

# Engaging Environments

## Final Report – Project Summaries, Outcomes & Legacy



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# Introduction to Engaging Environments: creating conditions for change

**Engaging Environments (EE)** was a five-year public engagement project funded by the **Natural Environment Research Council (NERC)**, led by Director, Professor Hilary Geoghegan (University of Reading) and Interim Director, Dr Erinma Ochu (University of the West of England Bristol), in collaboration with: Joyce Ternenge and Matt Burrows from University of Reading; Dr Cindy Bronn, Tekiu Ltd; Anita Shervington from BLAST; Dr Cecilia Medupin from University of Manchester; Sarah Staunton-Lamb, Katherine McGavin, and Katrin Nolland from Earthwatch Europe; Dr Furaha Asani, Jo Lansdowne, and Zoe Rasbash from Pervasive Media Studios; Dr Jane Delany, Dr Heather Sugden, and Dr Danielle Robinson from Newcastle University; and Professor Muki Haklay and Dr Nadia Dewhurst-Richman from UCL (see **Biographies**).

In response to the climate emergency and the intersectional challenges of environmental and social justice, EE sought to build the capacity of environmental scientists and diverse communities to work towards equitable partnerships that help reduce the impact of the climate and biodiversity crisis on the most affected people and places.

The climate crisis is inextricably linked to histories and legacies of colonialism, capitalism, industrialisation, patriarchy, and systemic forms of oppression. NERC has previously commissioned funding through its cross-council 'Hidden Histories of Environmental Science' programme to investigate these connections, with particular focus on colonialism and the decolonisation of knowledge.

Though we all have a meaningful stake in trying to tackle global issues such as the climate crisis, many feel powerless to act, excluded from any form of decision-making, and unable to navigate the many barriers to engaging with research and policy. For the EE project team and community partners, public engagement with environmental science had to be boldly reimagined as a collective practice and joint endeavour. The project surfaced a desire to challenge the status quo of top-down approaches to environmental science and research, and the legacies of these histories – we need to create the conditions which make equitable partnerships the norm, improve funding structures, deliver culturally relevant and responsive public engagement and research, and bridge the equity gap across research and higher education.

The project was funded by NERC between 2019 and 2024 (NE/S017437/1), as part of its national programme for public engagement, following an initial consortia-building phase (NE/R012067/1). EE linked to NERC's strategic aims and

objectives across many areas, including building the capacity of the next generation of researchers to engage, promoting engaged research, convening public debate about contemporary issues in environmental science, inspiring public audiences with environmental science, listening to the public through public dialogue to inform NERC, and beyond that, developing community capacity to complement NERC's work.

In terms of its structure, EE was often described by its Independent Evaluator, Dr Cindy Bronn of Tekiu Ltd, as a 'Project of Projects'. EE developed partnerships across Higher Education Institutions (HEIs), diverse communities, cultural partners, an SME (Small and Medium-sized Enterprise), and critical friends. The project co-ordinated activities and allocated funding to the various project communities around the country for distinct programmes of work in various regional settings. Projects focused on listening, learning, and developing common principles, values, and practices of co-creation and co-inquiry, equitable partnerships, capacity-building, and community engagement (see [project diagram](#)). The partnership also offered mutual learning and knowledge exchange opportunities between local project communities to help shape practice around the country.

Through these various activities, EE sought to investigate inclusive research practices, addressing inherent power dynamics, the creation of safe and inclusive spaces,

accountability processes, and the identification and break down of barriers to public engagement with environmental science.

Given the scale and ambition of EE, set against the backdrop of the COVID-19 pandemic, it is acknowledged that not everything was successful. There is value, though, in [learning from failure](#) and, when supported by developmental and principles-focused evaluation, as was invested in by EE, this is an important step in making improvements and innovation.

Though [not a general consensus](#), it has been suggested both internally within the project and externally via other sources that COVID-19 could be viewed as a '[dress rehearsal](#)' for [climate change](#) – global impacts [disproportionately affecting already disadvantaged demographics](#), [mass-scale economic disruption](#), [corruption](#), [widespread mis- and dis-information](#), and [distrust towards the scientific community](#), to name a few commonalities. The pandemic also had a major impact on the delivery of planned activities within the project, where face-to-face meetings and events were not possible initially, whilst also surfacing inequities within the delivery team and the partnership, as it did within wider society.

Through this phase, there were also changes in project governance and leadership, with interim direction from Dr Erinma Ochu (maternity cover), who appointed an experienced Scientific Advisory Collective (SAC) to ensure EE's leadership was more representative of the communities it sought to benefit

and to guide EE's project team and partners as it responded to the pandemic. An independent review, taking the form of a Gap Analysis by EE's Independent Evaluator, was commissioned with the support of NERC and the SAC.

The review identified the current state versus the desired state of the project in the aftermath of the COVID-19 pandemic and the steps required to close this gap. These insights, drawn from those delivering EE activities, led to a re-orientation and re-prioritisation of EE towards equity for the most affected researchers and communities, in the context of the climate emergency and systemic injustice. In doing so, EE adopted a transdisciplinary approach aimed at building capacity to enable and better support most affected communities to co-create in equitable ways and from a position of power within the NERC research community and beyond.

At this time, NERC also created the [Future Leaders Council](#), a new governance structure, to support NERC to become more representative of the communities it serves. This emerged from [NERC's diversity and inclusion living action plan](#), which EE partners contributed to. Further, this community capacity-building approach is now the direction of travel for [UKRI's public engagement team](#). This followed EE's Interim Director, Dr Erinma Ochu, co-chairing a citizen science call, introducing key changes to the panel make-up, to ensure it was more representative of the projects being judged, including disability

studies expertise, cultural sector expertise, and community-based organisations and practitioners that have pioneered community-led research. Panel recommendations from this call [informed future investments](#), led to a report on [equitable Research and Innovation futures](#), and the launch of the UKRI PE team and The Young Foundation's [Community Research Networks](#) call.

In addition to reallocation of budgets to reflect this re-orientation, EE also secured funding from UKRI's COVID-19 Grant Extension Allocation to enable the online delivery of Earthwatch's Science Camps for Early Career Researchers (ECRs), anti-racism sessions, and social therapy to support ECRs, delivered by [Naomi Mwasambili of Chanua Health](#).

As [indicated through prior community-engaged research projects](#), many systems and processes in which projects like EE operate are currently prohibitive to engagement and research of this nature. However, by continuously learning from the challenges faced, attempting to address systemic issues, and sharing this learning with NERC, EE was able to deliver valuable outputs and outcomes that can inform ongoing learning, development, and investment opportunities.

We summarise this work in this final report and detail [recommendations towards equitable partnership](#), such that EE can make a long-term contribution to creating conditions for change.



Image credit: Li-An Lim

## How to use this report

This final report offers an overview of EE partnership activities and outcomes. It provides NERC, UKRI, and other funders, as well as HEIs, researchers, SMEs, community organisers, and cultural organisations with evidence of the value of equitable research and engagement. These examples can be used to raise the profile and recognise the importance of culturally relevant community engagement, co-inquiry in environmental science, inclusive research practice, capacity-building for ECRs and for community and cultural partners, community-building towards equality, diversity, inclusivity, and accessibility (EDIA), dedicated developmental, principles-focused evaluation, and project coordination orientated towards equitable partnerships.

### We offer evidence and examples of:

- Lessons to bridge principles, practice, and policy
- Stories and experiences of communities and researchers through testimonials and embedded films
- Links to the future work and embedded principles of partners, critical friends, ECRs and NERC teams
- Tools and resources to be shared and widely used
- Recommendations for public engagement

