals in the coming years.

The trustees also work voluntarily, and the Board acknowledges and appreciates here the long service to CEE by Gerry Post, Simon Gardner, and Kent Prior, all of whom completed their terms of office in 2021.

2021 was of course another challenging year for everyone. Covid 19 continued to dominate, bringing not only grief, but also a continued drive for change in work and home lifestyles, rethinking work-life balances, and increasing innovation. Evidence synthesis became, if not a household phrase, then certainly a common topic of debate as researchers rushed to find new vaccines and recommend behavioural changes to keep us safe. CEE continued to contribute to COVID-END (COVID-19 Evidence Network to support Decision-making) as one of the few environmental synthesis organisations in this diverse international network. As the pandemic runs its course, emphasis is turning to the environmental circumstances in which the virus appeared in the human population and how society might take action to prevent further pandemics. Through utilising rigorous evidence synthesis methods, the CEE community can make an important contribution to building this evidence base for understanding the causes of virus transmission from wild animals to human populations and how environmental management can reduce risk of further transmissions of novel viruses.

As the demand for evidence to address societal challenge — across countries and the political spectrum – increases, new methods are essential to facilitate faster evidence synthesis development, retrieval, and communication while maintaining accuracy, transparency, and replicability. Application of new technologies and the digitisation of our field are key to such transformation. CEE has led this both directly and by supporting its growing community.

As the Board recognised last year, the CEE Environmental Evidence Summit Webinar Series was hugely successful, replacing the cancelled 2020 Environmental Evidence Summit in Canada and covering everything from introductory sessions to technical innovation. In fact, it ran from late 2020 until May 2021. The series engaged many more people than might have attended in person and remains an excellent online resource. Our thanks go in particular to Jessica Taylor (CEE's Communications Officer and Meetings Committee Chair) for this success. The Board is delighted to see more and more webinars and recordings of CEE members' presentations being uploaded to the CEE YouTube Channel. We will continue to ensure these are promoted and used as a key part of our training services to both researchers and users.

Continued...

CEE grows on its central collaborative activities and those of its Centres' and individuals' own related activities, and the Board supports all these enthusiastically. I mention here two excellent examples from 2021. First, led by Neal Haddaway (Board Trustee and Stockholm Environment Institute representative) in January 2021, the Evidence Synthesis & Meta-Analysis in R Conference explored diverse tools and use cases in evidence synthesis tool development, and their YouTube Channel continues to reach a growing community of practice with over 4,100 views. Later in the year, the US Environmental Protection Agency Rapid Evidence Assessment Methods and Applications Working Group also ran a virtual event series exploring a range of related subjects. Sam Cheng (CEE representative for Center for Biodiversity and Conservation at the American Museum of Natural History) was on their Steering Group, and several CEE Board, Centre, and independent volunteers contributed to this small and highly interactive series of workshops over a five-month period.

One of the most notable events in 2021 was of course COP26 held from 31 October to 13 November in Glasgow, Scotland. For the first time, CEE was admitted to the United Nations Framework Convention on Climate Change process as an observer organization. Four of us, myself as CEE Chair, Ruth Garside (Board Trustee and Exeter lead for the UK Centre of CEE), Ruth Stewart (Board Trustee and Director of the Africa Centre for Evidence), and Barbara Livoreil (Past-CEE Centre Director) represented CEE by attending sessions virtually, with the goal of ensuring advocacy for evidence, and learning about the process to see how CEE could better contribute to future similar events. Whilst the evidence for the existence and progression of climate change is not in the main disputed any more, evidence to inform and shape the extensive complex interventions to mitigate and adapt to such rapidly increasing changes is needed urgently. CEE may seek funding to attend future events such as these where we can deliver strong face to face advocacy. The Board recognises the financial and carbon savings, however, of the increasing sophisticated virtual access systems and we will certainly increase our virtual presence in these international events in the coming years.

CEE is a not-for-profit charity and we run a tight ship financially, not least thanks to the continued support of Teri Knight as co-opted Treasurer. We are highly dependent on our extensive (and continually expanding) network of volunteers – from the Board and CEO to the deliverers of training programmes and the peer reviewers of our main income generating activity, the open access journal Environmental Evidence. The journal's primary aim is to support the objective use of scientific evidence to inform policy or practice. To that end, it also publishes methodology papers and encourages submissions that promise advances in the field of evidence synthesis and dissemination. The Board was delighted to see that Environmental Evidence published more papers than ever before in 2021, including systematic reviews and maps, protocols for forthcoming systematic reviews and maps, and papers exploring metric development, novel tools, and methods for designing and wrangling multifunctional, machine-readable evidence synthesis databases. The proportion of the open access fees that comes to CEE helps fund our work in supplying all our support services to authors and users of evidence syntheses without charge. The Board recognises the demands on everyone involved, from Editor-in-Chief Andrew Pullin to the many unsung but much appreciated peer reviewers. Andrew has advised the Board that he will be stepping down as Editor-in-Chief at the end of 2022 and the search is on for a successor to take this key asset of CEE into the future.

Continued...

The Board appreciates the progress made by all the project teams in developing CEE services for both authors and evidence users. Further examples in 2021 included the continual updating of the CEE Evidence Guidelines and Standards for Evidence Synthesis in Environmental Management, which stand alongside well-established health field guidelines, and the CEE Critical Appraisal Tool. This Tool, developed by Ko Konno (Bangor University), is increasingly important for evaluating the 'risk of bias' (or threats to internal validity) of primary studies assessing effectiveness of interventions or impacts of exposures in environmental management. We are also excited about the development of CEE's PROCEED in partnership with the Julius Kühn Institute, a global registration system for titles and protocols of environmental evidence reviews and syntheses. This will provide a free open access resource of protocols for environmental evidence reviews/syntheses, with authors able to register and upload their protocols using appropriate templates. We hope to launch this formally in mid-2022.

For decision makers in policy and practice as well as for the general public, CEE also continues to develop and provide a range of services such as the ever-increasing catalogue of Plain Language Summaries of CEE Systematic Reviews and Maps and our open access CEE Database of Evidence Reviews (CEEDER). CEE runs CEEDER with the help of a volunteer network of editors, screeners, and reviewers. In 2021, the Board was delighted that Josie Jackson from Natural Resources Wales (NRW), the largest Welsh Government Sponsored Body, was seconded part-time into CEEDER's editorial team. As Josie says later in this Report, this was an exceptional opportunity for both parties, and the Board encourages other user organisations to collaborate with us in this way. We were also delighted to see the first ever CEEDER Collection launched during COP26, the 'Climate Change Collection'. To help decision makers navigate the ever-increasing volume of climate change literature, the new collection currently containing over 240 reviews allows users to easily browse policy-relevant environmental evidence syntheses related to climate change. This CEE service can ensure evidence-informed decisions are made using the most reliable syntheses, which will be critical in the race to Net Zero.

In the light of COP26 and the focus globally on evidence synthesis, the Board revisited the CEE Strategic Plan 2013-2023 just before Christmas 2021. Further Board-Centres workshops in early 2022 should produce a draft we can use to work with the wider CEE community by the end of summer 2022. With plenty of detail still to be explored, we see this as a time to consolidate and communicate CEE Evidence Services, promote diversity and inclusion in our network and activities, and develop an underpinning sustainable strategy for financing and staffing an ever more successful CEE. These are ambitious targets and, as always, we extend an invitation to all of you, both researchers and users, to engage with us. We welcome and need your ideas and offers of help.

