EBNet
Environmental Biotechnology

Engineering and Physical Sciences Research Council

Biotechnology and Biological Sciences Research Council

ENVIRONMENTAL BIOTECHNOLOGY NETWORK

Environmental Biotechnology and Social Sciences WG

Environmental Biotechnology and Social Sciences WG (EBSS WG)



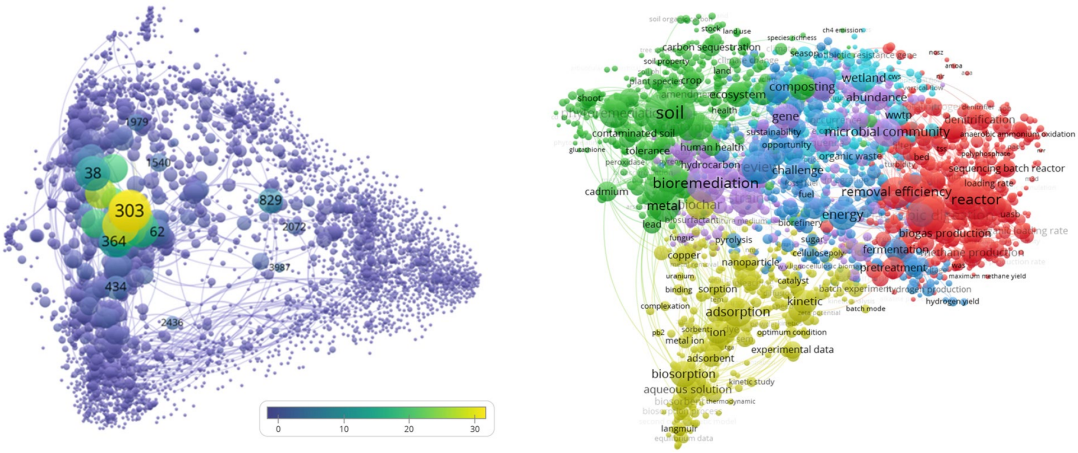
Led by Prof Adrian Ely, University of Sussex

Co-Leads Dr Rob Smith and Prof Jane Calvert, University of Edinburgh

The purpose of this WG is to examine the histories, contemporary dynamics and potential futures of the field of environmental biotechnology, drawing on insights from the social sciences. The WG has conducted exploratory research, summarised and shared findings, and made recommendations on future interdisciplinary projects.

ACTIVITY SYNOPSIS

The Environmental Biotechnology and Social Sciences WG was formed as a 'closed' group consisting of members from the University of Edinburgh and the University of Sussex with expertise in social science aspects of Science, Technology, Engineering and Mathematics (STEM). Together they held three 2-day internal workshops, performed bibliometric analysis, conducted stakeholder interviews and ran a one-day by-invitation event to examine a single topic - *Exploring the Past, Present and Futures of Environmental Biotechnology as a Field*. This is now available to the wider community, as a Full Report and a separate Executive Summary.



Examples of bibliometric study outputs in Ely et al., 2005

Whilst publications in the wider field of Environmental Biotechnology are increasing as a proportion of all scientific research areas, the term itself is variously defined and used by different communities who may benefit from a common centre for enhanced cross-disciplinary interaction. A paper by the EBNet Management Team on *What is Environmental Biotechnology?* builds on the report and other activities undertaken by the Network to explore this area further.

WG Publication

Ely, A., Coburn, J., Moore, D., Parker, K., Smith, R., Calvert, J., & I. Ràfols (2025) Exploring Environmental Biotechnology as a Field: Report to the Environmental Biotechnology Network (EBNet) by the EBNet Social Sciences Working Group. Main Report and Summary.

"Exploring The Past, Present and Futures of Environmental Biotechnology as a Field"

4 November 2024: Friends House, 173-177 Euston Road London NW1 2BJ

Introduction/ background

The term 'Environmental Biotechnology' (EB) is central to EBNet's activities, but its use has raised some interesting questions. It does not have universal recognition, nor do all users agree on what it encompasses; however, many see a value in the term. The Social Science Working Group of the BBSRC Environmental Biotechnology Network (EBNet) has, since May 2024, been examining the histories, contemporary dynamics and potential futures of the field of environmental biotechnology, drawing on insights from the social sciences, in particular science and technology studies (STS). This event provides the opportunity to learn about and discuss the findings of this research, and to contribute to discussions around the potential futures of environmental biotechnology. The outputs of the workshop will feed into the final report of the EBNet Social Sciences Working Group, to be published later in 2024.