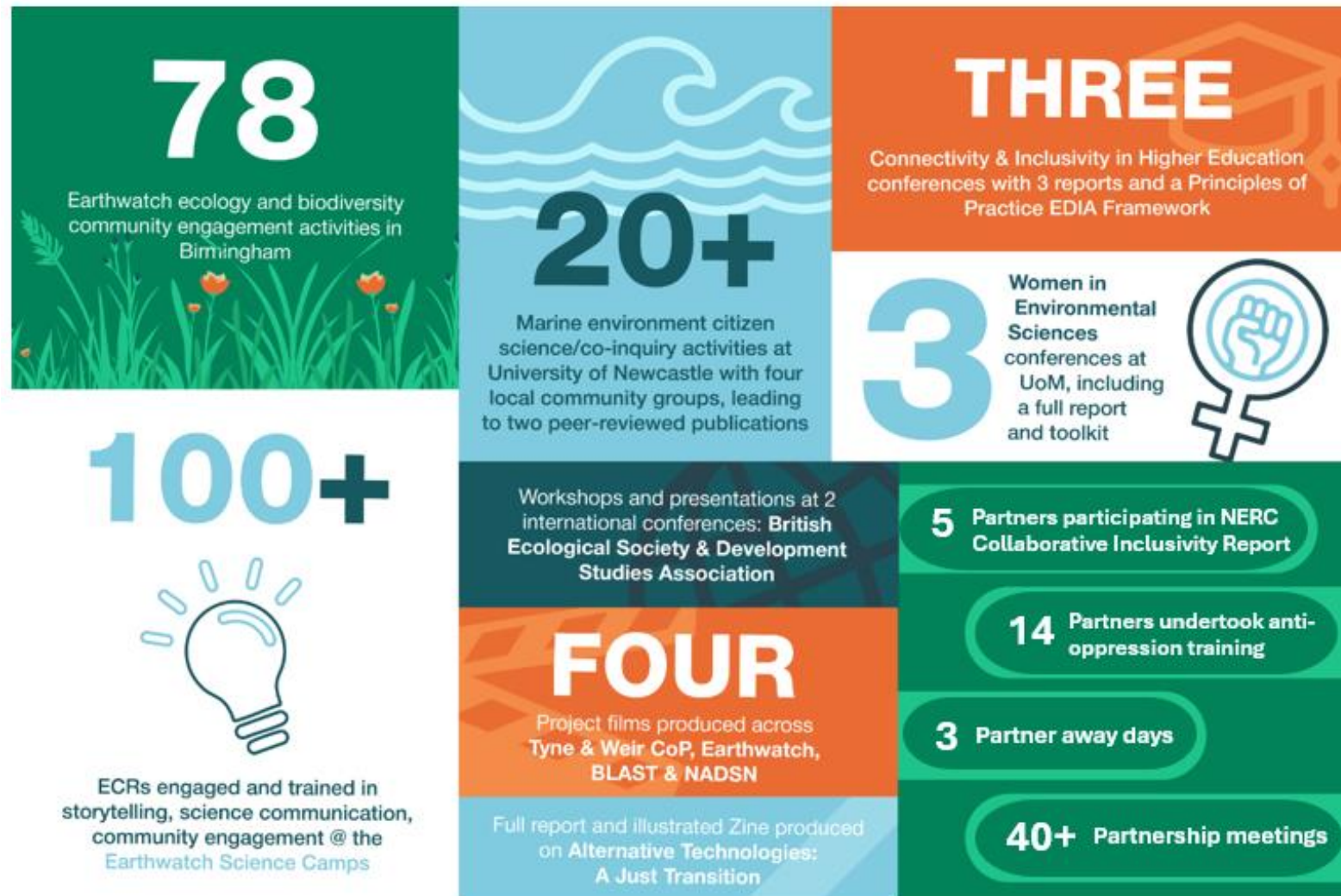
## Project diagram



This diagram visualises how activities and projects connected to EE themes to create the conditions for change.



## EE infographic





## Recommendations and conditions for change

Our recommendations and conditions for fair and equitable collaborations emerging from our key themes and evaluation:

- **Capacity-building for early-career environmental scientists**

It is crucial for early-career environmental scientists, and ECRs more broadly, to be equipped with the appropriate skills for community engagement, building equitable partnerships, and science communication. Training at an early stage can enhance research impact and safeguard against extraction and tokenism.

- **Capacity-building with communities towards equitable partnership**

There needs to be an increased focus on developing a community-based infrastructure to enable engagement on a more even footing, and the capacity to create the conditions for equitable co-creation, partnering with universities and funders from a position of power. This requires adequate investment in, and support of, community and cultural organisations to develop their own culturally relevant proposals and topics for inquiry.

- **Culturally relevant community engagement**

Community-led research should serve to support sustainable, equitable community development and be responsive to culture and heritage, adopting the spirit of ‘nothing about us, without us’, which heralds from the disability justice movement.

- **Co-inquiry in environmental science**

Global issues such as climate change require sharing of power and resource across many different knowledge systems to co-produce effective, interdisciplinary, culturally relevant solutions. By investing in the infrastructure to build communities into research from the outset and recognising the value of knowledge from outside the small sphere of academia, issues can be addressed in a holistic way.

- **Community-building towards equality, diversity, inclusivity, and accessibility (EDIA)**

As highlighted earlier, environmental and social injustices are directly connected to and impacted by systemic forms of oppression. This needs to be acknowledged, in the first instance, and subsequently addressed to make environmental science, research and innovation accessible, equitable, and participatory, so that it is more representative of society and societal need.

- **Developmental, principles-focused, and formative evaluation**

Independent evaluation of research through developmental evaluation promotes ongoing project development and innovation through continuous documentation of decision-making processes and iterative reflection and learning in the face of complexity and uncertainty. Formative evaluation enables adaptability and knowledge exchange through the objective assessment of the project processes, structures, effectiveness, and impact. This approach provides an opportunity to strengthen and build confidence in decision-making by the delivery team.

- **Project coordination towards equitable partnerships**

The connective infrastructure within a project such as this, with multiple partners across sectors, is absolutely essential to its delivery. Overall project governance, project management, plus financial, procurement, administrative and communications support, should be in-built to help navigate barriers and safeguard against change or absence within delivery teams.

## **The conditions for fair and equitable collaborations between HEIs, community-based organisations, and SMEs:**

- Fair and equitable funding
- Streamlined administration and governance
- Inclusive research practices
- Addressing power dynamics
- Public accountability and transparency
- Meaningful community involvement
- Working with minoritised and vulnerable groups
- Ensuring sustainable impact and legacy
- Recognising all contributions
- Building an inclusive and respectful culture

See [the Evaluation section](#) for detailed descriptions.

See also our [Parting reflections: Towards a fairer and more just research ecosystem](#).

# **Project summaries and outcomes**

## Capacity-building for early-career environmental scientists

### Earthwatch Science Camps for ECRs

**Co-Investigators:** Sarah Staunton-Lamb, Learning, Communities & EDI Lead, Earthwatch Europe; Katherine McGavin, (formerly) Learning and Engagement Manager, Earthwatch Europe; Katrin Nolland, Programme Manager, Earthwatch Europe

**Earthwatch Europe, based in Oxford, UK, is an organisation which aims to achieve a world where we live in balance with nature, through engagement and connection which is powered by science. In partnership with EE, its main programme of work was to co-produce Science Camps for ECRs in environmental science, focusing on equipping them with skills in community engagement, citizen science, storytelling, and science communication.**

Through co-design and collaboration with partners from across EE, an immersive learning experience was developed around principles and practices which could be incorporated into future work by ECRs. Additionally, peer-to-peer learning opportunities were built-in with a chance to develop networks, capacity, and collaborations.



Image credit: Yoke Creative

EE Co-Investigators, Dr Erinma Ochu, Dr Cecilia Medupin and Anita Shervington, as well as EE's Critical Friend Janice Ansine, have all delivered sessions at the Science Camps since their creation, and there have also been sessions hosted by science communication partners [The Conversation](#) and [Pint of Science](#) on ways to engage the media and the public with scientific research. One of the workshops delivered by Dr Ochu, focused on storytelling, was further developed for delivery at the [2023 British Ecological Society Conference](#) in Belfast, entitled, 'Storytelling for ecological justice across planetary boundaries', where over 45 ECRs from around the world were in attendance.

Participants were able to draw on the lived experiences of the facilitators and speakers and conversely shared their own lived experiences to bring more of themselves into their environmental science and research, with a view to harnessing community organising and storytelling approaches to be able to meaningfully engage and communicate their work.

To help enable this, the cohort is encouraged to adhere to the following core principles of engagement:

- **Authentic** – genuine, honest, and engaging
- **Practical** – real-world, useful, and applied
- **Accessible** – easy to understand, multiple entry-levels, jargon-free
- **Inclusive** – of values and welcoming diverse perspectives and experiences
- **Simple** – straightforward, take people step-by-step on a clear journey
- **Impactful** – have a powerful effect and influence which leads to behaviour change
- **Purposeful** – have clear goals and objectives, make a difference

Overall, these Science Camps have engaged over 100 ECRs across more than 40 HEIs, with the content of the Science Camps developing to reflect a greater interdisciplinarity of research interests. Earthwatch has developed its recruitment processes to diversify the intake of participants in terms of

ethnicity, nationality, and backgrounds. There have been major success stories from the Science Camp alumni, including [Dr Emmanuel Junior Zuza](#), who completed his PhD with The Open University and has subsequently taken up a lectureship with the Royal Agricultural University, now promoted to senior lecturer, as well as securing two years of funding to train researchers on how to work effectively with farmers. Emmanuel also teaches at the Science Camp and is co-authoring a book on Citizen Science for Biologists with EE collaborators Dr Erinma Ochu and Janice Ansine.



Image credit: Dr Holly Broadhurst

[Dr Holly Broadhurst](#) [pictured], who also completed a PhD with The University of Salford, has now moved into a role at the same institution as a Postdoctoral Research Fellow in Infectious Disease Ecology. Both Emmanuel and Holly successfully integrated community engagement within their research

practice in agroecology and [the use of environmental DNA \(eDNA\)](#) respectively.

Additionally, as the cohort of participants has grown, Earthwatch has taken care to maintain this network and build in knowledge sharing, capacity-building focused on training and leadership, and opportunities for support as alumni move through their careers. This is supported by a growing online community connected via LinkedIn and alumni returning to the Science Camps to share their leadership insights.



Watch [Engaging Environments: Creating Science Camps for early career researchers with Earthwatch](#)

**Tip:** Holding down CTRL while left clicking the video title will open it in a new tab!

The Science Camps also influenced [ongoing Science Camps](#) and organisational change internally at Earthwatch. Sarah Staunton-Lamb has transitioned from her role as Senior Community and Learning Manager to Learning, Communities and EDI Lead, which has enabled her to focus on recognising the importance of communities and diversity across all Earthwatch work, applying principles and practice from EE, whilst also developing a Community Charter with a focus on inclusivity and diversity.

