



EBNet Newsletter October 2026

New

[Designed biology versus managed natural communities](#)

A colleague using AI for thematic analysis of some contributions by EBNet [WG Leads](#) noticed an interesting sub-heading: 'Designed biology versus managed natural communities'. The distinction was apparently between systems based on synthetic biology, and those not involving GM organisms or components. This is intriguing, because neither phrase appears in the material provided: and the prompt specified analysis should be based strictly on the text. A quick search on Google Scholar also indicated that these phrases are not in common use. So, AI seems to have invented them. We asked some participants at a recent [EBIC event](#) for their impressions: some found the labels interesting, others ludicrous or invidious. The discussion fits in well with our reflections on [What is Environmental Biotechnology?](#) What do these terms convey to you? Are they potentially useful? Your thoughts and suggestions welcome...

[EBNet input to Defra FPR consultation](#)

The topic of fertiliser products is undergoing intensive review across Europe; and since nutrients are both a problem and a key opportunity for the Environmental Biotech sector, the process and its results are relevant to many EBNet members. Earlier this year [Defra](#) and the devolved UK administrations ran a [Public Consultation](#) on reforming the UK Fertilising Product Regulations ([FPR](#)). Two leading groups, the Renewable Energy Association ([REA](#)) and the Bio-based and Biodegradable Industries Association ([BBIA](#)) coordinated responses across their sectors: copies of their responses and the original Consultation document are available [here](#). EBNet's input on selected questions was kindly prepared by [Dr Angela Bywater](#) in conjunction with the [AF WG](#), and submitted via REA: the text is [here](#). Results from the Consultation are not yet available, but Defra is now working with the Scottish and Welsh Governments and the Northern Ireland Executive to organise technical workshops building on the outcomes.

[PHA from waste feedstocks: joint webinar and publication](#)

EBNet and the Global Center for Sustainable Bioproducts ([GCSB](#)) are jointly hosting a webinar to explore current advances and emerging trends in polyhydroxyalkanoate (PHA) production. [Dr Seongbong Heo](#) will discuss current knowledge on mixed microbial cultures, waste-derived

feedstocks, nutrient-decoupled and integrated production strategies, and data-driven approaches to PHA accumulation. Register [here](#) or on the link in the title. And don't miss a related [journal paper](#) with co-authors from [EBNet](#) and [NBIC](#) in the Publications section below.

MEC systems, hydrodynamics and scale-up

Congratulations to [Dr Maira Anam](#) of Newcastle University for her [prize-winning](#) poster on *Impact of hydrodynamics on pilot-scale Microbial Electrolysis Cells* at the [Better Water 4 All Network+ ECR conference](#), and her talk on *Impact of fluid flow on microbial community development in pilot-scale MEC* at the [EBIC ECR Event](#). This work is in a key area for our [BES WG](#), and is also an excellent example of EBNet's [Theme 2](#) on interactions between microbes and the engineered environments they live in. The talk is available [here](#) on EBNet's YouTube Channel, and the poster can be downloaded [here](#). For Dr Anam's comments on the importance of scale-up see [this link](#).

Unlocking the potential of digestate processing

Digestates from organic wastes and wastewater treatment residues are a hot topic at present, both as an under-utilised resource and due to growing concerns about the impact of emerging pollutants on traditional destinations such as land application. Similar issues apply to residues from other waste-based biotechnologies, including anaerobic fermentation. [Dr Yue Zhang](#) of EBNet's [AF WG](#) led a study on options for digestate valorisation within a rapidly-evolving regulatory landscape. The work was commissioned by Renewable Energy Assurance Ltd ([REAL](#)), [REA](#)'s business arm, and a report is expected shortly. Meanwhile Dr Zhang gave a presentation on key issues in this area at [ESS 2026](#). Our thanks to Dr Zhang and REAL for making a version of her talk available [here](#) on our Youtube channel.

Update on webinars - don't miss!

More details on the webinar *Environmental Biotechnology: How to Partner with Microbial Communities* by [Prof Bruce Rittmann](#) on 6 Oct 2026 at 16:00 UK. The talk will explain how integrating multiple tools allows us to harness the wide range of microbial metabolisms, with H₂-based membrane bioreactors as an example. The event is co-hosted by EBNet and [Better Water 4 All Network+](#). Sign up via BW4All's [event page](#).