Planned Programme (as of 26/9/2024)

The Past and Present of Environmental Biotechnology	
10.30	Coffee & Registration
11.00	Introduction & Welcome Jane Calvert (Professor of Science and Technology Studies, University of Edinburgh) (Chair), Sonia Heaven (Emeritus professor, University of Southampton and Lead, EBNet), Adrian Ely (University of Sussex and Co-lead, EBNet Social Sciences Working Group)
11:05 – 11:25	Exploring Environmental Biotechnology: **Exploring the bibliometric landscape of environmental biotechnology as a field** Josie Coburn (Research Fellow, SPRU – Science Policy Research Unit, University of Sussex) & Duncan Moore (Research Assistant, SPRU – Science Policy Research Unit, University of Sussex)
11:25 – 11:40	**Response 1** - Joy Y. Zhang, Professor of Sociology, Founding Director, Centre for Global Science and Epistemic Justice, University of Kent & Engineering Biology Hub for "environmental processing and recovery of metals". **Response 2** - Andrew Pickford, Professor of Molecular Biophysics, University of Portsmouth & Lead for the Engineering Biology Hub "preventing plastic pollution with engineering biology".
11:40 – 12:00	Q & A
12:00 – 12:20	COFFEE BREAK

12:20 – 12:40	Exploring Environmental Biotechnology 2: **Contemporary dynamics and debates** Adrian Ely (Reader in Technology and Sustainability, SPRU – Science Policy Research Unit, University of Sussex) & Kyle Parker (Research Fellow, University of Edinburgh)
12:40 – 12:55	**Response 3** - Eleanor Hadley Kershaw, Senior Lecturer in Management, University of Exeter Business School & Co-Investigator "Renewing biodiversity through a people-in-nature approach' (RENEW)" project **Response 4** - Tom Arnot, Senior Lecturer, Department of Chemical Engineering & Co-Director Water Innovation & Research Centre, University of Bath
12:55 - 13:15	Q & A (20 mins)
13:15 – 14:00	LUNCH
Futures of Environmental Biotechnology	
14:00 – 14:10	Introduction to the afternoon sessions Jane Calvert (chair)
14:10 – 14:30	Provocations *5-minute talks without slides, putting forward a specific vision for the future of Environmental Biotechnology* James Chong, Lead Bioinformatics Training for Microbial Environmental Biotechnologies Working Group Meredith Barr, Lecturer in Chemical Engineering, London South Bank University, Lead: EBNet Biochar Working Group Tom Curtis, Professor of Environmental Engineering, Newcastle University Pat Thomas, Award-winning campaigner, journalist and author, Founding Director of Beyond GM and A Bigger Conversation
14:30	World Café (workshop) To include a total of 4 rounds of circulation, with 15 minutes per round. Dimensions/topics for discussion (see guidance for further details): - Molecular/ genetic (mechanistic) engineering vs community (system) engineering approaches - Integration across digital, biological and engineering frontiers: opportunities and risks - The changing role of the private sector and intellectual property in a traditionally "public good" field - Environmental Biotechnology: Prevention and/or cure? The role of regulation to drive types of biotechnology and other solutions
14:30 – 15.00	Rounds 1 and 2 Discussion on above topics

15:00 – 15:10	**Plenary** 2 minutes from each of the 4 tables
15:10 – 15:30	COFFEE BREAK
15:30 – 16:00	**World Café (workshop): Rounds 3 and 4** Discussion on above topics as per Rounds 1 and 2
16:00 – 16:10	**Plenary 2** 2 minutes from each of the 4 tables
16:10 – 16:30	**Plenary discussion**
16:30	Feedback & closing reflections: - Susan Molyneux Hodgson (Professor of Sociology, Associate PVC for Research and Impact for the Faculty of Humanities, Arts and Social Sciences (HASS), University of Exeter) - Sonia Heaven (Emeritus Professor, University of Southampton and PI, EBNet) - EBNet SSWG Team
17:00	Close

The EBNet Social Science Working Group (EBSS WG) are Adrian Ely, Josie Coburn and Duncan Moore (University of Sussex), Jane Calvert, Rob Smith and Kyle Parker (University of Edinburgh) and Ismael Rafols (CWTS in the Netherlands).

For further information on this event, please contact EBNet@EBNet.ac.uk

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