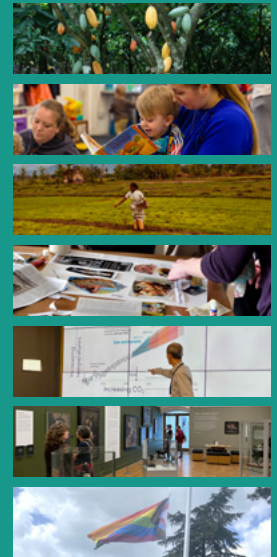


# 2024 Research Awards



# 2024 Research Awards



I am delighted to introduce the shortlisted projects for the 2024 Research Awards. The awards celebrate excellent research taking place across the University that addresses real-world problems using interdisciplinary approaches, is built on partnership and collaboration and engages a wide range of audiences.

Research engagement, collaboration and impact take many forms and this year entries were submitted to one of four categories: External Collaboration and Innovation, Interdisciplinary Research, Public Engagement with Research and Research Impact.

We received a number of high quality entries on a broad range of topics reflecting the creativity and impact, and depth and breadth, of research activities taking place across the University.

Each of the shortlisted projects described here addresses a significant challenge and engages individuals, organisations or communities to bring about positive change: from revitalising Ghana's cocoa farming to safeguarding mobility for diversity via an LGBTQ+ travel tool. Disciplines represented in the shortlist include Classics, Crop Science, Education, English Literature, Environmental Science, International Development, Law and Meteorology.

I congratulate every one of the researchers who applied for the awards this year and hope that the projects described here inspire you to find out more about our research and the ways we work together to ensure research brings benefits to all.

Professor Parveen Yaqoob  
Pro-Vice-Chancellor (Research & Innovation)

## Shortlisted Projects

### External Collaboration and Innovation

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# Making cocoa farming in Ghana sustainable

Sustainable soil solutions: Revitalising Ghana's cocoa farming

**Andrew Daymond (Crop Science) and Tom Sizmur (Geography & Environmental Science)**

**More sustainable cocoa farming is now possible thanks to research co-developed by University of Reading crop and soil scientists working with Ghanaian partners. Through participation and training events, farmers and entrepreneurs have adopted organic soil amendments resulting in improved soil health, greater cocoa yields and private sector interest.**

Ghana is the world's second-largest cocoa producer with an estimated 800,000 smallholder farmers growing cocoa. However soil degradation from continuous cropping is leading to a decline in cocoa yields and forest loss as farmers abandon their farms and move to new areas.

Working in partnership with the Cocoa Research Institute of Ghana (CRIG), and

Kwame Nkrumah University of Science and Technology (KNUST), Dr Andrew Daymond and Professor Tom Sizmur have been working to promote sustainable soil management using low-cost compost and biochar from farm wastes like cocoa pod husks, tree prunings and chicken manure.

Experimental trials were conducted in the laboratory, greenhouse and across 15 farms to assess the impact of soil amendments on cocoa yields, with farmers participating as early adopters and providing testimonials. Innovative approaches included using digital data capture techniques and combining soil science with social science insights from farmer interviews.

This multidisciplinary approach ensured compost formulations were relevant to local conditions. A steering group of stakeholders across the cocoa value chain, including government, international cocoa buyers, a

farmer cooperative and a soil amendment supplier, guides the project's direction.

The project benefited farmers by increasing cocoa yields and co-creating knowledge on producing and applying organic soil amendments. The project's success generated interest and additional funding from the private sector for extended field trials and dissemination activities.

Field-based training events, including practical demonstrations and testimonials from early adopters along with a compost production guide and video, have enhanced the project's impact. The project also boosted demand for compost produced by the local enterprise supplying the project, EMFED Farms. Ongoing engagement with the confectionery industry aims to promote broader uptake of organic soil amendments globally.

## Partners

Cocoa Research Institute of Ghana

Kwame Nkrumah University of Science and Technology (KNUST)

EMFED Farms

## Funders

UKRI Global Challenges Research Fund

Biology and Biotechnology Research Council

Innovate UK AgriFood Africa Innovation Awards

Natural Environment Research Council

University of Reading Knowledge Exchange Fund

Touton S.A.