Kathryn Monk (Board Chair)

Collaboration for Environmental Evidence

A Message from the CEO

The need for reliable evidence to inform actions has never been more obvious than in 2021. Uncertainty about the future and how we can meet the challenges of the next 10-20 years has been played out in the mass media and in the streets as well as in the numerous meetings of policy makers and campaigning organisations. The sheer number of questions we need to address concerning the sustainability of our environment, solutions to food and water security, and adaptation to climate change is daunting. At the same time, the volume of evidence generated by the science community through primary research is impressive and ever increasing. The recent report from the newly formed Global Evidence Commission, in which CEE is a partner, notes that despite this ever-increasing demand and supply, things don't always go well, with some evidence going unnoticed or ignored and other evidence being given unwarranted attention through the bias of vested interests. The process of rigorous and reliable evidence synthesis gained attention in 2021 as crucial to societal interests and not least to deal with environmental crises that are upon us now.

CEE was created to support rigorous evidence synthesis and help fill the space between primary research and evidence-informed decision making. In 2021 we made some significant steps toward this goal with the preparation of the PROCEED protocol registration service, a new tool to assess risk of bias in primary studies and the further development of CEEDER, an evidence service for users. The completion of a third year of collation of evidence reviews published globally on environmental management marked the completion of the development phase of CEEDER and a review of the state of evidence synthesis in the environmental sector. All of these achievements have been possible only through the contribution of volunteers throughout the collaboration and I thank them most sincerely.

Andrew Pullin

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

Kathryn Monk
Chair
Honorary Professor, Swansea University, UK

Henrik Smith
Trustee
Director of the Centre for Environmental and Climate Research, Lund University, Sweden

Ruth Stewart
Trustee
Director of the Africa Centre for Evidence, South Africa

Steven Cooke
Trustee
Director of the Institute of Environmental and Interdisciplinary Science. Carleton University, Canada

Neal Haddaway
Trustee
Senior Research Fellow, Stockholm Environment Institute, Sweden

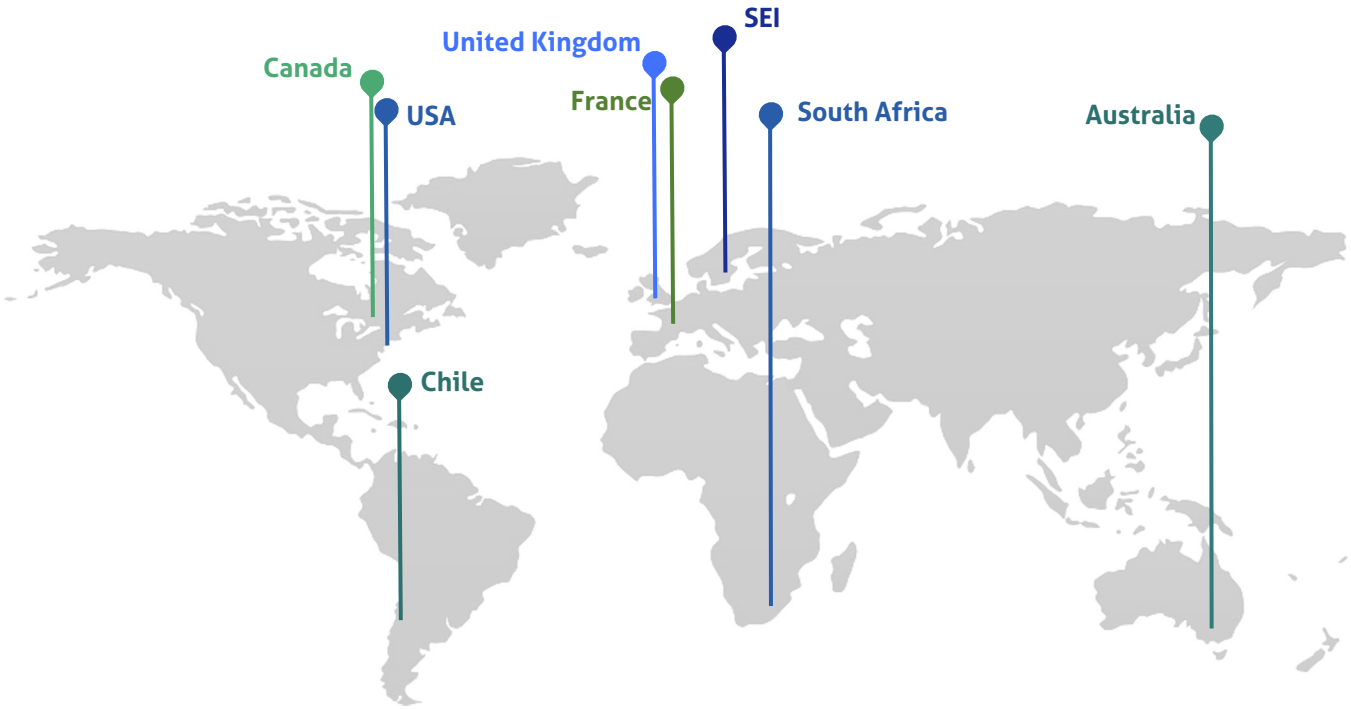
Ruth Garside
Trustee
Associate Professor in Evidence Synthesis, University of Exeter

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.

CEE Centres in 2021



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 2021, under the direction of the CEE Communications Team, 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 CEE Centre and is responsible for maintaining the CEE's website, LinkedIn group, Twitter account (@envevidence), the production of the Annual Report, and overall, acting as a 'brand guardian' ensuring consistency across all internal and external communications.

Priorities for the Communication Team in 2021 included the development of a template and system for producing plain language summaries to accompany new reviews and maps, promotion of CEE during COP26 while attending virtually as an observer, and launching the new CEE website and CEEDER database. The new CEE website was launched in February 2021 and more prominently outlines the services that CEE provides to both evidence users and producers. The CEEDER database was also re-designed and is now housed within the CEE website for easier navigation.

Plain Language Summaries

In 2021, CEE began publishing plain language summaries to accompany new systematic reviews and maps published in our Environmental Evidence Journal providing a new service for decision makers and other evidence users. These short, 2-page summaries present the synthesis in a digestible, easy to read format and save readers valuable time by highlighting the key findings.

Plain language summaries are written by review authors using a standardized template and then reviewed by members of the Communications Team and a knowledge user from the CEE Community. All plain language summaries can be found in a new library of plain language summaries on the CEE website as well as on their respective review page.

Summaries produced for 2021 reviews include:

- Struvite precipitation is an effective technology for nutrient recovery from anaerobic digestate, while there is limited evidence to conclude the effectiveness of ammonia stripping
- Habitat preferences determine species' response to forest management in boreal production forests of Fennoscandia and European Russia
- Small, protected habitat patches within boreal production forests contribute to biodiversity conservation
- Research of crop yields under low-inputs should be reprioritised to ensure the assessment of integrated interventions
- Urban green areas are cooler and have lower concentrations of nitrogen oxides air pollution than non-green areas, but this varies according to type and extent of vegetation
- Herbivory research does not cover a sufficient range of environmental variation in the Arctic to estimate herbivore impacts on vegetation

Collaboration for Environmental Evidence

CEE is an independent, not-for-profit, global network of researchers and stakeholders that publishes evidence syntheses to inform environmental policy and practice

Plain Language Summary
October 2021

Systematic Map
CEE 18-005

Herbivory research does not cover a sufficient range of environmental variation in the Arctic to estimate herbivore impacts on vegetation

Soininen, E.M., Barrio, I.C., Bjørkås, R., Björnsdóttir, K., Ehrich, D., Hopping, K.A., Kaarlejärvi, E., Kolstad, A.L., Abdulmanova, S., Björk, R.G., Bueno, C.G., Eischeid, I.., Finger-Higgens, R., Forbey, J.S., Gignac, C., Gilg, O.., den Herder, M., Holm, H.S., Hwang, B.C., Jepsen, J.U., Kamenova, S., Kater, I., Koltz, A.M.., Kristensen, J.A.., Little, C.J., Macek, P.., Mathisen, K.M., Metcalfe, D.B.., Mosbacher, J.B., Mörsdorf, M., Park, T.., Propster, J.R.., Roberts, A.J., Serrano, E., Spiegel, M.P., Tamayo, M., Tuomi, M.W., Verma, M., Vuorinen, K.E.M., Väisänen, M., van der Wal, R., Wilcots, M.E., Yoccoz, N.G., Speed, J. D.