The [GCSB/EBNet PHA webinar](#) is on 29 Oct at 14:00 UK. And look out for news on forthcoming events on *Nanobubbles in water and wastewater treatment* on 24 Nov 2026 with EBIC and BW4all, and on *AD biorefineries* with the AF WG (date tbc).



Spotlight on...

Do you have news to share with other members? Email us details if you want a shout-out in the next update, or on the [News page](#)

Good press for Scottish Water

News items on the UK water industry are mainly there for all the wrong reasons, from [sewage spills](#) to forever chemicals in [tapwater](#): so it's good to see something positive. A piece in the latest issue of CIWEM's *Environment* magazine describes Scottish Water's newly-upgraded [Winchburg wastewater treatment works](#), intended as a model for future low carbon-footprint plants. Key to this is the use of an aerobic granular sludge system for biological treatment. Meanwhile Scottish Water in conjunction with IChemE is hosting a [visit](#) to Invercarnie Water Treatment works. Sadly the original slow sand filters have been removed to provide extra capacity: but will we soon see this technology making a come-back to deal with emerging pollutants? See the [AG](#), [WB](#) and [PFAS WG](#) tags for updates on these topics.

[CBE JU Circular Economy Dashboards](#)

The Circular Bioeconomy Joint Undertaking ([CBE JU](#)) has launched a series of interactive [dashboards](#) covering programme statistics, key performance indicators and portfolio information.

These provide an accessible way to explore funded projects. The dashboards show target markets for bio-based solutions, and how feedstocks, technologies, intermediate outputs and products connect. Users can explore participation and funding by country, search for participants and find which projects they are involved in. An interactive map shows the locations of flagship biorefineries and demonstration plants. EBNNet [warmly welcomes](#) this very useful set of tools.

[New IEA tool maps biogas potential around the globe](#)

The International Energy Agency ([IEA](#)) has released a first-of-its-kind global spatial analysis assessing the potential for developing biogases from organic waste streams. Modelling suggests that nearly 900 billion m³/year of natural gas equivalent could be sustainably produced, meeting 20% of current global demand. More than 70% of this potential is in emerging and developing economies, led by India and Brazil, as well as China. To help stakeholders and decision-makers assess opportunities at a national and local level, the IEA launched an [interactive online map](#) allowing users to explore the findings in more detail. Interested in biogas and biomethane? Sign up for [IEA Task 37](#)'s regular and highly informative [Newsletter](#).

[EBES 2026 Conference and an ECR Challenge](#)

[EBIC](#) held its second annual ECR Conference in September, with excellent presentations on the theme of *Engineering Biology for Environmental Solutions* – and participants coming not just from the EBIC partner universities, but across the UK and around the world. Good to meet up with many EBNNet members there too. See the latest EBIC [Newsletter](#) for some [highlights](#) of the event, with details of key sessions and prizewinners. And expect to hear more sometime about the outcomes of the year-long ECR Challenge, which were presented to EBIC's high-powered Independent Advisory Board the day before the event...

[Green Stories - Short film competition](#)

Following a flash-fiction competition on the theme of 'Epiphanies', the [Green Stories](#) Project is

now inviting people to bring one of the winning entries to life as a short film or animation. This should be no more than 2 mins long, and should capture the spirit of epiphany – a transformative moment which causes one or more characters to change for the greener. Films can be uploaded until 31 Dec 2026. For more details see [here](#) – and please circulate to others.

Halloween is coming - be creative!

Don't miss the [Coccus Pocus 2026 Scary Story](#) competition, which this year is sponsored by EBNNet with a closing date of 31 Oct 2026. And don't forget NBIC's [Biofilm Create](#) competition, which is open for submissions of photography and other types of art until 23 Oct 2026.