“The demands of the farmers for composts actually sustains my business, especially during the off season.”

**Kwabena Mends, founder and CEO, EMFED Farms**

## Judges' comment

“An impressive project, with a clear purpose and wide stakeholder engagement, that has the potential for very large longer-term impact.”



# Families flourish through co-created reading initiatives

Ready to Read: Community-led reading initiatives in Whitley

Holly Joseph and Daisy Powell (Institute of Education)

**A community-based project to promote a love of reading among families in low-income areas in Reading is providing benefits beyond improved literacy in children, such as increased confidence and better mental health. By co-designing book-related activities with community members the project fosters trust and engagement and has generated national policy interest.**

Children from homes in which family members read and own books develop stronger literacy skills and do well at school. However, low-income families often lack time and resources for reading activities. Early interventions like Sure Start positively impact educational outcomes even years later at GCSE level, highlighting the value of early support to reduce the disadvantage gap.

This project aimed to foster a love of reading in families in Whitley and Whitley Wood, reported to be among the most deprived areas nationally. Led by education experts Dr Holly Joseph and Dr Daisy Powell, researchers took a participatory approach, working with families, schools, libraries, charities and community centres to co-design activities that would be engaging, self-sustaining and tailored to local needs.

Based on extensive interviews and informal discussions, they co-designed parent-toddler storybook groups, a book club for parents and a school-readiness summer school for pre-schoolers.

Key to the project's success was building trust with a community wary of top-down interventions through recruiting community members as co-investigators and providing incentives like opportunities to socialise, tea and cake, and free books.

Families reported benefits beyond just improved literacy - from increased confidence and new friendships to better sleep and mental health. The outcomes garnered strong support from local and national government, and raised funds for ongoing sessions.

As well as benefitting families, the project's participatory approach has resonated with those seeking effective public services: evidence from the research has informed Labour policy discussions on early years provision and literacy development.

## Partners

- Aspire2
- Brighter Futures for Children
- Hexham Road Community Centre
- Reading Borough Council

- Reading Libraries
- Whitley Community Development Association
- Whitley Excellence Cluster
- Whitley Wood Community Centre

## Funders

- University of Reading and John Sykes Foundation Community Fund
- Friends of Reading University
- Research England via the University of Reading Participatory Research Fund
- University of Reading UROP scheme

“Also, the children seeing us read at home... when we come back from school, we have half an hour of reading time... it's just something that's now etched into what we do... I think I'm reading two to three books a month now.”

**Mum, parent and toddler reading group and adult book group**

## Judges' comment

“An excellent project, well developed with co-creators, that has had very successful local engagement and is starting to impact on national policy.”



# Building the case for natural farming in India

Understanding Zero Budget Natural Farming in Andhra Pradesh

Sarah Duddigan (Geography & Environmental Science) and Grady Walker (International Development)

**An innovative interdisciplinary approach combining soil science and social sciences has revealed new understanding about the effectiveness of Zero Budget Natural Farming. By providing a holistic approach to support the case for its expansion across Andhra Pradesh in India, both the land and the farmers who work it will benefit.**

High farmer debt and suicides in India, exacerbated by soil degradation, is undermining effective agricultural production and rural wellbeing. Zero Budget Natural Farming (ZBNF) is a grassroots agrarian movement in Andhra Pradesh. It is a low-cost, locally sourced natural farming method that promotes chemical-free farming to bolster smallholder farmers' resilience.

An interdisciplinary team, led by soil scientist Dr Sarah Duddigan and social scientist Dr Grady Walker, have been developing an evidence base to understand the effectiveness of the ZBNF approach.

Through a combination of controlled field experiments and participatory photography, their research considered the motivations behind the adoption of ZBNF. It engaged with over 150 smallholder farmers and young research fellows who actively participated in data collection and analysis, as well as other local stakeholders such as Women's Self-Help Groups.

The soil science investigations demonstrated how ZBNF enhances soil moisture retention and improves yield, while reducing expenditure. In parallel, the participatory photography revealed that farmers value ZBNF not just for potential yield gains, but for providing

agricultural independence, preserving cultural legacy, and rejecting industrialised farming methods.