Figure: Soininen et al. 2021

Distribution of studies of herbivore impacts on arctic vegetation. Background color shows change of mean temperature (°C) from period 1951-1980 to period 2000-2020.

The effects of herbivores on vegetation may depend on climatic and ecological context. Research on the impacts of herbivores on arctic vegetation is concentrated in those parts of the Arctic that are warmer, wetter, near the coast, and that have experienced a moderate increase in temperature. The current evidence base might therefore provide an incomplete picture of the effects of herbivores on arctic vegetation throughout the region.

Why is this Evidence Synthesis Needed?

A warming Arctic leads to changes of vegetation, the increase of trees and shrubs in the open tundra landscapes being the most evident of such changes. Herbivores that inhabit the Arctic encompass mammals (e.g., reindeer, musk ox, lemmings), birds (e.g., ptarmigan, geese), and invertebrates (e.g., birch moth). They modify arctic vegetation through feeding, fertilizing and disturbance. The effects of herbivores can counteract some of the climate-change induced changes of vegetation. However, the effects of herbivores on plants and ecosystem structure and function vary across the Arctic and seem to depend on the environmental conditions under which herbivory takes place. For example, the herbivore impacts on vegetation can differ in areas with different temperature or vegetation productivity. Therefore, studies in different locations can generate different outcomes, and generalizing the impacts of herbivores on plants becomes difficult. This systematic map assessed how well the existing literature of herbivore impacts on vegetation covers the environmental variation in the Arctic, to understand how robust are the conclusions that we can currently make about the effects of herbivores across the tundra biome.

This Collaboration for Environmental Evidence Systematic Map examines how well existing studies on herbivory cover the environmental conditions in the Arctic to assess how robust conclusions about the effects of herbivores on tundra vegetation might be. The map summarizes evidence from 662 studies on herbivore effects on arctic vegetation.

Main Findings

What studies are included?

The map identified 309 articles including 662 studies of herbivore impacts on plants or vegetation spanning the circumpolar Arctic. Studies included observational and experimental approaches, mainly from field studies but also remote sensing, modelling, and greenhouse studies. Most studies were published after 1980, with a marked increase in studies conducted around 2000 and peaking around 2010. Vertebrate herbivory, mainly by reindeer, small rodents, and geese, was studied seven times more often than invertebrate herbivory. Geographically, the largest cluster of studies was in Northern Fennoscandia.

How well do studies of herbivory cover environmental conditions in the Arctic?

Most studies on Arctic herbivory have been conducted in warm and moderately wet parts of the Arctic. Coastal areas and areas where the increase in temperature has been moderate have been studied more than more remote areas with extreme arctic conditions. However, the existing studies covered the range of observed warming and changes in vegetation greenness and growing season length in the last decades. The studies spanned the full range of Arctic vertebrate herbivore diversity and human population density and footprint.

A database of herbivory studies across the Arctic

The database of studies of herbivore effects on arctic vegetation is available through an interactive visualization tool: https://shiny.vm.ntnu.no/users/speed/ArcticHerbivorySystematicMap/. This tool allows exploration of individual environmental variables and the coded data for exploration and to generate further hypotheses.

What are the Implications of the Review Findings?

The current evidence base might not be sufficient to understand the effects of herbivores on Arctic vegetation throughout the region. The bias in the geographical distribution of herbivore studies in the Arctic, the uneven coverage of some environmental gradients and the limited evidence base on invertebrate herbivory compromise generalized conclusions on herbivore impacts on Arctic vegetation. In particular, the overrepresentation of studies in areas with moderate increases in temperature prevents robust generalizations about the effects of herbivores under different climatic scenarios. The systematic map calls for future studies to prioritize the areas experiencing the most pronounced climate changes but also in those that are changing the least to increase our broader understanding and management of the effects of herbivores. Understanding how herbivory influences the responses of Arctic ecosystems to environmental change can help guide appropriate adaptive strategies to sustain ecosystem functioning and the provision of ecosystem services.

Photo: Eeva Soininen

Synthesis Time Frame

The authors of this systematic map conducted their searches between March 2018 and March 2020, with no time-restriction applied. This CEE Systematic Map was published in October 2021.

Full Citation

Soininen, E.M., Barrio, I.C., Bjørkås, R., Björnsdóttir, K., Ehrich, D., Hopping, K.A., Kaarlejärvi, E., Kolstad, A.L., Abdulmanova, S., Björk, R.G., Bueno, C.G., Eischeid, I.., Finger-Higgens, R., Forbey, J.S., Gignac, C., Gilg, O.., den Herder, M., Holm, H.S., Hwang, B.C., Jepsen, J.U., Kamenova, S.., Kater, I., Koltz, A.M.., Kristensen, J.A.., Little, C.J., Macek, P.., Mathisen, K.M., Metcalfe, D.B.., Mosbacher, J.B., Mörsdorf, M., Park, T.., Propster, J.R.., Roberts, A.J., Serrano, E., Spiegel, M.P., Tamayo, M., Tuomi, M.W., Verma, M., Vuorinen, K.E.M., Väisänen, M., van der Wal, R., Wilcots, M.E., Yoccoz, N.G., Speed, J. D. (2021). Location of studies and evidence of effects of herbivory on Arctic vegetation: a systematic map. Environmental Evidence, 10:25.

Link to Publication

https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-021-00229-9

Funding

FRAM—High North Research Centre for Climate and the Environment supported this work with funding for two workshops. Funding from the Terrestrial Working Group of the International Arctic Science Committee was received to organize the Herbivory Network meetings in Iceland in 2016 and in Yamal in 2019, where this project was worked upon.

Collaboration for Environmental Evidence

www.environmentalevidence.org
info@environmentalevidence.org

Observer Status at COP26

CEE's mission as a global network is 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.

For the first time, CEE was admitted to the United Nations Framework Convention on Climate Change (UNFCCC) process as an observer organization for the 26th session of the Conference of Parties (COP26) held October 31st to November 13th 2021 in Glasgow, Scotland.

Kathryn Monk (CEE Board Chair), Ruth Garside (Board Trustee), Ruth Stewart (Board Trustee), and Barbara Livoreil (Past-CEE Centre Director) represented CEE by attending sessions virtually over the two weeks. While the observer status largely limited the representatives to one-way engagement with the meetings, the goals for attending were:

- To attend sessions and note the presence or absence of advocacy for evidence-based decision making in current processes to help to identify opportunities for CEE to become more engaged.
- To learn how COP meetings operate and about opportunities to host a virtual exhibitor booth or event, hold informal meetings, and engage with registered participants at future events.
- To envision how CEE could better contribute to future similar events.