### Relevant links and contacts

Podcast: [Climate Conversations on 'climate' justice' with Dr Emmanuel Zuza](#)

Paper: [Citizen Scientists' Motivation to Participate in Environmental DNA \(eDNA\) Surveys: A Case Study on Monitoring Mammals in the UK](#)

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## Capacity-building with communities towards equitable partnership

### #OpenLight

**Co-Investigator:** Dr Erinma Ochu (Manchester Metropolitan University (MMU))

*“There are many kinds of open... Love is a word, another kind of open... Take my word for jewel in you open light”*

[Coal](#), Audre Lorde

**#OpenLight** was founded by Dr Erinma Ochu, as an off shoot of EE, inspired by a line in the Audre Lorde poem, ‘Coal’, to provide a structure to support creative thinking and imagination in challenging times. #OpenLight is a climate and culture equity platform for Black and minoritised artists, academics and cultural entrepreneurs to research and exchange knowledge from inclusive research practice, as a world-making endeavour.

Partnering with Dr Cindy Bronn (Tekiu Ltd), EE’s Independent Evaluator, the aim was to support the development of equitable principles for undertaking inclusive research by creating the conditions for setting up a Community of Practice (CoP) which could share practice and generate a framework of principles through knowledge exchange. This was designed to build a legacy for minoritised researchers to consider how to navigate

working with research organisations and research funders and to be guided by those principles.

*How can we disrupt, open up, and repurpose emerging technologies and storytelling for world-making purposes?*

*What different trajectories for research can be imagined when culture and equity is a starting point?*

To explore these opportunity spaces further, #OpenLight connected and considered this in constellation with the creative and inclusive research practices of seven Black and minoritised artists and entrepreneurs who are working towards establishing different futures, through independent practitioner research. The artists and entrepreneurs were Dr Addy Adelaine (CEO, [Ladders4Action](#)), Maya Chowdhry ([Artist](#)), Nwando Ezibie ([Studio Nwando](#)), Dr Ying Lia Li (CEO, [Zero Point Motion](#)), Naomi Mwasambili (CEO, Livy Africa – ‘[Tanzania’s Cocoa Story](#)’ and ‘[Launching Tanzania’s first Cocoa Bar](#)’), Anita Shervington (Director, [BLASTFest](#)), and Keisha Thompson (CEO, [Contact Theatre](#)).

Three student research internships were also hosted – two at MMU and one at Sheffield University, where three students were supported by [RISE/ASPIRE](#), and four academic researchers were supported to develop their digital sustainability work further. A further collaboration resulting from this is the Emerald Press book series, ‘[Digital Materialities and Sustainable Futures](#)’, with Dr Adi Kuntsman (MMU), and Dr Liu Xin (Turku Institute for

Advanced Studies and Karlstad University) launched as an opportunity for ECRs.

Outputs included: tools, processes, strategies, and access requests which were developed to make research spaces, such as research meetings and funding panels, more equitable and inclusive. Peer review contributions were made to inform inclusive research policy and practice with funders, and to document the specific structural barriers that remain within funders and traditional research practice.

Within the principles of practice frameworks, researchers were able to find ways to use them to protect and guide their work, including realignment when writing a grant proposal, or as a way to communicate with potential partners to be clear on what they stand for, and what their values are. This has implications for both academic institutions and funders to consider alignment through values, and also to consider better resourcing of Black and minoritised researchers inside and outside of academia. Several participants have gone on to secure their own funding and training opportunities, linked to environmental justice.

This CoP was also supported by Dr Ochu's Wellcome grant, 'Stewarding the Digital Commons', and match-funded by [Wellcome's Research Enrichment – Diversity and Inclusion](#) scheme (UNS11764).



Watch [Livy Africa presents... Added Value: The Cocoa Story Tanzania](#)

## Relevant links and contacts

Paper: [Distorted constellations: interdisciplinary perspectives on understanding reality and the self](#)

Paper: [‘Scientific racism’ and structural inequalities: implications for researching black mental health](#)

Paper: [Pride in STEM worldwide](#)

Paper: [Digital storytelling: A relational pedagogic approach to rebuilding hybrid places for creativity, equity and community building in a crisis](#)

Email: [Erinma.Ochu@uwe.ac.uk](mailto:Erinma.Ochu@uwe.ac.uk) and [Cindy@tekiu.com](mailto:Cindy@tekiu.com)

Capacity-building with communities towards equitable partnership

## Alternative Technologies: A Just Transition, led by Watershed's Pervasive Media Studios, and commissioned by UWE Bristol

**Co-Investigators:** Dr Erinma Ochu, University of the West of England Bristol (UWE Bristol); Dr Furaha Asani, Pervasive Media Studios; Jo Lansdowne, Pervasive Media Studios; Zoe Rasbash, Pervasive Media Studios

*“How do you wayfind through a present that is so unequal, to a future that is so uncertain?”*

Jo Lansdowne, Executive Producer of Watershed's Pervasive Media Studio

Following a post-pandemic reallocation of budget, the reasons for which were documented in a change control document created by UoR, Dr Erinma Ochu, and Tekiu, and Dr Ochu's move to UWE Bristol, an enquiry was developed into [Alternative Technologies: A Just Transition](#), connecting EE with [UWE Bristol](#), [Digital Cultures Research Centre \(DCRC\)](#), and [Watershed's Pervasive Media Studios](#), all

located in Bristol, UK. The content for this summary originates from the report linked in this introduction.

The foregrounding of this project lies in the contextualising statement, “The climate crisis is a crisis of culture”. It is not an apolitical environmental phenomenon but the consequence of a society that values individualism and disconnection from each other and the earth itself. At the heart of the problem is a world where technological development is driven by wealth and power accumulation, synonymous with high tech products, and a field where only ‘experts’ can innovate.

This was a commissioned co-created enquiry which sought to use a community-based approach to integrate [previous work by Pervasive Media Studios](#) focusing on a creative just transition, into a new climate action wayfinding methodology. The approach brought together 15 Black and minoritised members of the Pervasive Media Studios community, and a delivery team made up of Watershed and UWE Bristol staff. As a collective, this group aimed to examine technologies and their past, present, and future role in climate justice (and breakdown) and explore what the alternatives could be through a process of carefully facilitated design thinking. The objective was to curate a group where a wide range of lived experiences, including those currently marginalised by the climate crisis, could be engaged. In doing so, the collective was further asking how the design of

the programme and space might model the difference we are trying to build together.

Initially, themes of interest were speculated on, including environmental racism, effects of the climate crisis on disability, inclusive accountability, non-human life and lifeforms (organic and non-organic), inanimate objects as stakeholders in this work, and digital harm.

The programme of work began with a series of three participatory workshops over a six-week period, with three weeks in between each workshop, bringing together activities to explore different elements of a just transition and technology in novel ways. This was supported by a two-pronged evaluation approach, gathering participant feedback via survey, and delivery team feedback via two guided reflection sessions.

- **Workshop One**

- Get to know each other
- Terms of engagement
- Exploring ‘what do we mean by technology?’
- Challenging the parameters that dictate how technology is defined
- Exploring how we understand concepts of ‘regenerative’ and ‘extractive’

- **Workshop Two**

- Exploration of place-based elements of this work via creative engagement of water, Bristol’s history, the harbourside
- Using hydrophones – sensory engagement with the world under the water in the harbour
- The ‘place-based’ nature of a transition through poetry

- **Workshop Three**

- Offering thanks and reflections
- Exploring just transition for us as a community of practice
- Creative explorations and sensemaking
- How do we use shared learnings so far to re-orient ourselves and work together?

Following these workshops and the evaluation processes, nine key emergent themes and accompanying findings believed to be relevant to equitable participatory research and responsible R&D were established. These themes were: roots, designing comfort, co-production, communication, intentionality and emergence, wellbeing, esteem and inspiration, legacy, and structure.

Additionally, a number of key recommendations for group-based work that seeks friendly and mutually respectful co-creation emerged, which are below:

- **‘Too many cooks’** – when attempting co-design, often many voices are invited into the delivery team - with no clear roles assigned - which can halt decisive action. Clear roles and responsibilities must be assigned and division between advisory groups can enable more agile delivery.
- **Invest in a good amount of time for a soft start and thorough introductions** in workshops – allocating time for people to settle into the space, at their own pace, whilst proper introductions can help to create a sense of esteem and grounding.
- **Honour local expertise** – centring an enquiry around unique local contexts, histories and relations, positions your cohort as experts.
- **Think about global connections** – consider how the immediate environment and context might link the local to the global, supporting you to think with planetarity.
- **Uncertainty on organisational positions will be reflected in uncertainty in facilitation** – it is important to name facts and be explicit in your stance around key topics. For example, ‘We accept the climate breakdown is inextricably linked with colonialism and empire, which cannot be

decoupled from the development of technology in the West’. If this isn’t explicit, creeping uncertainty can lead to harms when holding discussions around these topics.