The participatory approach directly benefitted community participants by sharing new knowledge about sustainable agriculture practices. The overall research project supported capacity building through training between the Reading team and over 100 Indian researchers and farmers.

Bringing the two disciplines together generated insights on the multifaceted socio-economic and environmental benefits. These insights could not have been achieved from either discipline alone. The project's holistic findings have supported decision-makers who are intending to upscale natural farming to 6 million farmers in Andhra Pradesh, marking a significant step towards sustainable agricultural practices and rural development.

## Partners

Rythu Sadhikara Samstha (RySS) - farmer empowerment organisation

## Funders

KfW Development Bank

“This is an opportunity to show my cluster farmers the difference between the ZBNF, organic and conventional treatments which will help them to implement the one that's best for better yields and good soil health.”

Natural Farming Fellow, RySS

## Judges' comment

“An Innovative interdisciplinary research project bringing together soil science and social science to work with a well-defined stakeholder community that has very promising impact.”



# Transforming UK food systems for disadvantaged communities

FoodSEqual: Healthy, sustainable food systems for disadvantaged communities

## FoodSEqual Team

**An interdisciplinary research team from the University of Reading and four partner universities are working alongside food sector, government and civil society stakeholders to address food poverty in culturally-diverse disadvantaged communities. Through co-creation, it develops innovative solutions that tackle a lack of access to healthy, sustainable food, empowering communities to have choice and agency over their diets.**

As many as 22% of people in the UK are living in food poverty, reliant on solutions outside of mainstream food systems such as food banks which do not enable them to plan or choose their diet.

The FoodSEqual project brings together an interdisciplinary team from the University of

Reading, four partner universities, food industry, government and civil society organisations to address food poverty and the lack of access to healthy, sustainable food for culturally-diverse disadvantaged communities. Working directly with community groups in Reading, Plymouth, Tower Hamlets and Brighton and Hove, the project uses participatory action research (PAR) methods to co-create sustainable food solutions to give communities choice and agency over the food they consume.

Community members have been trained as Community Researchers to support the research, foster trust, and facilitate engagement through workshops, focus groups and photo diaries, gathering data and enabling the ideas and voices of the community to be heard first hand.

Researchers working across food, agriculture, environmental disciplines, human geography, sociology, business & management, psychology

and built environment have benchmarked the current UK foodscape through a community lens, and are working to understand food aid supply chain fluctuations and improve the management of surplus food.

The project promises societal, economic and environmental benefits by trialling policy or supply chain interventions and working with food companies to co-develop products with the communities. In 2023, the project received additional funding to focus on integrating affordable fresh produce into local food systems to reduce health inequalities.

FoodSEqual's collaborative approach ensures the project's findings and innovations are practical, sustainable and beneficial for the communities they are working with. The methods and learnings are being documented to create a 'blueprint' of how to co-develop and conduct transformative transdisciplinary research in community settings.



## Partners

Association of Convenience Stores (ACS)

Barfoots of Botley Ltd

Institute of Grocery Distribution (IGD)

Pladis

Premier Foods

Shift

Reading: WCDA/C.A. Belchers & Son Ltd/  
Food4Families

Plymouth: Sole of Discretion/Plymouth  
Fishing and Seafood Association/TamarFresh/  
Plymouth Soup Run/Food Plymouth CIC

Tower Hamlets: Women's Environmental  
Network (Wen), London

Brighton & Hove: Brighton & Hove Food  
Partnership (BHFP)

## Funders

UKRI, in partnership with the Global Food Security Programme, BBSRC, ESRC, MRC, NERC, Defra, DHSC, PHID, Innovate UK and FSA

“It’s great to be part of this. It’s enabled me to become a community researcher and share concerns and ideas about food, and access to it, with my own community. We’ve all learned so much too.”

Kelly Brown, community development worker, WCDA

## Judges’ comment

“An excellent transdisciplinary project with lots of wide-ranging partners that has clear outcomes and a well-defined trajectory to achieving significant impact.”