During COP26 the Communications Team used Twitter and LinkedIn to promote relevant evidence syntheses and CEE's involvement in climate change work to connect with the COP26 audience. An example of this included promoting a recently updated systematic review published in Environmental Evidence on urban greening and the associated plain language summary to coincide with COP26's 'Cities, Regions, and Built Environment' day on November 11th. During the conference, we also launched the first ever CEE Database of Evidence Reviews Collection, the 'Climate Change Collection'. To help decision makers navigate the ever-increasing volume of climate change literature, the new collection containing over 240 reviews allows users to easily browse policy-relevant environmental evidence syntheses related to climate change. This service provided by CEE can be used to ensure evidence-informed decisions are made using the most reliable syntheses, which will be critical in the race to Net Zero.

CEE Community Spotlight

In 2020 CEE developed a partnership with Wales' government sponsored body for the environment, Natural Resources Wales (NRW), to continually develop the Collaboration for Environmental Evidence Database of Evidence Reviews (CEEDER) as an important environmental decision-making tool for operational users and policy makers. Through this partnership, Josie Jackson, a member of staff with the Integrated Evidence Group in NRW, was placed on the CEEDER Editorial Team part time during 2020-21 whilst still undertaking her role as Evidence Synthesis and Communications Specialist. In her role with NRW, Josie supports staff to use and commission evidence syntheses and provide specific evidence advice to staff across NRW. This includes effective evidence communication advice to various audiences as well as advice around scoping exercises, rapid and systematic reviews. Josie's post with CEEDER ended in 2021 and she took some time to describer her experience:

I joined NRW in late January 2020 having just finished a short post-doc in conservation genomics at Cardiff University. Almost immediately after joining, I was asked if I would like to start a secondment for a quarter of my time in the CEEDER editorial team. Of course, I said "yes please"!

The benefits to NRW were clear, I was trained up by a collaboration of global evidence synthesis experts and this new knowledge was fed immediately into my role, which was spread wider through the organisation. It seemed like an ideal opportunity to speed up my learning curve in evidence synthesis methodology while increasing NRW's exposure of the latest research advances in environmental sciences from across the world.

It felt good to be part of something global, even our weekly skypes were across three times zones! My day job is focussed on how we manage the Welsh environment, so being able to additionally help shape a tool which is used internationally was a huge motivator for me.

In the editorial team I was involved in searching for and screening the latest evidence reviews. I would often pass on recent findings that were directly relevant to my colleagues and importantly for us in NRW, these articles were evidence reviews as opposed to primary research. Assessing the papers using the CEESAT criteria improved my skills to rapidly search for information that indicated reliability. This familiarity with the CEESAT criteria has been an invaluable skill to bring to my NRW role, as like many of us, I often have little time to keep up to date with research, and to critically appraise it quickly.

But it is not all assessing articles! For example, during the year I (from a evidence user perspective) fed into the development of more tools to help those using, reviewing, or producing evidence syntheses, for example a checklist of journal editors which I have since been adapting for NRW to use internally.

For CEEDER, by including a representative from their targeted user audience into the editorial team, it created a continuous feedback loop between evidence user and provider to ensure the database was being improved according the needs of environmental decision makers themselves. This is an obvious win-win and means that CEEDER is constantly evolving and improving.

An example of this in action was when I passed on some feedback from NRW staff that they would like CEEDER to include articles that are similar to systematic maps or 'overviews' (in addition to systematic reviews), like those that ask the question of 'what evidence exists on…'. This evidence is useful to us in NRW because we can get a general overview of a subject and assess where the evidence gaps are. As a small team, CEEDER can be incredibly agile and responsive to these suggestions and soon after we began including these 'evidence overviews' in addition to reviews. Adaptive management in action!

So now my time with the editorial team has unfortunately come to an end, and I am left to thank the team for being brilliant team-mates and mentors. I have learnt an immense amount and much of which I apply frequently in my role. I highly recommend this experience for those working in similar environmental organisations.

And the NRW and CEEDER partnership journey continues! We are looking forward to the next developments of the partnership to improve CEEDER for all.

Josie Jackson

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

Senior Editors

Prof Paul Ferraro, John Hopkins University, United States of America
Prof David B Lindenmayer, Australian National University, Australia
Prof Hugh Possingham, University of Queensland, Australia

Associate Editors

Ana Benítez-López, Estación Biológica de Doñana, CSIC, Spain
Steven Cooke, Carleton University, Canada
Ruth Garside, University of Exeter, United Kingdom
Biljana Macura, Stockholm Environment Institute, Sweden
Nicola Randall, Harper Adams University College, United Kingdom

Editorial Board

Péter Batáry, Georg-August University, Germany
Monique Borgerhoff-Mulder, UC Davis, United States of America
András Báldi, Hungarian Academy of Sciences, Hungary
Samantha Cheng, American Museum of Natural History, United States of America
Carly Cook, Monash University, Australia
Mélanie Douziech, Agroscope, Switzerland
Adam Felton, Swedish University of Agricultural Sciences, Sweden
Geoff Frampton, Southampton University, United Kingdom
Louise Glew, World Wildlife Fund, United States of America
Elena Kulinskaya, University of East Anglia, United Kingdom
Malgorzata Lagisz, University of New South Wales, Australia
Barbara Livoreil, Fondation pour la Recherché sur la Biodiversité, France
Gabor Lovei, University of Aarhus, Denmark
Alejandro Martinez-Abrain, University of A Coruna, Spain
Gillian Petrokofsky, University of Oxford, United Kingdom
Carina van Rooyen, University of Johannesburg, South Africa
Karen E. Smokorowski, Fisheries and Oceans Canada, Canada
Yefeng Yang, City University of Hong Kong, China

Featured Reviews

What are the effects of even-aged and uneven-aged forest management on boreal forest biodiversity in Fennoscandia and European Russia? A systematic review

Savilaakso, S., Johansson, A., Häkkilä, M. et al. What are the effects of even-aged and uneven-aged forest management on boreal forest biodiversity in Fennoscandia and European Russia? A systematic review. Environ Evid 10, 1 (2021). https://doi.org/10.1186/s13750-020-00215-7

This systematic review contributes to the public discussion and provides evidence for policy making by synthesising current evidence on impacts of even-aged and uneven-aged forest management on biodiversity in boreal forests of Fennoscandia and European Russia. This systematic review suggests that habitat preferences determine species' response to different harvesting methods and the magnitude of effect is large. Less disturbance from harvesting is better for forest dependent species whereas opposite is true for open habitat species. Uneven-aged and mature even-aged forests (> 80 years old) are important to maintain biodiversity in boreal forests. However, the results also highlight that natural forests are needed to ensure the future of forest dependent species in Fennoscandia and European Russia. Given that a broader set of biodiversity aspects are to be protected, best overall biodiversity impacts for a variety of species at landscape level can be achieved by ensuring that there is a mosaic of different forests within landscapes.