- **A place-based thing as a conduit for conversation can be provocative, but also triggering** – consider how people with different lived experience might experience place differently, and appropriately mitigate risks.
- **Processes to call out white supremacy** – whiteness shows up in research and development spaces in suffocating ways often invisible to its perpetrators. An ongoing and deeper investigation into how whiteness shows up R&D in our specific context, alongside processes for addressing it and redressing harms caused, is needed to truly embed the learnings from this enquiry.
- **Food is everything** – intentionally inclusive and cosy catering brings people together and supports the collective in bonding over lunch periods.
- **From terms of reference to contracts of care** – to ensure people are upholding the shared values, regularly revisiting of terms of reference and how the collective can uphold them is needed. Further, access needs are not static.
- **Mitigate for power dynamics** – doing this kind of work diligently must include a deliberate plan for the creation of safety for both participants and delivery team members –

especially for those whose lived realities are closely connected to the content. Consider implementing buddy systems, quiet spaces, decompression spaces, and co-facilitation.

- **Return to the material** – a Just Transition can link personal, community, and planetary concerns, investing in ideas, skills and expertise to develop bioregional solidarity and resource chains. Consider how this can be done in practice, such as, a) expanding your creative ecosystem and sharing resource and knowledge to encourage symbiotic movement with this doing complimentary work locally, rather than working in competition, and b) exploring how you can materially support and build resilience in your specific context; for us, that means considering how best to support minoritised freelancers, SMEs, and their communities.
- **Beyond evaluation** – ask people if they want to be contacted to discuss feedback they provide, and if they're interested in future work, in evaluation surveys.

The full results of this enquiry are available in the report linked to below. An illustrated Zine of the enquiry was also produced, as well as a podcast with Dr Furaha Asani further explaining the enquiry in further detail.



Watch [Climate Action + Creative Tech: Finding Our Way With/in || Dr. Furaha Asani || Watershed](#)

## Relevant links and contacts

Full report: [Alternative Technologies: A Just Transition](#)

Zine: [Sights and Sounds of Alternative Technologies: A Just Transition](#)

Podcast: [Climate Action + Creative Tech: Finding Our Way With/in with Dr. Furaha Asani](#)

Enquiry homepage: [Alternative Technologies: A Just Transition](#)

Email: [erinma.ochu@uwe.ac.uk](mailto:erinma.ochu@uwe.ac.uk) and [furaha.a@watershed.co.uk](mailto:furaha.a@watershed.co.uk)



## Culturally relevant community engagement

### BLASTFest & Birago Day

**Co-Investigator:** Anita Shervington, BLAST

*“The traditional ‘top-down’ approach to community engagement, whereby institutions dictate to communities how an engagement is carried out, what challenges are being addressed, and potential ‘solutions’, perpetuates long-standing systemic issues.”*

Anita Shervington

**BLAST** is a community engagement platform and connective network which fuses Black Life, Arts, Science and Technology to create opportunities for Black and African Caribbean communities in the STEAM (Science, Technology, Engineering, Arts, Mathematics) ecosystem. As part of BLAST’s work with EE, Director and Founder, Anita Shervington, collaborated with Natty Mark Samuels, of [African School](#) in Oxford, to deliver one of a series of events for the inaugural Birago Day, celebrating African and Caribbean storytelling and folklore, and the life and work of Senegalese poet, diplomat, veterinarian and storyteller, Birago Diop.

This opportunity aligned with BLAST’s focus in its connection with the African diaspora, as well as key themes across EE and

NERC, such as storytelling in STEM, our natural environment, capacity-building, and inclusive engagement.

*Listen to Things*

*More often than Beings.*

*Hear the voice of fire,*

*Hear the voice of water.*

*Listen to the wind,*

*To the sighs of the bush;*

*This is the ancestors breathing.*

– From *Les Souffles* by Birago Diop

Working with its pre-existing partner, Think Tank Science Museum in Birmingham, UK, BLAST designed and delivered a promenade-style event with supportive funding from EE to illustrate culturally relevant and responsive community engagement related to key STEM themes. The programme included a ‘Moonlit Classroom’ talk from Natty Mark-Samuels, incorporating readings of traditional stories and poetry with audience participation, presentations from local Zoology students, musical performances, and discussion from singer and veterinarian Dr Niquet Goldson, a Capoeira display, and a panel discussion across key themes.



Image credits: Motion Blurr Studios

The delivery of this and BLAST’s other engagements over a period of more than 10 years are a lesson in the need to cultivate multidisciplinary, intergenerational, and regenerative opportunities, creating the conditions for Black and minoritised communities to utilise, and scrutinise, science, arts, and culture, for social change. It is also illustrative of the fact that, as Anita Shervington puts it:

“Black people [and Black communities] fund their own inclusion, often through ‘sweat equity’, due to the disparity in funding, resourcing, and infrastructure for communities, in comparison to the resources available to large institutions, organisations, and funders. Whilst this disparity remains, the status quo will not change, and community organisations will not be able to partner with universities or funders from a position of power or security.”



Watch [Engaging Environments: Celebrating Birago Day with BLAST Fest](#)

### Relevant links and contacts

EE Case Study: [BLAST, Birago Day & The Power of the Connective](#)

Email: [info@blastfest.org.uk](mailto:info@blastfest.org.uk)

## Co-inquiry in environmental science

# Marine co-inquiry with Tyne & Wear Communities

**Co-Investigators:** Dr Jane Delany, Newcastle University; Dr Heather Sugden, Newcastle University; Dr Danielle Robinson, University of Leeds (formerly at Newcastle University)



Image credit: Dr Danielle Robinson

**This project connected marine scientists from the [Dove Marine Laboratory at Newcastle University](#) with diverse coastal communities (herein co-researchers) in North East England. Together they co-created environmental research projects that addressed local concerns with co-researchers involved in key decision-making processes throughout all the**

**research phases, developing equitable co-inquiry between communities and marine scientists.**

The community groups involved were: [Sangini](#), a Black and minorities-led art-based group committed to ending gender-based violence; [Hart Gables](#), which supports LGBTQ+ communities in the region; the [International Community Organisation of Sunderland](#) (ICOS), which exists to improve the quality of life for Black and minoritised people in the North East; and [North Tyneside YouthStrike4Climate](#), an activist group for young people aged 10 and above that are engaged in the climate emergency.

Each project followed a four-phase approach consisting of multiple, iterative phases of 1) relationship building, education, and awareness; 2) co-design; 3) co-production; and 4) action, with evaluation embedded throughout the co-creation process. Projects lasted between 10 and 12 months and were tailored to each community group, designed to be responsive to the specific queries, concerns, and aspirations that arose through the early stages of co-design, whilst also recognising the value of different knowledge systems, incorporating different perspectives, and addressing power imbalances.





Image credits: Dr Danielle Robinson

Sangini co-created an art-science collaborative - guided by Bangladeshi artists, co-researchers created artwork from recycled materials to express their concerns around issues such as plastic pollution and climate change. Hart Gables co-designed a series of thematic workshops combining environmental awareness and practical activities to improve community awareness of local environmental issues and break down barriers to community engagement with scientific research. Youth Strike for Climate co-designed a project to record local rocky shore species, developing scientific research skills and capacity for data collection, while raising awareness of local biodiversity. Finally, ICOS co-designed a project to address plastic pollution on local beaches, integrating data on marine litter (collected as part of the project) and local knowledge for a more holistic understanding of plastic pollution at a local scale.

Throughout the research and evaluation processes, both academic and community researchers reflected on their experiences in the projects, including successes and challenges, with three key guiding principles emerging as important underpinnings for equitable co-creation. These principles were: 1) valuing the entire co-creation process; 2) identifying conditions needed for inclusive co-creation; and 3) participatory evaluation. Some of the recommended practices to address these principles are also outlined below:

- **Value people, not ‘checkboxes’** – inclusive engagement is about valuing community practices, diversity, and people as individuals. Checkbox-style documentation manifests in a limited understanding of beliefs, inequalities, and barriers to participation – missing the point of deeply understanding differences for impactful collaboration.
- **Understand what a ‘safe space’ means** – for some, physical spaces are important. For others, it is not always physical but a feeling. Safe spaces can be co-created and co-experienced, developed from ongoing and evolving relationships.
- **Evaluation as an integrated research activity** – embedding co-evaluation throughout the research process can help ensure that reflection and action become an iterative process that translates into evidence-based change and continuous improvements to project design, development, and delivery.

Evaluation processes also captured the broader outcomes and impact associated with engagement in each of the co-creation projects with highlights below:

- **Transformative experiences** – co-researchers reported an increase in pro-environmental behaviours and community empowerment following participation. There were also documented shifts in perceptions of science, with co-

researchers reporting they are now confident in their ability to meaningfully contribute to research.

- **Connection to the wider community** – co-researchers described the way in which project activities had helped increase community visibility and break down wider perceptions surrounding the community while also fostering a new sense of belonging.
- **Legacy** – Sangini developed a further partnership with [The Angelou Centre](#), whereby they were able to pass on knowledge and skills around engaging with environmental challenges. Work from the project was also recognised by the European Citizen Science Empowerment Inclusiveness and Equity ('EIE') group.