# Inspiring action on climate change through engaging science

Communicating climate research to inspire positive action

Richard Allan (Meteorology)

**By raising awareness using positive messages and solutions, a Reading climate scientist is educating and engaging others to inspire action to tackle the causes of climate change. The project has successfully engaged diverse audiences including schools, businesses and local groups by adapting communication methods and has fostered collaborative sector initiatives on electric vehicles and charging networks.**

Climate change is affecting every inhabited region across the globe and human activities are intensifying extreme climate events including heatwaves, heavy rainfall and droughts.

Climate scientist Professor Richard Allan, a lead Intergovernmental Panel on Climate Change (IPCC) author and STEM Climate Ambassador,

has been connecting with local groups, businesses and schools to educate and engage on the causes and consequences of human-caused climate change and motivate positive actions.

Using an adaptable approach, Professor Allan combines the latest IPCC findings with engaging content on ancient climates and recent weather extremes that is appropriate to audiences with limited knowledge of the subject. The evolving communication style successfully reaches audiences with different skillsets, from oral storytelling to formal presentations. Schools benefit from hands-on demonstrations linking research to learning, while for businesses and local government, the focus is on the local context.

Key to the approach is balancing state-of-the-art research with positive messages and solutions to inspire action rather than despondency. Delivery and content are continuously refined, including emphasising

the exciting aspects of the science to motivate engagement, leading to more focused events.

Engagement with the transport sector, especially regarding electric vehicles and charging networks, has yielded positive results. Keynote presentations and collaborations with sustainable energy businesses like GRIDSERVE have showcased strong reactions and motivation for collective action toward achieving net-zero carbon emissions. Other collaborations and projects have followed, alongside ongoing requests for involvement from podcasts to an EV charging innovation centre.

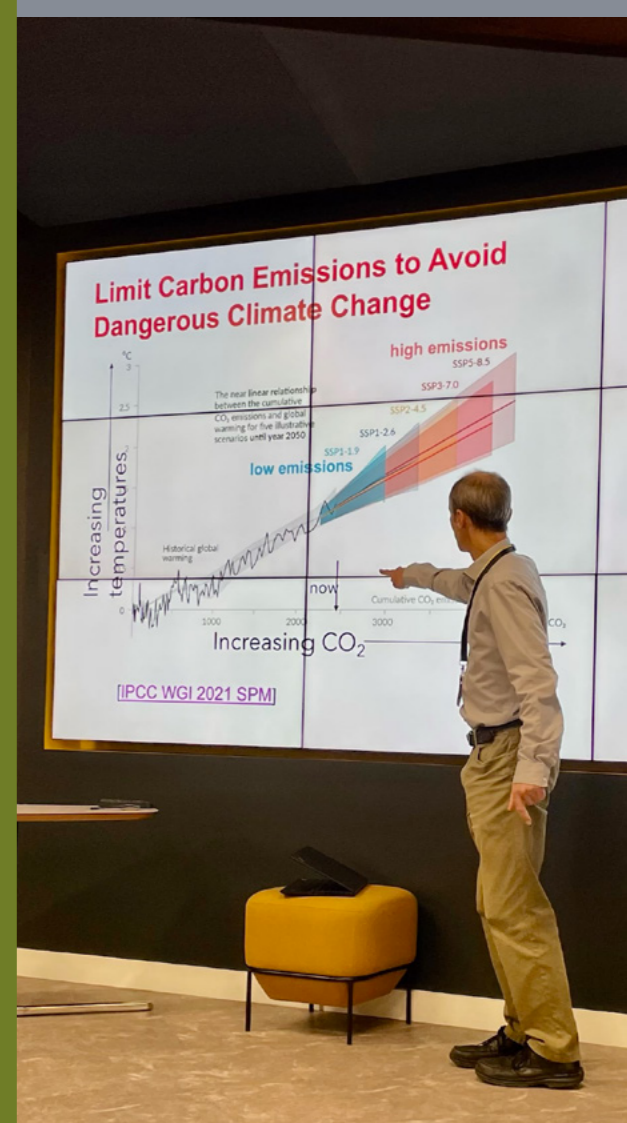
Extensive communication through the media, blogs, social media and podcasts has further augmented the project's reach. The evolving formats provide a model for engaging diverse audiences and specific sectors, demonstrating the power of effective science communication in increasing climate understanding and inspiring solutions.