Events

Online

NEW [EBNet/BW4All Webinar Environmental Biotechnology: How to Partner with Microbial Communities](#) - 16 Oct 2026 16:00 UK

NEW [UK Bio-Based solutions Network Launch](#) - 19 Oct 2026 12-13:00 UK

NEW [BBIA Scaling Bio-Based Production: Building Resilient Feedstock Supply Chains](#) - 28 Oct 2026, 12-13:00 UK

NEW [GCSB/EBNet Webinar Advances in Polyhydroxyalkanoate \(PHA\) Production](#) - 29 Oct 2026 14-15:00 UK

NEW [Sustainable Treatment and Resource Recovery from Palm Oil Mill Effluent](#) - 27 Nov 2026, 08:00 UK

[Microbiology Society Education & Outreach Conference](#) - 21 Oct 2026

And *don't miss* **PhycoClub**'s regular [PhycoFridays](#) on the last Friday of each month: details for October 2026 available soon

In person

NEW [IUMS Biennial Congress](#) - 4-6 Nov 2026, Lisbon, Portugal

NEW [Supergen Bioenergy Hub Annual Assembly](#) - 9-10 Nov 2026, Liverpool

NEW [ADBA National Conference](#) - 10 Dec 2026, London

NEW [British Society of Soil Science Annual Conference](#) - 1-4 Dec 2026, Aberdeen

NEW [IBiolC 13th Annual Conference](#) - 3-4 March 2027, Glasgow

NEW [European Congress of Chemical Engineering & Applied Biotechnology](#) - 13-16 Sept 2027, Edinburgh. **Abstracts deadline** 25 Jan 2027.

[8th Eurasia Waste Management Symposium](#) - 26-28 Oct 2026, Cappadocia, Turkiye

[CIWEM A Fresh Water Future Conference](#) - 9-10 Nov 2026, Liverpool

[ISWA World Congress](#) - 9-11 Nov 2026, London

[European Biosolids & Bioresources Conference 2026](#) - 17-18 Nov 2026, Telford

[11th International Symposium on Energy from Biomass and Waste](#) - 23-25 Nov 2026, Venice, Italy.

[IWA Diffuse Pollution and Eutrophication](#) - 24-27 Nov 2026 Vienna, Austria

[IWA Global Sanitation Summit](#) - 25-27 Jan 2027, Cape town, South Africa

[Monitoring and Control in Biomass Conversion Processes](#) – 23-24 March 2027 Leipzig, Germany.

Abstract deadline 3 Nov 2026.

NEW [European Biomass Conference & Exhibition EUBCE 35](#) - 25-28 May 2027 Reims, France.

Abstract deadline 30 Oct 2026.

[IWA Design, Operation and Economics of Large WWTP](#) - 12-16 Sept 2027 Vienna, Austria.

Funding

Selected funding opportunities are highlighted below. Find more at [UKRI Funding](#)

Funding

NEW [Engineering Biology Access to Infrastructure Pilot](#) - 21 Oct 2026

NEW [Engineering Biology Collaborative R&D round 3](#) - 3 Nov 2026

NEW [JSPS Short Term Pre/Postdoc Fellowships](#) - 9 Nov 2026

NEW [Bioinformatics and Biological Resources Fund \(26BBR\)](#) - 19 Nov 2026

NEW [Engineering Biology Investor Partnerships round 1](#) - 2 Dec 2026

NEW [Biodiversa+ 2026-27: novel ecosystems \(BiodivFuture\)](#) - 16 April 2027

[UKRI Translation funding: BBSRC Proof of Concept 2026](#) - 14 Oct 2026

[Knowledge Transfer Partnership 2026-7 Round 3](#) - 14 Oct 2026

[NERC: Exploring the frontiers of Environmental Research](#) - 12 Nov 2026

2026

[Elemental Hub Business Interaction vouchers](#) - 27 Nov 2026 or earlier

[UK Bioimaging Access Fund](#) - 30 Nov 2026

[Water4All 2026 call: sustainable water management](#) - 6 April 2027

[Circular Bio-Based Europe Joint Undertaking](#) - 22 Sept 2026 and after

[EPSRC Network Grant](#) - open

[NERC Pushing the frontiers of environmental research](#) - open

Exchange & Travel

NEW [JSPS Summer Program 2027](#) - 19 Oct 2026

[BBSRC International Travel Award Scheme for the Biological Sciences](#) - 20 Oct 2026

[Processes ECR Travel award](#) - 31 Oct 2026

[Environments ECR Travel award](#) - 31 Dec 2026

[ChemEngineering ECR Travel award](#) - 31 Jan 2027

[UKRI Collaborate with researchers in Brazil](#) - open

[EPSRC overseas travel grant](#) - open

[EPSRC working with overseas scientists](#): Luxembourg, Brazil, Germany, US - open