Evidence on the impacts of chemicals arising from human activity on tropical reef-building corals; a systematic map

Ouédraogo, DY., Delaunay, M., Sordello, R. et al. Evidence on the impacts of chemicals arising from human activity on tropical reef-building corals; a systematic map. Environ Evid 10, 22 (2021). https://doi.org/10.1186/s13750-021-00237-9

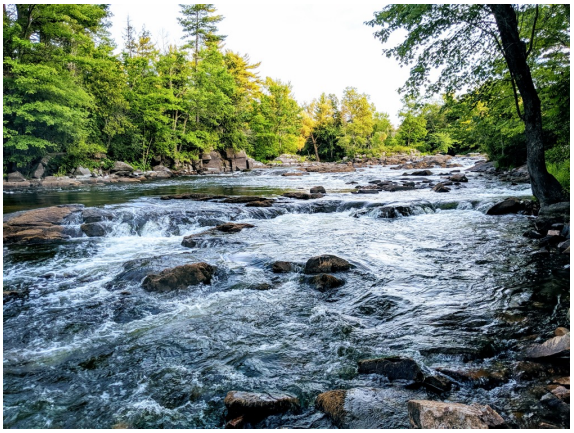
This synthesis systematically mapped the evidence of impacts of chemicals arising from anthropogenic activities on tropical reef-building corals, which are the main engineer species of reef ecosystems, to inform decision-makers on the available evidence on this topic. The map identified four well-represented subtopics that may be amenable to relevant full syntheses via systematic reviews: (1) evidence on bioaccumulation of chemicals by corals; (2) evidence on the effects of nutrient enrichment on corals; (3) evidence on the effects of human activities on corals; and (4) evidence on the ecotoxicological effects of chemicals on corals (except nutrient enrichment). The systematic map shows that corals in their natural environment can be exposed to many categories of chemicals, and that there is a complete gap in experimental research on the combined effects of more than two categories of chemicals. Further research on this topic is encouraged.

Featured Reviews

Effects of artificial light on bird movement and distribution: a systematic map

Adams, C.A., Fernández-Juricic, E., Bayne, E.M. et al. Effects of artificial light on bird movement and distribution: a systematic map. Environ Evid 10, 37 (2021). https://doi.org/10.1186/s13750-021-00246-8

This systematic map provides a comprehensive, searchable database of evidence of the effects of artificial light on bird movement and distribution, increasing both the quantity and diversity of studies that are accessible for further comparison and synthesis. Authors identify and describe the evidence available for four secondary questions relevant to conservation or management: aggregation/mortality at structures with artificial lights, evidence that light attracts and/or disorients birds, light-based deterrent efficacy, and the influence of continuous illumination on habitat selection. There may be sufficient evidence for a review of the weather and lunar conditions associated with collisions, which could help identify nights when reduction of artificial light is most important. Further experiments should investigate whether specific types of light can reduce collisions by increasing the detectability of structures with artificial lights. The efficacy of lasers as deterrents could be evaluated through systematic review, though more studies are needed for UV/violet lasers. To reduce the impacts of outdoor lighting on birds, research should investigate how spectral composition of white light influences bird attraction, orientation, and habitat selection.



Response of chlorophyll a to total nitrogen and total phosphorus concentrations in lotic ecosystems: a systematic review

Bennett, M.G., Lee, S.S., Schofield, K.A. et al. Response of chlorophyll a to total nitrogen and total phosphorus concentrations in lotic ecosystems: a systematic review. Environ Evid 10, 23 (2021). https://doi.org/10.1186/s13750-021-00238-8

In this systematic review, authors compiled and synthesized literature on sestonic and benthic chlorophyll a (chl-a) responses to total nitrogen (TN) and total phosphorus (TP) concentrations in the water column in streams and rivers to provide a state-of-the-science summary of nutrient impacts on these endpoints. This systematic review confirms that nutrients consistently impact primary producer biomass in streams and rivers worldwide. It builds on previous literature syntheses evaluating chl-a responses to nutrient concentrations and confirms that benthic and sestonic chl-a respond positively to nutrients across a range of stream and river conditions, but also points to limits on these relationships (e.g., potential saturation at high nutrient concentrations). Lack of consistent reporting of contextual data limited our ability to examine how moderating factors influenced these stressor-response relationships. Overall, this systematic review provides nutrient managers responsible for protecting the quality of lotic ecosystems with a comprehensive evidence base for chl-a responses to TN and TP concentrations in the water column.

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' under UK Charity Law:

- 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

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 2021 are due to:

- The Trustees
- CEE Guidelines Editorial Board
- Leaders and staff of CEE Centres
- Leaders and contributors to CEE Groups
- Members of the CEEDER Editorial Board and Review College
- 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
Email: info@environmentalevidence.org

Collaboration for Environmental Evidence

CHARITY COMMISSION FOR ENGLAND AND WALES

Charity Name	No (if any)
Collaboration for Environmental Evidence	

Receipts and payments accounts

CC16a

For the period from	Period start date	To	Period end date
	2021-04-01		2022-03-31

Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £
A1 Receipts				
Balance at year end	35,368	6,051	-	41,419
Journal 2020 APC Share	4,899			
Sub total	40,266	6,051		46,317
A2 Asset and investment sales, (see table).				
	-	-	-	-
	-	-	-	-
Sub total	-	-	-	-
Total receipts	40,266	6,051	-	46,317
A3 Payments				
Exp141: Communications Officer Grant 2020	5,017			
Exp142: IT Costs	513			
Exp143: IT Costs	53			
Exp144: IT Costs	86			
Exp145: IT Costs	38			
Exp146: Editorial Staff	375			
Exp147: Editorial Staff	767			
Exp148: Communications Officer Grant	5,010			

Sub total	11,859			

A4 Asset and investment purchases, (see table)				
	-	-	-	-
	-	-	-	-
Sub total	11,859	-	-	-
Total payments	**11,859**	**-**	**-**	**-**
Net of receipts/(payments)	**28,408**	**6,051**	**-**	**34,459**
A5 Transfers between funds	-	-	-	-
A6 Cash funds last year end	-	-	-	-
Cash funds this year end	**28,408**	**6,051**	**-**	**34,459**

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds		-	-	-
		-	-	-
		-	-	-

	Total cash funds	**28,408**	**6,051**	**-**
	(agree balances with receipts and payments account(s))			

B2 Other monetary assets

Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

B3 Investment assets

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-

B4 Assets retained for the charity's own use

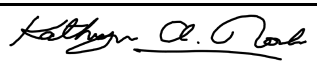
Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-

		-	-
		-	-

B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
		-	
		-	
		-	
		-	
		-	

Signed by one or two trustees on behalf of all the trustees

Signature	Print Name	Date of approval
	Kathryn A. Monk	25 April 2022
	Steven J. Cooke	April 26 2022

COLLABORATION FOR ENVIRONMENTAL EVIDENCE

England & Wales - Charity number 1157607

Accounts

Collaboration for Environmental Evidence

2020 ANNUAL REPORT

www.environmentalevidence.org

Table of Contents

3 A Message from the Board of Trustees
4 A Message from the CEO
5 The Board of Trustees
6 The Collaboration
7 CEE Centres in 2020
8 Communications Strategy
9 New CEE Centre
10 Environmental Evidence Summit Webinar Series
11 EEJ
12 Featured Reviews
14 Securing the Future of CEE
15 Thank you

A Message from the Board of Trustees

The Board is proud to share the Collaboration for Environmental Evidence (CEE) 2020 Annual Report detailing the charity's strong performance in a year that has, as we all know only too well, presented extraordinary challenges for individuals, organisations, and nations. For many, including CEE, 2020 has focussed us more than ever on our purpose, how we communicate that purpose, and how we organise ourselves in our global network.

Since 2013, when we launched our 10-year Strategic Plan, CEE's mission as a UK-based charity and a global network has been 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. During 2020, the challenges of decision making in the face of complex influences and being able to rely on available evidence, more than ever focussed the attention of governments and the public on rigorous evidence synthesis.