Watch [Engaging Environments: Co-Creation with Tyne & Wear Communities](#)

## Relevant links and contacts

Paper: [Beyond Science: Exploring the Value of Co-created Citizen Science for Diverse Community Groups](#)

Paper: [What Makes an Engaging Environment? Lessons Learnt From Co-Created Research With Diverse Community groups](#)

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## Co-inquiry in environmental science

# Naturehood: community engagement with Birmingham communities

**Co-Investigators:** Sarah Staunton-Lamb, Earthwatch Europe; Dr Carl Stevenson, University of Birmingham; Saidul Haque Saeed, Citizens UK; Dr Derren Cresswell, University of Birmingham; Dr Rob Tilling, Fruit & Nut Village/Earthwatch Europe

**From 2019 to 2022, as a part of Earthwatch's work within EE, it partnered with researchers from University of Birmingham, Citizens UK, and community organisers in the city to explore the crucial relationship between communities and their local green spaces.**

This part of the project connects to Earthwatch's Naturehood programme, which empowers local people to take positive action to support wildlife in their immediate surroundings. The project emphasises the interdependent relationship between human well-being and biodiversity, raising important questions about equitable access to nature, particularly in urban areas.

As part of the initiative, Earthwatch organised 78 ecology and biodiversity community engagement events across Birmingham's green spaces. These events utilised practical activities, outreach, and co-design methods to engage

community members and foster a deeper connection to their environment.

The project also incorporated a commissioned documentary which can be viewed below. Through personal stories, the film highlights the experiences of individuals who connect with and benefit from the green spaces in their city, particularly following the COVID-19 pandemic.



Watch [Engaging Environments: Shared Spaces Documentary](#)

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## Co-inquiry in environmental science

# UCL & SciStarter: guidance for developing online citizen science platforms

**Co-Investigators:** Professor Muki Haklay, UCL; Dr Nadia Dewhurst-Richman, UCL

**As part of its involvement in EE, UCL was tasked with the creation of a matchmaking platform to help the UK volunteer community find and engage with UK-based environmental science projects. The platform was to be created and embedded with the [US SciStarter platform](#) as a microsite. SciStarter was selected as a candidate to test the creation of a UK platform with similar functionality as it already hosts a large number of microsites for other organisations and countries and is a very popular platform in the US with over 100,000 registered users.**

Between April 2021 and May 2023, creation and user-testing of the UK SciStarter microsite was carried out. In order to design this, interviews were carried out with 9 individuals from an environmental citizen science target audience. These were comprised of closed and open-ended questions which aimed to collect data to help inform the design and functionality of the

microsite. Data was collected and a first draft created, and then this process was repeated with interviews and testing amongst larger groups.

Both user-testing phases revealed constraints in the degree to which the SciStarter platform could be customised for a UK audience, constraints which created usability issues resulting in significant negative user experiences. As such, an official launch of the platform was not possible due to limited funding restricting further development. However, the microsite creation and testing phases generated valuable data which could help (UKRI and/or NERC) inform future design efforts of a UK environmental citizen science hub. These findings are shared below:

- **User-tester characteristics** of age, qualifications/academic background, and professional industry emphasised the importance of the platform feeling like it was designed ‘for them’, with over 70% of users citing content relevance and lack of targeted language as a barrier. This can be remedied with inclusive, jargon-free language, a broad range of imagery (showing a range of different potential users of the platform), and a diversity of projects.
- Creating relevant content based on **user motivations** greatly enhances user engagement. An overlap in user data was seen in the stated motivation of wanting to engage in similar science, as opposed to similar patterns across those with

similar characteristics. Some key user motivations included: finding projects with research impact, learning about policy impact of citizen science, finding local face-to-face (F2F) projects to meet like-minded people, finding curriculum relevant projects for school children, preserving nature.

- **Search criteria** need to be relevant to the interests of the users. Testers preferences on search criteria were very specific to their motivations for wanting to engage with a project. Key criteria included: being able to search by specific locations, identifying family-friendly activities and further specify whether any training is required to engage, online vs F2F projects and further specification around timings of activities (whether they are scheduled at a regular time or can be carried out in the users' own time), how users' data and contributions would be used.
- **Language** is a critical factor affecting the engagement of platform visitors and is a significant factor driving the negative experiences of user-testers. Particularly across science and academia, language can be an alienating factor for public engagement in key issues. When targeting the public through citizen science initiatives, these should be as jargon-free as possible and if technical language is required, a glossary of key terms should be freely and clearly available on the platform.

- Some of the open-ended interview questions indicated a possible relationship between user motivation, user characteristics and the **functionality** expectations of the platform. For example, testers seeking family-friendly projects showed less interest in training material but were keen to access resources such as nature ID guides, step-by-step family-friendly activities to carry out in local parks/garden, curriculum-relevant activities which support school learning. Several testers suggested they'd like to see reviews of course/content to help them select between overlapping content. Over 80% of user-testers interested in family-friendly events mentioned a desire for a central events hub, where they could learn about all local nature engagement opportunities at National Trust sites, Wildlife Trust reserves, and Forestry England sites.

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Community-building towards equality, diversity, inclusivity, and accessibility

## Women in Environmental Sciences (WiES)

**Co-Investigator:** Dr Cecilia Medupin, University of Manchester

*“The more women we have playing their roles in shaping policy through science and engineering, the more policies will reflect the true diversity of society”*

Professor Alice Larkin, Climate Science & Energy Policy Specialist, UoM, Speaker at WiES conference

**WiES is an inclusive interdisciplinary network for women working in ecology and environmental sciences, established at the University of Manchester, UK, by EE Co-Investigator Dr Cecilia Medupin. The purpose of the network was to address the crucial role that women have to play in the climate emergency and sustainable global development, linked to the [UN Sustainable Development Goals](#).**

Women have essential roles in the necessary transformation to the ways that we live and work if human beings are to survive the climate emergency and, ultimately, thrive through and beyond this crisis. There has been progress in women’s empowerment in politics and education, but in the STEM sector, more systemic

change is required to break down barriers to women’s participation.

Through a series of events across 2018 and 2019, over 190 participants from more than 34 organisations and institutions were engaged. The events comprised keynote speeches, presentations, networking opportunities, knowledge exchange sessions and evaluation, all designed to create open discussions on complex issues in safe spaces. Key themes across the events included agriculture, education, energy, health, leadership and gender equality, policy, sustainable cities, and water and sanitation.

The events and their outcomes were supported by independent evaluation conducted by Dr Cindy Bronn from Tekiu Ltd. As with any successful project, this was a key aspect of the WiES events, providing information to participants at each event, capturing their responses, and documenting the event processes. Lessons learnt from 2018 were implemented in 2019.

A number of key recommendations arose from these events which can provide crucial guidance on improving women's engagement and representation within the context of the climate emergency, environmental sciences, and the STEM sector:

- **More open and safe avenues** are needed for women to come together and build networks whilst being inspired by common issues.
- **Quality engagement** takes time to design, build, establish and evaluate. The same goes for forming project teams and capacity-building – this should be built-in from the outset.
- **Topics selected for discussions** on the environment can be used as a means to create opportunities for communal identity, engagement, tolerance, collectiveness, and providing self-help solutions to everyday problems.
- Women should **be empowered to support other women**, rather than be in competition, and speak up when needed to create organisational change.



Watch [Women in Environmental Sciences Conference 2019](#)

## Relevant links and contacts

Report: [Women in Environmental Science \(WiES\) - How women can and must be engaged in the fight against climate change](#)

Toolkit: [The WiES Toolkit](#)

Recordings and additional resources from the events: [Welcome to the WiES Network](#)

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Community-building towards equality, diversity, inclusivity, and accessibility

## Connectivity & Inclusivity in Higher Education – a solutions-based approach

**Co-Investigator:** Dr Cecilia Medupin (University of Manchester (UoM))

*“Social innovators often find themselves, ‘making the path by walking it’, pioneering and innovating social change, working with high levels of complexity, uncertainty, and limited information.”*

Dr Cindy Bronn, Tekiu Ltd, Pilot Evaluator

**Building on her development of the WiES network, Dr Cecilia Medupin launched a pilot study with EE focusing on Connectivity & Inclusivity in Higher Education – a solutions-based approach from environmental sustainability. The study was designed to pilot the practice of illustrating and operationalising the need for connectivity and inclusivity in human interactions, particularly in HEIs, which is essential for sustainable and equitable growth and development.**

We can learn from connectivity within nature’s ecosystem to recognise interdependence with nature and other humans. This

helps us to understand how to connect with one another in contemporary times when we have silos and fragmentation brought about by social, technological, developmental, ecological, and economic boundaries and hierarchies. To investigate potential solutions to ongoing fragmentation and siloed thinking, Dr Medupin developed this three-part study, linking healthy institutional policies and practices, ensuring no one is left behind, creating shared responsibility, and implementing coordinated action based on the principles of ‘what makes an engaging environment’ to create welcoming, genuine, open discussions on complex issues in safe and engaging spaces.

Through a range of workshops, knowledge exchange sessions, speeches, presentations, and participatory feedback, key learning outcomes were generated by members of the UoM community including senior leadership, staff, researchers, and representatives from professional and voluntary organisations. Overall, over 200 participants from more than 20 organisations were registered across the three-part study.