Awards

NEW [Processes Young Investigator Award](#) - 31 Dec 2026

Jobs and training

Jobs

[Water Treatment Process Scientist](#) - 11 Oct 2026, Severn Trent Water

[Environmental Education and Engagement specialist](#) - 11 Oct 2026, Bangor University

[Research & Innovation Associate: Smart Stormwater Systems](#) - 23 Oct 2026, University of Hull

PhDs

[Tackling Membrane Biofouling](#) - 10 Oct 2026, University of Edinburgh

[Mathematical Biology and Population Dynamics](#) - 24 Oct 2026, University of Birmingham

Training

[Wastewater Treatment](#) - 25 Nov 2026, Aquaenviro online

[Optimising AS Plants](#) - 1 Dec 2026, Aquaenviro online

[Optimising Anaerobic Digesters - sewage sludge](#) - 3 Dec 2026, Aquaenviro online

[Optimising Industrial Effluent Treatment Plants](#) - 21 Jan 2027, Aquaenviro online

[Bioprocessing Entrepreneurship Scale-up Technologies \(BEST\) Challenge](#) - 2-6 Nov 2026, Durham

[BioProcess 360: Integrated Upstream and Downstream Bioprocessing](#) - 9-13 Nov 2026, Edinburgh

See also [BB-REG-Net](#), [CIWEM](#), [CIWM](#) and [CL:AIRE](#) for online training and eLearning opportunities

Publications

[Abstraction method shapes microbial ecology and pathogen risk in water from shallow aquifers.](#)

Duncan, R., Ijaz, U.Z., Cholet, F., Keating, C., Koci, O., Quinn, R., Russell, J., Hassard, F., Parker, A. and Smith, C.J., 2026. Total Environment Microbiology, p.100074. <https://doi.org/10.1016/j.temcr.2026.100074>

[Famine-end settling enables granulation without loss of PHA enrichment in integrated nutrient-decoupled PHA production.](#) Heo, S., Liu, Y.Q. and Webb, J., 2026. Chemical Engineering Journal, p.180045. <https://doi.org/10.1016/j.cej.2026.180045>

[Animal degradation of microbial storage polyhydroxyalkanoates.](#) Zeidler, C., Gruber-Vodicka,

H.R., Michellod, D., D'Angelo, G., Becker, S., Berndt, H., Wippler, J., Violette, M., Kleiner, M., Porta-Fidalgo, A. and Janke, R.S., 2026. Nature Ecology & Evolution, pp.1-15. <https://doi.org/10.1038/s41559-026-03153-8>

Still here?



EBNet's remit specifies microbially-mediated processes, but since PHA appears as a topic above, we will stretch to higher organisms here. The great thing about PHA as a storage product is its circularity: it can be both made and degraded by microbes. Until recently, however, only bacteria and fungi were known to do this.

Now researchers in Germany and the US have shown that the necessary polyhydroxyalkanoate depolymerase enzymes (PHADs) can be found in protists and even gut-bearing animals. The work reports on a marine worm, the gutless oligochaete *Olavius algarvensis*, that depends on symbiotic bacteria living beneath its skin. These bacteria store large amounts of carbon in the form of PHA, which it digests as a source of nutrition. Our compliments to Zeidler et al., 2026 (above) on a nice illustration of interdependencies in the web of life, which can be harnessed for environmental protection and human benefit.

See EBNet's [News](#) pages for more on Events, Funding and Publications - or use the tags to follow [Working Groups](#) and other topics.

And where else to look?

There is a growing range of UK Networks and Hubs relevant to Environmental Biotechnology. The six UKRI Engineering Biology Mission Hubs include the Environmental Biotechnology Innovation Centre ([EBIC](#)), which builds on and expands some of EBNet's themes. Two other Mission Hubs, [Elemental](#) and [P3EB](#), also have an environmental biotech focus. The Better Water for All Network+ ([BW4All](#)) is another direct successor to EBNet. EBNet members are active in the Global Center for Sustainable bioproducts ([GCSB](#)) and [C-Loop](#) Hub, while [NBIC](#) continues to support research, knowledge exchange and development in biofilms.





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