This focus brought CEE into increasing prominence as we serve these two key communities, evidence providers and evidence users. We continued to promote the most rigorous evidence synthesis methodologies, provided guidance and training for new researchers to this field, and brought together those established and emerging communities around the world through our scientific journal and meetings. Whilst many organisations faced obstacles to virtual working, CEE by its very nature was already well placed for continued smooth running. We recognise of course, that each of our Centres and Affiliated Groups have faced their own local challenges and congratulate everyone for continuing top-class research and publications. In particular, the Board would like to thank our Canadian Centre (Canadian Centre for Evidence-Based Conservation), which was set to host our third international CEE conference in Ottawa in June 2020. This was postponed and then cancelled, and subsequently CEE's Communications Officer Jessica Taylor and Meetings Committee worked tremendously hard with the Centre's Director Steve Cooke to convert the programme into monthly webinars. The latter were hugely successful, capturing a much wider audience, especially from evidence user communities, than would have been possible at the conference itself. Of note also is that CEE colleagues from around the world have played a role in the COVID-END Evidence Network to support decision-making related to the pandemic. Learning from all of this, we look forward to supporting a wider range of engagement activities in the coming year.

As with many organisations adopting more extensive remote working during the pandemic, the Board revisited the effectiveness of our organization design, ensuring we had at our core good governance systems and robust risk management approaches. Board members are located globally, and in 2020 we welcomed new independent and centre-associated members. This strengthened the recognition of the interests of the Centres and enabled more effective strategic discussions. Whilst existing Board members worked effectively together to cover Board responsibilities, the rapid expansion of CEE and associated complexity of managing activities through a small CEE Office and expanding numbers of volunteers means we must address these challenges in the coming year.

Continued...

The success of CEE in 2020 was reflected not only in the explosion of webinars but also in the addition of another new Affiliate, the Center for Biodiversity and Conservation at the American Museum of Natural History in New York, USA.

Alongside the Centres and Affiliates, CEE could not have achieved so much in 2020 without the vast number of volunteers from across our wider academic community. They pressed ahead with many projects todeliver on-schedule tangible benefits under CEE's still highly relevant and valued 2013-2023 Strategic Plan.
Our financial accounts are small but nevertheless rigorously managed and we are in a good place with some reserves to consider investment in further new projects in 2021.

Our income comes mainly from CEE's Journal, Environmental Evidence, and the Board was delighted when the journal received its first Clarivate Impact Factor in 2020. We were equally pleased to see publication numbers holding up and thank the Editorial Board, peer reviewers, and the authors themselves. The journal has a critical role to play in upholding CEE's mission and encouraging increasing numbers of rigorously produced systematic reviews and maps.

Among the many other highlights in 2020, the Board recognises the impressive development of the CEE Database of Evidence Reviews (CEEDER). CEEDER provides an assessment of the reliability of reviews in environmental management so users can easily find trustworthy evidence syntheses to inform decision making and is being developed in partnership with those users. Again, this milestone would not have been possible without the dedicated members of our growing Review College who independently assess every article in the database using the CEESAT criteria.

Finally, the Board would like to recognise the continuing vision, inspiration and hard work that Andrew Pullin is now putting into the voluntary executive management of CEE. The founding Chair in 2011, and its first CEO since 2018, Andrew still leads from the front an increasingly successful, expanding and demanding CEE, and has the Board's full support.

The importance of evidence-based or -informed decision-making in the environmental field is increasingly realised, and even more so as the complexity of the environment-society-economics nexus is realised within our own governance systems, locally, nationally and globally. COVID-19-induced radical change in societal behaviour has underlined the fact that CEE has an increasingly important role to play globally in supporting the most effective decision making possible that affect our lives and those of the next generations.

Collaboration for Environmental Evidence

A Message from the CEO

Along with many other organisations, CEE has experienced an exceptional year of challenges. Fortunately, due to our structure as a global collaborative network, CEE has been extremely resilient to the restrictions enforced by the pandemic and I would like to congratulate all of our Centres, Affiliated Groups and volunteers for the way in which they have continued to contribute to CEE 's mission despite the difficulties imposed upon us all. Most importantly, CEE has managed to adapt quickly to the lockdowns, no more evident than when we needed switch our global conference to a series of online webinars that have been well attended and received thanks to the efforts of Jessica Taylor and Steven Cooke in our Canadian Centre. Our major projects (our journal, training, CEEDER and PROCEED) were all able to continue running and developing through online collaboration of working groups and, thanks to the continued support of our volunteers, we have been able to launch new tools and services for both out authors and evidence users. Our global network has also continued to expand with the addition of the US Centre based at the American Museum of Natural History, and a number of Affiliated Groups. In order to adapt to the pandemic, new ways of remote working and collaboration have emerged and this will benefit us into the future as virtual meetings become the norm. CEE has an increasingly important and influential role to play as an open-access platform to support both evidence synthesis and evidence-informed decision making in the environmental sector and this presents many opportunities for those who wish to contribute to our work going forward.

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

Simon Gardner
Trustee
Head of Innovation Programmes and Partnerships, NERC, UK

Kathryn Monk
Trustee
Principal Advisor for Science, Natural Resources Wales, UK

Gerald Post
Trustee
Veterinary Oncologist, The Veterinary Cancer Centre, USA

Kent Prior
Trustee
Senior Conservation Science and Policy Manager, Parks Canada, Canada

Henrik Smith
Trustee
Director, Centre for Environmental and Climate Research, Lund University, Sweden

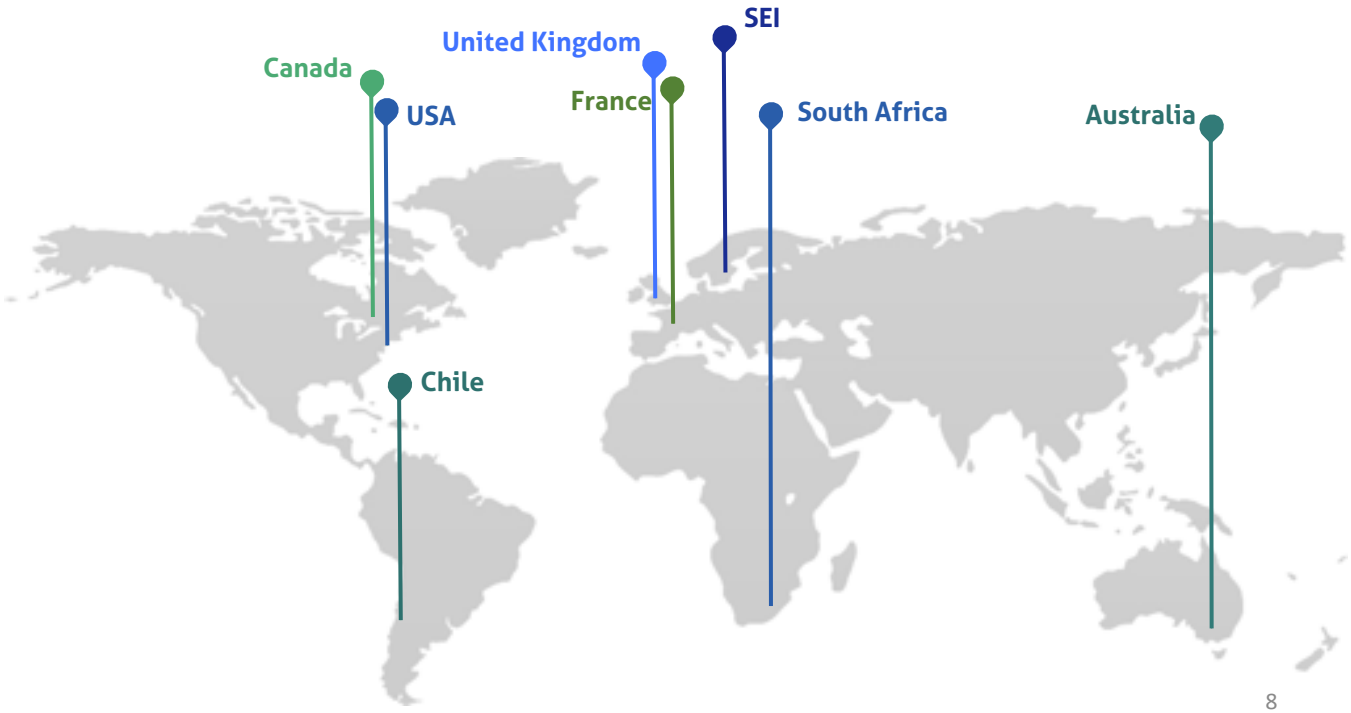
Ruth Stewart
Trustee
Director, Africa Centre for Evidence, South Africa

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.