Support was provided by Dr Cindy Bronn (Tekiu Ltd) from the perspective of Principles-Focused Evaluation (PFE), which led to the development of an EDIA Principles of Practice framework, focusing on organisational inclusivity, EDIA strategy, inclusive culture, leadership, and accessibility in practice (see framework on pages 47-50 in the [Connectivity & Inclusivity report](#)).





Watch [Introduction to the 2023 Connectivity and Inclusivity in Higher Education](#)



Watch [Panellist Session](#)



Watch [Keynote 2023 - To be an agent of change, understand your environment](#)



Watch [Synopsis and Conclusion](#)

In addition to the resources linked here, a number of high-level recommendations were generated relating to leadership, teaching, research, and operations:

- Create a **welcoming and inclusive atmosphere** where members of the community can be open, share, and connect.
- Promote **open-mindedness** and learning beyond the academic curriculum.
- Advocate for a **range of perspectives** to be heard.
- **Turn principles into practice** (and policy) across teaching, research, learning, and operations.
- **Provide adequate training** around **Connectivity and Inclusivity** for those in managerial and/or leadership roles, as these skills are essential for effective leadership.

## Relevant links and contacts

Full report: [Connectivity & Inclusivity in Higher Education: A solutions' based approach from environmental sustainability](#)

Full report: [To be an Agent of Change, you need to understand your environment](#)

Paper: [Creating an Innovative Approach to Engagement, Connectivity, and Problem-Solving in Higher Education Institutions Using LEGO® Serious Play®](#)

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## Project coordination

# Project coordination: towards equitable partnerships, knowledge exchange, shared learning, and development

**Project Team:** Professor Hilary Geoghegan, University of Reading; Joyce Ternenge, University of Reading; Matt Burrows, University of Reading; Dr Erinma Ochu, UWE Bristol (formerly University of Reading); Dr Cindy Bronn, Tekiu Ltd

**As the ‘host’ institution for EE, the University of Reading (UoR) held responsibilities related to the development and oversight of the project’s infrastructure, via a core project team consisting of the Director (PI), Professor Hilary Geoghegan, the Interim Director, Dr Erinma Ochu, the Project Manager, Joyce Ternenge, and the Policy & Communications Manager, Matt Burrows, with continuous evaluation and partnership support from Dr Cindy Bronn. The team was also supported by various UoR professional service departments.**

The main functions of the team included the co-ordination and allocation of funding across the various strands of the project. It consisted of grant administration, project management, contracting of partners and critical friends, the Scientific

Advisory Collective (SAC), risk assessment, monitoring, reporting, communications, hosting national ‘Project of Projects’ meetings, and procurement.

Joyce Ternenge led Project Management. This consisted of the management of all the above responsibilities related to funding. Additionally, the Project Manager held the space between the project partners, the UoR, and NERC, enabling all activities shared in this report, mitigating risk, sharing challenges, and finding ways forward for the partnership. Matt Burrows led on Policy and Communications across the project, having been recruited post-pandemic. Matt facilitated and supported the delivery of project outputs such as films, case studies, reports, and learning blogs from partners, and co-produced the EE visual identity, project voice and website. He also helped to guide other legacy activities related to University and Funder policies.

In addition to the team at UoR, the project was further supported by Critical Friends: Janice Ansine from the [Open University](#), Rick Hall and Megan Shore from [Ignite! Futures](#) based in Nottingham, and latterly Professor Yota Dimitriadi on behalf of the National Association of Disabled Staff Networks ([NADSN](#)). This collective supported many project-wide activities by offering a critical lens and guidance throughout. The SAC was also established to offer guidance, particularly through and out of the pandemic, which consisted of Anita Shervington, Caroline

Ward, Corrina Urquhart, Shannon Dosemagen, Tori Tsui, Sally Lloyd-Evans, Nadine Andrews, Phil Newton, and Iain Stewart.

NADSN particularly offered support and guidance around public engagement and [community safeguarding post-COVID](#), as well as developing a film focusing on ‘Marginalisation in Science: Disability and Inclusion’, which can be viewed here:



**Watch [Marginalisation in Science: Disability and Inclusion](#)**

To support the aforementioned re-orientation and re-prioritisation of EE towards equity, a key recommendation of the Gap Analysis report was for the partnership to complete anti-oppression training. This was facilitated by the [Held Collective](#), who designed and delivered an in-depth six-month course, focusing on learning around Systems of Oppression, moving onto Liberatory Practices, and questioning what an Anti-

Oppressive Community of Practice within Engaging Environments would look like.

As part of the knowledge exchange activities related to the project, various co-investigators and friends of EE collaborated on the design and delivery of panel discussions and workshops at international conferences. The first of these was the 2023 [Developmental Studies Association conference](#) hosted at University of Reading, where a combined panel of EE Co-Investigators worked with the Participatory Action Research (PAR) Team at UoR, and NADSN, providing a platform to community researchers to share barriers to community engagement.

Later that year, a group convened by Dr Erinma Ochu attended the British Ecological Society conference in Belfast to deliver a workshop focused on ‘Storytelling for ecological justice across planetary boundaries’. The delivery team included Dr Ochu, Anita Shervington, Sarah Staunton-Lamb, Dr Holly Broadhurst and Dr Emmanuel Zuza Jr. The project also supported two Zoology students from Birmingham and a local Community Leader to attend the conference for networking and knowledge exchange purposes.

## **Relevant links and contacts**

EE website for stories and resources: [Engaging Environments](#)

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## Evaluation

# Developmental, principles-focused, and formative evaluation

**Team:** Dr Cindy Bronn, Tekiu Ltd

**Throughout the duration of EE, the overall project, its individual work packages, and the work of each partner was underpinned and supported by evaluation, delivered by its Independent Evaluator Dr Cindy Bronn of [Tekiu Ltd](#). Activities included mapping partner and project logic models, developing learning tools, conducting a Gap Analysis in response to the COVID-19 pandemic, and carrying out developmental, principles-focused, and formative evaluation across EE.**

The evaluation of EE focused on identifying effective strategies and lessons to be learnt more widely for publicly funded, collaborative projects, particularly under UKRI. The summary included here covers the conditions for fair and equitable collaborations between HEIs, community-based organisations, and SMEs. This draws on real-world lessons and experiences from the work undertaken in EE and practical strategies and knowledge from project partners, including community partners.

## Fair and equitable funding

Successful collaborations ensure the **fair allocation of resources** among all partners. In collaborative projects budgets are co-developed transparently, with community organisations and SMEs receiving adequate funding for their contributions (including coverage of their real costs and overheads). All partners – not just the lead university – should have a stake in financial decision-making at every stage of the project. Clear policies (e.g. memoranda of understanding) on budget distribution and prompt payment help build trust and ensure project continuity. While UKRI and NERC recognise the importance of paying public contributors for their time and expertise (at rates comparable to academic committee work) more needs to be done to recognise the value of community input and translate this into policy and customary practice.

## Streamlined administration and governance

Administrative burden can derail partnerships, especially for small organisations with limited capacity. Effective projects **establish unified governance structures** and supportive administrative processes. This includes using simple, joint agreements (for contracts, data sharing, IP, etc.) and clarifying roles and responsibilities upfront (often with tools like a RASCI matrix to designate who is Responsible, Accountable, Supporting, Consulted, and Informed for each task). By simplifying reporting requirements and providing administrative

support to community partners (e.g. help with grant paperwork), projects and avoid overwhelming non-institutional partners. All partners should be involved in governance (e.g. representation on project steering groups, recruitment of Advisory Board Members, etc.) to ensure transparency and shared accountability rather than a hierarchical, university-dominated management.

### **Inclusive research practices**

Collaborative projects must actively **avoid exploitative research** that extracts knowledge from communities and project partners, especially from minority backgrounds. Instead, they **embrace different ways of knowing and of knowledge creation**, co-production of knowledge, recognising and treating community partners as equal leads, contributors to research design, data collection, interpretation, and solution design and implementation. Good practice involves acknowledging the expertise in lived experience and local knowledge – and giving those forms of knowledge equal weight to academic knowledge. Researchers should approach communities with cultural humility and anti-oppressive practices, being mindful of power imbalances rooted in historical institutional oppression (racism, classism, etc.). This means research methods are adapted to be culturally appropriate and beneficial to the community, and partners have the right to set boundaries on how their knowledge is used (e.g. respecting that community knowledge is

*owned* by the community and always requires permission to share).

### **Addressing power dynamics**

Power imbalances between universities, funders, and community/SME partners are inherent in many projects – but they can be mitigated. Equitable collaborations intentionally **share power** in decision-making, agenda-setting, and leadership. For example, some consortia use co-leadership models (e.g. a community co-investigator alongside the academic PI) or provide the necessary support and safeguarding needed to rotate meeting chairs thereby giving all partners a voice. An ‘inception phase’ at the start of the project is essential to come together as partners and review the accepted project proposal. This enables checking deliverables against partners’ capacity to deliver and ensures the required capabilities are present from the start. Transparency is a key tool for levelling power: openly discussing budget decisions, project goals, and expectations helps prevent any one institution from dominating or burning out. It is also important to acknowledge and address power dynamics at the proposal stage – e.g. ensuring community partners are involved in defining research questions (not just brought in after funding is secured). When imbalances or conflicts emerge, successful teams create space for honest dialogue and adjust collaboration agreements and codes of conduct if needed. *Principles of equitable partnership*



developed through UKRI funded research stress mutual benefit, reciprocal learning, and **commitment to transparency and accountability** at multiple levels (institutional and individual).