CEE Centres in 2020



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 2020, under the direction of the CEE Communications Team, 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 CEE Centre and is responsible for maintaining the CEE's website, LinkedIn group, Twitter account (@envevidence), the production of the Annual Report, and overall, acting as a 'brand guardian' ensuring consistency across all internal and external communications.

While the global pandemic prohibited travel for much of the year, CEE was represented as a virtual exhibitor at Africa Evidence Network's Evidence 2020 online conference. As our own CEE conference, the Environmental Evidence Summit, was postponed indefinitely, the content was transferred to a free, monthly webinar series. This new communication output for CEE was very successful in 2020 and led to the creation of our new YouTube channel that will host ongoing CEE content in the future.

New CEE Centre

In the spring of 2020, the Center for Biodiversity and Conservation (CBC) at the American Museum of Natural History in New York joined CEE as an affiliated centre, the first in the United States. The CBC will serve as an organizing hub for evidence synthesis efforts in the United States, linking together scientists, practitioners, policymakers, local community leaders, and educators across sectors. Their mission is to help organizations assess their needs for evidence, assess existing knowledge, and apply evidence to inform environmental, conservation, and development decisions. Dr. Samantha Cheng is the coordinator for the U.S. Centre.

In the past year, members have been primarily involved in building capacity around evidence synthesis approaches and getting involved in the CEE network. Centre members also have recently joined forces with the UK, Canada, and SEI Centers to identify and scope opportunities for applying evidence mapping approaches to understanding environmental factors linked to zoonotic virus emergence, as part of the COVID-END initiative.

This year, the group began a 5-year collaboration with the United States Agency for International Development (USAID), to advise Missions around the world and strengthen their capacity to better gather and use evidence as part of their integrated natural resource management programming, which connects biodiversity, sustainable development, and human health. As part of this work, CBC has been leading evidence synthesis and biodiversity research work on a number of topics, including the intersection of land and resource governance, natural resource management, democracy, and climate change - as well as mining and the environment.

Members of the Centre have also been raising awareness around evidence synthesis methodologies and generating evidence products with regional organizations aimed at bridging the knowledge-action gap for conservation and environmental and natural resource management - including the National Ocean Protection Council, the Environmental Protection Agency, Our Shared Seas, and the Cana Foundation.

To learn more, contact Samantha Cheng, scheng@amnh.org

Greetings from the CBC!

150 YEARS | AMERICAN MUSEUM OF NATURAL HISTORY

Center for Biodiversity and Conservation

Environmental Evidence Summit Webinar Series

Given the circumstances surrounding the COVID-19 global pandemic, the Meetings Committee and the Canadian Centre for Evidence-Based Conservation, with the support of the CEE Board of Trustees, made the decision to postpone the Environmental Evidence Summit in Ottawa. The sessions planned for the in-person event that was to be held in June 2020 were converted into a monthly webinar series that was accessible to our global community. This 11-part series began in August 2020 and will continue through June 2021 via GoToWebinar.

This series also facilitated the launch of CEE's new YouTube channel where recordings of all sessions are held. From August to December 2020, there were an average of 50 attendees per live session and close to 600 total views of the recordings.

We are very grateful to the session chairs, CEE community, and attendees for quickly adapting to the new format and making the webinar series a huge success. Discussions are ongoing for the continuation of CEE webinars beyond the Environmental Evidence Summit Series.

Environmental Evidence Summit Series Program
Evidence-based decision making and the use of evidence syntheses by the Canadian Federal government
Evidence Synthesis Technology
Developing generic theories of change for key conservation strategies as a basis for generating, accessing, and using evidence.
Mobilizing knowledge for evidence-based approaches in the anthropocene -
Plotting a course for strengthening the conservation evidence base: integrating multi-actor perspectives
Evidence syntheses in "Eco-health": exploring interactions between the environment and human health and well-being
Evidence co-production and use in environmental policy processes in Africa
Comparing rapid and systematic review methods for environmental evidence: benefits and limitations of different approaches
Advances in agricultural evidence
Qualitative evidence synthesis: using qualitative evidence to inform decision making
Learning with each other: promoting cross sectoral collaboration for evidence synthesis

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

Senior Editors

Prof Paul Ferraro, John Hopkins University, United States of America
Prof David B Lindenmayer, Australian National University, Australia
Prof Hugh Possingham, University of Queensland, Australia

Editorial Manager

Dr Biljana Macura, Stockholm Environment Institute, Sweden

Handling Editors

Prof Paul Ferraro, John Hopkins University, United States of America
Dr Ruth Garside, University of Exeter, United Kingdom
Dr Nicola Randall, Harper Adams University College, United Kingdom

Editorial Board

Dr Péter Batáry, Georg-August University, Germany
Dr Ana Benítez-López, Radboud University, Netherlands
Dr Monique Borgerhoff-Mulder, UC Davis, United States of America
Prof Barry Brook, University of Tasmania, Australia
Dr András Báldi, Hungarian Academy of Sciences, Hungary
Dr Samantha Cheng, American Museum of Natural History, United States of America
Dr Carly Cook, Monash University, Australia
Dr Mélanie Douziech, MINES ParisTech, PSL University, France
Dr Adam Felton, Swedish University of Agricultural Sciences, Sweden
Dr Geoff Frampton, Southampton University, United Kingdom
Dr Ruth Garside, University of Exeter, United Kingdom
Dr Louise Glew, World Wildlife Fund, United States of America
Prof Elena Kulinskaya, University of East Anglia, United Kingdom
Dr Barbara Livoreil, Fondation pour la Recherché sur la Biodiversité, France
Dr Gabor Lovei, University of Aarhus, Denmark
Dr Alejandro Martinez-Abrain, University of A Coruna, Spain
Dr Gillian Petrokofsky, University of Oxford, United Kingdom
Dr Nicola Randall, Harper Adams University College, United Kingdom
Dr Carina van Rooyen, University of Johannesburg, South Africa
Dr Marija Sciberras, Heriot-Watt University, United Kingdom
Dr Cagan Sekercioglu, University of Utah, United States of America
Dr Karen E. Smokorowski, Fisheries and Oceans Canada, Canada

Featured Reviews

What evidence exists on the impact of agricultural practices in fruit orchards on biodiversity? A systematic map

Markus van der Meer, Sonja Kay, Gisela Lüscher & Philippe Jeanneret . Environmental Evidence Volume 9, Article number: 2 (2020)