### **Public accountability and transparency**

Because these projects use public funds, there is an onus to maintain **high accountability** to both funders and the public. Good practices include clear documentation of how funds are used (including how decisions are made and by whom), and **open communication** of project progress and outcomes (including a risk table). Many partnerships develop a shared code of conduct that commits to transparency in all aspects of project administration and budgeting. This includes publishing plain-language summaries or blogs so that community stakeholders can see how the project is evolving, how their community is represented and cited, and how community input is influencing outcomes. A commitment to accountability also means acknowledging systemic issues that affect the project – for instance, if certain efforts go unacknowledged or if certain voices are missing or if mistakes were made, these are not swept under the rug but discussed, resolved, and learnt from.

### **Meaningful community involvement**

Equitable projects relate to community partners not as tokens or ‘research subjects’, but as true partners. This involves **meaningful engagement** at all stages: from framing the research and co-designing research questions, to data analysis,

to co-authoring reports and presentations and other forms of communication and expression that the community chooses. Community members’ contributions are explicitly recognised and celebrated. For example, if community co-researchers collect data or provide insights, they are cited and credited in all outputs (reports, papers, panels, videos) – addressing the common pitfall of inequitable authorship in collaborations which often leads to knowledge extraction and erasure. Teams also invest time in relationship-building with communities (e.g. meetings in community settings - where they want, when they want - meeting them where they are at to avoid burdening them) to build trust and ensure the research remains true and responsive to community needs. Crucially, projects must **respect community autonomy** – partners and community partners have the agency to say no to activities that do not align with their values or priorities, without fear of jeopardising the partnership. This mutual respect helps avoid the exploitative dynamic where academics steer everything; instead, communities become true co-creators of knowledge and action.

### **Working with minoritised and vulnerable groups**

When projects engage vulnerable populations or minoritised communities, additional care and empathy are required. Ethical research practice in these contexts goes beyond formal consent – it means **safeguarding participants’ well-being** throughout the project. Practicable strategies include involving community

advocates or support workers who can ensure participants feel safe, offering free-of-charge counselling or debriefing for participants if distressing topics are discussed during meetings/events, and being flexible with methods (e.g. using creative or arts-based approaches that are more empowering and less extractive for partners and communities). In addition, support with appropriate funding for transport and childcare must be provided to ensure partners and community partners can participate equitably. Moreover, teams should be trained in anti-oppression and trauma-informed facilitation, so they do not unintentionally cause harm. Any signs of ‘**knowledge extraction**’ or community discomfort should prompt the team to pause, reflect, document, and adjust framing, methods, or goals. By prioritising the dignity, lived experience, leadership and agency of minorities and vulnerable partners and community members, projects can avoid doing harm and instead create a positive and productive experience for all involved.

### **Ensuring sustainable impact and legacy**

A common issue for time-limited projects with finite resources is that once the grant-funded period ends, community partners often risk being left empty-handed as projects fizzle out. To counter this, collaborations should plan for **sustainability and legacy from the start**. This might involve deliverables that build capacity within community organisations so they can continue the work, creating outputs that have long-term value for

communities (e.g. toolkits, educational resources, policy changes), network-building and nurturing working relationships for communities beyond the project partners, or securing follow-on support for further research and implementation. Effective projects often allocate budget or time for legacy activities – for example, training ECRs and community members to maintain or further develop a project beyond the grant, or archiving project data in a way the community can access and use. Even if a project is short-term, discussing “What happens next?” with partners can yield creative solutions (e.g. handing over equipment, finding local sponsors, or integrating results into community programmes). The goal is to avoid the pattern of communities feeling used, exploited or abandoned after a project – instead, leave a positive legacy such as new skills, strengthened networks, new opportunities or tangible improvements that outlive the project. **Long-term mutual commitment** and planning for exit/transition are essential in equitable partnerships.

### **Recognising all contributions**

Fair collaboration means **crediting and valuing the contributions of all partners** – especially those often behind the scenes. This includes not only academic researchers and community leaders, but also project managers, facilitators, technicians, and support staff who enable the partnership. Projects benefit from explicitly acknowledging these roles (for

instance, listing community coordinators as co-authors or co-presenters, or thanking administrative support in reports, presentations, and meetings). Recognition also ties into **fair reward** – ensuring that minoritised or community partners are not only paid fairly but also get opportunities for career advancement (e.g. training, networking, visibility, follow on funding) from the project. By recognising and highlighting contributions from minoritised team members and community experts and by creating spaces/platforms for their voices and perspectives projects help counter the traditional hierarchy that often centres institutional achievements (usually by professors). This bolstering and recognition foster a sense of shared ownership and motivate all partners.

### **Building an inclusive and respectful culture**

Perhaps one of the most critical factors across all areas is **cultivating a project culture of inclusion, respect, and empathy**. Partnerships thrive when they create a **safe, welcoming environment** for everyone. This means actively dismantling any oppressive or colonial dynamics – for example, checking any academic arrogance at the door, using inclusive language, and being willing to learn from our mistakes and from each other. It also involves attending to the wellbeing of team members: acknowledging the emotional labour that public engagement can involve and supporting each other through challenges. Regular reflection sessions can be used to surface

any issues (like a partner feeling unheard or overburdened) so their situation can be redressed constructively. Training in areas like unconscious bias, anti-racism, power dynamics, and facilitation can equip team members with the skills to collaborate more equitably. By building a truly collaborative culture – one that values trust, respect, patience, humility, and mutual support – projects set the stage for all the other good practices to take root. This cultural foundation is what ultimately allows complex multi-partner projects to succeed in a fair and equitable way.

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## Parting reflections: Towards a fairer and more just research ecosystem

As we bring this report on Engaging Environments to a close, we are reminded that the most transformative journeys are often those without a predefined map – where the path is made by walking, together. This project was never just about delivering engagement outputs or ticking off objectives. It was about creating the conditions for lasting, systemic change – within research institutions, funding structures, and community relationships. It was about learning how to walk differently, together.

The work documented in this final report reflects a collective reimagining of what public engagement in environmental science can look like when justice, care, equity, and cultural relevance are placed at the centre. It also reveals, with honesty, that this path is complex, non-linear, and often uncomfortable. There were missteps, pivots, and painful reckonings. But equally, there were tremendous achievements, breakthroughs, bonds formed, and powerful moments of transformation – for institutions, researchers, and communities alike.

If there is one message to carry forward from Engaging Environments, it is this: equitable partnerships are not a “nice to have” add-on. They are foundational to research that seeks to be relevant, responsible, and resilient in the face of today’s

intertwined environmental and social crises. Achieving equitable partnerships requires more than goodwill. It demands intentionality, brave leadership, humility, shared power, and a commitment to reflection and repair when harm occurs.

This journey also confirmed what many in the community have long known but rarely seen acknowledged in funding landscapes: that communities – especially those minoritised, racialised, or structurally disadvantaged – already hold vital knowledge, resilience strategies, and innovative capacity. They do not need to be “engaged with” as passive recipients of science, but valued, supported, and resourced as active co-creators of knowledge and futures. Initiatives like #OpenLight, BLASTFest, Marine co-inquiry with Tyne & Wear Communities, among others, make this abundantly clear.

We hope that readers – whether funders, academic researchers, or community-based organisations – find in these pages a compass for their own journeys. For funders, we offer a case for more flexible, values-aligned, and community-powered funding mechanisms. For institutions, we offer insight into how bureaucracies can be reshaped to support, rather than stifle, collaboration. For researchers, particularly ECRs and those from minority backgrounds, we affirm that it is possible – and powerful – to do research differently. Last but not least, for community partners, we hope this report offers both recognition and a sense of possibility: that your contributions matter, that

your leadership is needed, and that a more just research ecosystem cannot exist without you. We have much to learn from you still.

Looking forward, when planning for or funding collaborative projects within the environmental science research ecosystem, we call for:

- **Continued investment in cultural infrastructure** that supports equitable collaboration.
- **Recognition of emotional labour and care work** as central to project delivery and sustainability.
- **Stronger accountability structures** that acknowledge past harms and prevent future ones.
- **Ongoing learning capacity-building for all partners** – not just to participate in research, but to shape it.
- **Learning environments that reward reflection, imperfection, and shared growth.**

As the climate crisis intensifies and systems of oppression continue to evolve, the lessons from Engaging Environments could not be more timely. There is no single blueprint for building equitable partnerships. But there are patterns of practice, principles of care, and communities of solidarity that we can draw upon.

We hope this report can be a touchstone for those committed to walking this path – not just in theory, but in practice. With care. With courage. And most importantly, with others.