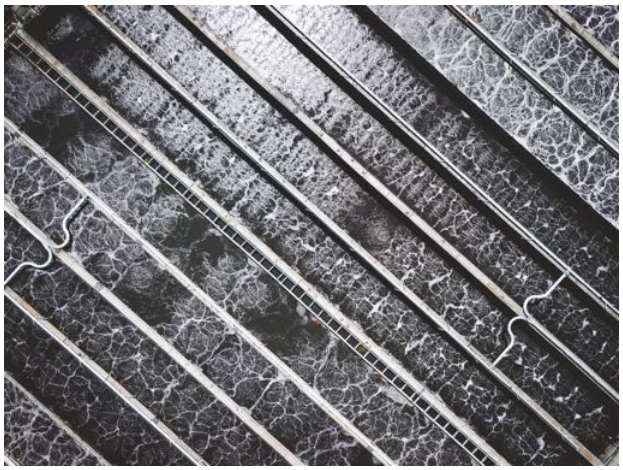
This systematic map compiled and structured the available evidence to (1) assess the state of research on discrete biodiversity indicators and agricultural practices, (2) identify the literature relevant for assessing production impact and habitat suitability for supporting biodiversity and (3) provide a wide-ranging overview of existing evidence of the impact of agricultural practices in fruit orchards on biodiversity. The systematic map revealed that rigorous and comprehensive investigations on the suitability of orchards as perennial habitats for wildlife, run on the long-term and following a holistic approach, are still basically lacking. Although evidence base on orchard management effects on particular organisms has grown over the past two decades, information to develop reliable close-to-nature management tools and strategies is insufficient. The implications for policy and research suggest that—in view of worldwide biodiversity loss, which may cause a major threat for food production—a better understanding of the role played by orchards and their management in agricultural landscapes for biodiversity is required.

Can linear transportation infrastructure verges constitute a habitat and/or a corridor for vertebrates in temperate ecosystems? A systematic review

Dakis-Yaoba Ouédraogo, Anne Villemey, Sylvie Vanpeene, Aurélie Coulon, Vital Azambourg, Marine Hulard, Eric Guinard, Yves Bertheau, Frédérique Flamerie De Lachapelle, Vanessa Rauel, Eric Le Mitouard, Arzhvaël Jeusset, Marianne Vargac, Isabelle Witté, Hervé Jactel, Julien Touroult, Yorick Reyjol & Romain Sordello Environmental Evidence volume 9, Article number: 13 (2020)

This systematic review is the first synthesis of evidence addressing this topic for vertebrates (mammals, birds, amphibians and reptiles) in temperate ecosystems. The synthesis identified a major knowledge gap regarding the potential of linear transportation infrastructure verges as corridors for vertebrates, and when they exist studies rarely directly measured movements on verges. The authors thus encourage more research on this topic and the development of protocols that enable direct measures of vertebrate movements. The effect of management practices on the role of habitat of verges also deserves further investigations, and research efforts should be coordinated to focus on one specific practice (e.g. vegetation management).

Featured Reviews



What evidence exists on ecotechnologies for recycling carbon and nutrients from domestic wastewater? A systematic map

Solveig L. Johannesdottir, Biljana Macura, Jennifer McConville, Dag Lorick, Neal R. Haddaway, Agnieszka Karczmarczyk, Filippa Ek, Mikołaj Piniewski, Marta Księżniak & Paweł Osuch Environmental Evidence volume 9, Article number: 24 (2020)

The aim of this paper was to collate evidence on ecotechnologies intended for use in the wastewater sector globally to facilitate the recovery or reuse of carbon and/or nutrients. This systematic map found substantial evidence for the recovery and reuse of nutrients and carbon from wastewater sources. The relative abundance of studies where substances are recovered compared to studies where they are reused, suggests a knowledge gap on reuse of recovered nutrients and carbon. The majority of studies on reuse were on irrigation with treated wastewater or reuse of biosolids, and not on reuse of extracted nutrients such as struvite.

What are the relative risks of mortality and injury for fish during downstream passage at hydroelectric dams in temperate regions? A systematic review

Dirk A. Algera, Trina Rytwinski, Jessica J. Taylor, Joseph R. Bennett, Karen E. Smokorowski, Philip M. Harrison, Keith D. Clarke, Eva C. Enders, Michael Power, Mark S. Bevelhimer & Steven J. Cooke . Environmental Evidence volume 9, Article number: 3 (2019)

The primary goal of this systematic review was to address two research questions: (1) What are the consequences of hydroelectric dam fish entrainment and impingement on freshwater fish productivity in temperate regions?; (2) To what extent do various factors like site type, intervention type, and life history characteristics influence the consequences of fish entrainment and impingement?
This synthesis suggests that hydropower infrastructure in temperate regions increased the overall risk of freshwater fish injury and immediate mortality relative to controls. The evidence base confirmed that turbines and spillways increase the risk of injury and/or mortality for downstream passing fish compared to controls. Differences in lab- and field-based studies were evident, highlighting the need for further studies to understand the sources of variation among lab- and field-based studies. Authors were unable to examine delayed mortality, likely due to the lack of consistency in monitoring for post-passage delayed injury and mortality. This synthesis suggests that bypasses are the most "fish friendly" passage option in terms of reducing fish injury and mortality. To address knowledge gaps, studies are needed that focus on systems outside of North America, on non-salmonid or non-sportfish target species, and on population-level consequences of fish entrainment/impingement.

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' under UK Charity Law:

- 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

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 2020 are due to:

- The Trustees
- CEE Guidelines Editorial Board
- Leaders and staff of CEE Centres
- Leaders and contributors to CEE Groups
- Members of the CEEDER Editorial Board and Review College
- 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
Email: info@environmentalevidence.org

Collaboration for Environmental Evidence

CHARITY COMMISSION FOR ENGLAND AND WALES

Charity Name	No (if any)
Collaboration for Environmental Evidence	

Receipts and payments accounts

CC16a

For the period from	Period start date	To	Period end date
	4/1/2020		3/31/2021

Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £
A1 Receipts				
Balance at year end	27,059	6,051	-	33,110
Journal honorarium 2019 + 2020	3,000			
Journal 2019 APC share	6,530			
NRW (project support)	2,800			
	39,389	6,051		45,440
A2 Asset and investment sales, (see table).				
	-	-	-	-
	-	-	-	-
Sub total	-	-	-	-
Total receipts	39,389	6,051	-	45,440
A3 Payments				
Exp121: IT Costs	46			
Exp122: IT Costs	46			
Exp123: IT Costs	86			
Exp124: IT Costs	46			
Exp125: IT Costs	77			
Exp126: IT Costs	46			

Exp 127: Computer equipment	389			
Exp 128: IT Costs	828			
Exp 129: IT Costs	166			
Exp 130: IT Costs	76			
Exp131: IT Costs	46			
Exp132: IT Costs	46			
Exp133: IT Costs	46			
Exp134: IT Costs	46			
Exp135: IT Costs	46			
Exp136: IT Costs	46			
Exp137: Editorial Manager	753			
Exp 138: IT Costs	46			
Exp139: Editorial staff	750			
Exp140: Editorial staff	395			
	4,021			

A4 Asset and investment purchases, (see table)				
	-	-	-	-
	-	-	-	-
Sub total	-	-	-	-
Total payments	4,021	-	-	-
Net of receipts/(payments)	35,368	6,051	-	41,419
A5 Transfers between funds	-	-	-	-
A6 Cash funds last year end	-	-	-	-
Cash funds this year end	35,368	6,051	-	41,419

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds		-	-	-

	-	-	-
	-	-	-
Total cash funds	-	-	-

(agree balances with receipts and payments account(s))

B2 Other monetary assets

Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

B3 Investment assets

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-

B4 Assets retained for the charity's own use

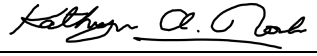
Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-

		-	-
		-	-
		-	-
		-	-
		-	-

B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
		-	
		-	
		-	
		-	
		-	

Signed by one or two trustees on behalf of all the trustees

Signature	Print Name	Date of approval
	Kathryn A. Monk	12 August 2021