# Biographies

(A-Z by first name)





**Anita Shervington** is a community science and cultural organiser in Birmingham. She is Director of BLAST Fest; a pop-up festival and engagement platform that fuses the collective power of science, social justice, Black arts and culture, and creativity, as a force for change. Anita's background includes community development, maternal nutrition and health, women's civic leadership, and heritage and culture. Her work focuses on ownership, belonging, community leadership and philanthropy, within the context of systems change, collective liberation and regenerative development.



**Dr Cecilia Medupin** is a Senior Lecturer at the Department of Earth & Environmental Science, University of Manchester, UK. Cecilia has a proven track record of leading design, delivery, and evaluation of environmental science workshops. Cecilia is the convenor of the WiES network and was a Co-Investigator on EE, as well as being a member of the British Ecological Society's Equality & Diversity Work Group. Cecilia brings her experience as an African woman with diverse experiences of living and working in the UK.



**Dr Cindy Bronn** is the Co-Founder and Managing Director of Tekiu Ltd. The company provides a range of knowledge-sharing and capacity-building solutions that help people to benchmark and innovate through the power of diversity, sectoral change, connectivity, and cultural translation. Cindy was a partner and Independent Evaluator of the EE programme.



**[Dr Danielle Robinson](#)** was a post-doctoral Research Associate and early-career marine environmental scientist at the University of Newcastle during this project. Danielle has subsequently moved to a role as Research Fellow at the University of Leeds in the School of Earth and Environment. Danielle is interested in human-environment interactions and environmental perceptions, using qualitative and quantitative research methods with a focus on participatory research.



**[Dr Erinma Ochu](#)** was Co-Investigator and Storytelling Lead for EE, and Wallscourt Associate Professor of Immersive Media in the College of Art, Technology & Environment at UWE Bristol. Building on a background in biology, storytelling, and immersive technologies, Erinma's transdisciplinary research is focused on collective consciousness, the unifying force binding communities together to drive social movements. Following EE, Erinma is Watershed's inaugural [Researcher in Residence](#).



**[Dr Furaha Asani](#)** leads Pervasive Media Studio's research team on the delivery of a research strategy focusing on projects that span across inclusive and responsible innovation, hybrid (digital and physical) products and experiences, and the climate emergency.



**Dr Heather Sugden** was a Co-Investigator for EE and is Senior Lecturer at Newcastle University in the School of Natural and Environmental Sciences. Heather is a community ecologist with expertise in marine benthic habitats, with additional expertise in citizen science which engages local communities to inspire and promote stewardship of our marine environment.



**Professor Hilary Geoghegan** was Principal Investigator for EE and is Professor of Geography at the University of Reading. A cultural geographer, her work examines life in a climate change world, attending to emotions, more-than-human relations, and knowledge-making. Informed by EE and her experiences as a neurodivergent person, she continues to develop her [internal accountability](#) to support the conditions for meaningful change.



**Dr Jane Delany** was a Co-Investigator for EE and is Senior Lecturer at Newcastle University, and Head of the Dove Marine Laboratory. Jane's expertise is in marine ecology and citizen science, bringing these together to co-create participatory marine environmental research projects and public engagement activities.



**Janice Ansine** is a Senior Project Manager at The Open University (OU) and supported EE in a Critical Friend capacity. Janice manages projects at the OU that use innovative, easily accessible web-based tools and resources to engage and help anyone participate and learn about science.



**Jo Lansdowne** is Executive Producer of Pervasive Media Studio, leading Watershed's Creative Technology team; supporting research activity, talent development, and the studio's resident community to deliver brilliant work.



**Joyce Ternenge** was the Project Manager for EE. She has a BTech. degree in Geology and an MSc in Environment and Development from the University of Edinburgh. She has carried out research on air quality in Kathmandu and understanding climate-induced herder-farmer conflicts in Nigeria.



**Katherine McGavin**, former Learning & Engagement Manager at Earthwatch Institute and contributor to EE, is now Programme Manager for Eurasia Marine at Fauna & Flora. She was a key player in designing and delivering the first Community Science Camp.

With over 10 years of experience in the environmental sector, she currently focuses on strengthening and building the capacity of local conservation NGO partners across the Eurasia Marine portfolio. Her work supports the effective management of marine ecosystems to protect both biodiversity and the communities most dependent on marine resources.



**Katrin Nolland** works across the project and finance teams across Earthwatch Institute. For the last ten years she has supported various projects, managed their budgets, and handled the logistics.



**Matt Burrows** was Policy & Communications Manager for EE. He has a bachelor's degree in English Language & Linguistics, and has experience of communications, marketing, public and media relations across multiple sectors.



**Megan Shore** is Programmes Manager at Ignite! Futures, based in Nottingham, and Director of Green Hustle. Megan supported EE as a Critical Friend of the project, alongside Rick Hall (below) through her work with Ignite!, overseeing delivery of youth-focused programmes to support young people.



**Professor Muki Haklay** was a Co-Investigator for EE and is Professor of Geographic Information Science in the Department of Geography at University College London. Muki is renowned for his work in citizen science and is the Co-Director of Extreme Citizen Science (ExCiteS) at UCL, which is dedicated to allowing any community, regardless of literacy, to use scientific methods and tools to collect, analyse, interpret and use information about their area and activities



**Dr Nadia Dewhurst-Richman** is an interdisciplinary post-doctoral researcher in the ExCiteS research group at University College London. Nadia has interests spanning citizen science, human behaviour, social psychology, digital marketing, and conservation science.





**Rick Hall**, now retired, was founder of Ignite! Futures in 2006, which was established with a vision to promote creativity in learning to help unleash the unique, creative spark in every young person, equipping them for a rapidly-changing world. Rick supported EE as a Critical Friend of the project.



**Sarah Staunton-Lamb** is Learning, EDI and Communities Lead at Earthwatch Institute. Sarah has over 25 years' experience working in the environmental and education sector and leads Earthwatch's work with young scientists, early career researchers, and teachers.



**Zoe Rasbash** is Watershed's Climate Action Researcher. With a background in climate justice youth organising and policy advocacy, she has campaigned at the local, national, and international level for just responses to the climate crisis. She is also a writer on visual arts and the climate emergency.

## Acknowledgements

With deepest gratitude, we honour the many people who have shaped EE and us as individuals: our fellow partners, ECRs, students, cultural partners, community organisers, critical friends, scientific advisory collective, and communities. EE is built upon your care, courage, generosity, honesty, and labour, and you have sustained us and our activities.

EE involved a radical act of love on the part of many partners. In the words often attributed to [James Baldwin](#), 'If I love you, I have to make you conscious of the things you don't see'. For EE that was seeing systemic oppression as it exists within our partnership, institutions, and wider society. The pandemic changed our lives forever, and the need to bridge the equity gap was (and remains) urgent. Whilst a project is always the work of many hands and EE's achievements belong to everyone who invested care and time, we thank Professor Hilary Geoghegan as Director for bringing us together, and will be forever grateful to Dr Erinma Ochu as our Interim Director, Dr Cindy Bronn as our Independent Evaluator, and Joyce Ternenge as our Project Manager, whose support, networks, leadership, compassion, and advice enabled EE to navigate the pandemic world. We would also thank Matt Burrows for his contribution to communications and policy management and leading on the co-production of this report. Further thanks and appreciation are extended to the project's Scientific Advisory Collective: Anita

Shervington, Caroline Ward, Corrina Urquhart, Shannon Dosemagen, Tori Tsui, Nadine Andrews, Sally Lloyd-Evans, Phil Newton, and Iain Stewart.

EE emerged from a glimpse of an alternative way of doing public engagement with environmental science that combined and centred lived experience, justice, and collective endeavour. EE became about understanding and communicating our collective struggle and shared resistance. As our evaluator has said many times, 'we are making the path by walking it', and we hope our journey serves as a map for others working towards equitable partnership and accountability.

We are grateful to our colleagues at NERC: Hannah King, Hannah Lacey, Hannah Collins, and Claire Andrews. The three Hannahs journeyed with us as we battled through the impossible, and supporting us to the extent that funders can at present. Whilst we took an evidence-based approach to decision-making, additional Covid-19 funding, and funding reallocation, their solidarity and commitment to make things work enabled transformative projects and community-building to take place in EE. In the time since we were first funded by NERC in 2017, and again in 2019, there has been recognition within NERC and as part of URKI more broadly that UK research and innovation must become more diverse and inclusive. EE partners have been alongside colleagues at NERC on that

journey, and we hope we set a new benchmark for future projects.

We recognise and acknowledge the work of our institutional and departmental research support teams and community partner organisations who have devoted considerable time to the contracts, procurement, reporting, and accounting. We also acknowledge the support of Professor Geoghegan's Heads of School, Stuart Black and Steve Musson, who undertook some management responsibilities and provided additional financial support for ongoing evaluation and communications during her sick leave absence. We also thank Dr Tharindu Liyanagunawardena for her advice and training to ensure this report is [digitally accessible](#), and Gaia Mortier for the report design.

EE is dedicated to those who fight for justice daily without recognition and whose truths are seldom heard. Your courage inspires and sustains us as we take our awareness and learning from EE forwards.



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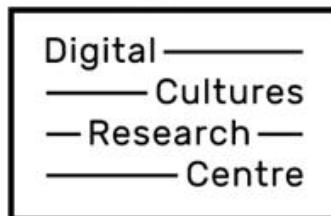
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