“...having caught up with a few year 9 and 10 students they seemed to have really enjoyed the talk and apparently couldn't stop discussing it in the final lesson of the day, so you've clearly inspired!”

Dr J Futyan, The Marist School

## Judges' comment

“An excellent programme of work that shows innovation and wide engagement, which helps place the University not just as a leader, but also as a partner, in climate science in our locality, as well as nationally and globally.”



# Monsters and myths inspire young audiences

In the Company of Monsters: New visions, ancient myths

Emma Aston (Classics) and Andrew Mangham (English Literature)

**The 'In the Company of Monsters' exhibition, co-curated by University of Reading researchers, engaged young audiences in museum experiences, using mythology and modern reinterpretations to challenge perceptions of difference. Its legacy has inspired plans for future museum visits, educational and digital resources and more challenging contemporary issue-based exhibitions.**

'In the Company of Monsters: New Visions, Ancient Myths' was a major exhibition held in Reading Museum from September 2023 to February 2024. Co-curated by Reading professors Emma Aston and Andrew Mangham with Reading Museum's Elaine Blake, the

exhibition showcased the works of local artist Eleanor Crook and Scottish artist Paul Reid, complemented by artifacts from the University's Special Collections and the Ure Museum.

The exhibition aimed to engage young people (aged 14–25), identified as the 'lost generation' of GLAM (galleries, libraries, archives, and museums), in museum experiences, promote the arts and humanities, and challenge perceptions of difference through ancient mythology and modern reinterpretations.

The exhibition was a collaborative effort involving the University's Centre for Health Humanities (CHH), undergraduate students, and various University departments. It included a creative programme of activities, including drawing and writing workshops, an artist-in-residence day, gaming events, school visits,

a school competition and a "deep dive" area for visitors to explore the themes of monster studies and monster theory.

The exhibition attracted 18,000 visitors and proved popular with younger and family audiences, with 376% of visitors aged 14–25. Feedback revealed that the exhibition changed perceptions, fostered empathy, and inspired visitors, particularly younger ones, to visit museums and art galleries in the future. Of those that had never visited the Museum before, 42% aged 14–24 and 100% of secondary school visitors, said they would make a return visit, suggesting a lasting impact on cultural participation and appreciation for the arts.

The project's reach has extended beyond the exhibition with collaborations with local educational organisations to create bespoke lesson plans and digital resources.

The partnership between CHH and Reading Museum will explore more challenging contemporary issues in future exhibitions.

## Partners

Reading Museum

“This has given us the confidence to expand the theme of exhibitions from things like history of local football or railways to more challenging contemporary issue-based subjects.”

Elaine Blake, Exhibitions and Partnerships Curator, Reading Museum

## Judges' comment

“Based on a successful exhibition, this is an excellent project showing considerable creativity and innovation, promising outcomes and subsequent engagement that has potential for longer term impact.”





# Innovative tool empowers LGBTQ+ travellers

LGBTQ+ travel tool: Safeguarding mobility for diversity

Frances Hamilton and Tahlia-Rose Virdee (Law)

**A new online travel tool, developed by University of Reading law researchers, is helping organisations develop policies for LGBTQ+ international travel and empowering individuals to check their employer's safeguards. Addressing a major policy gap and endorsed by advocacy and education organisations, the tool is being adopted across the UK.**

Staff who engage in international academic mobility benefit from increased career progression, but LGBTQ+ individuals often face challenges to their welfare and safety due to varying legal and cultural landscapes when travelling. Only 17% of universities have policies expressly addressing LGBTQ+ welfare in international travel.

The free 'LGBTQ+ International Travel for Work Policy Development Tool' was created by Dr Frances Hamilton, and research assistant, Tahlia-Rose Virdee in the School of Law. It fills a void in safeguarding by helping organisations develop policies addressing the unique challenges faced by LGBTQ+ individuals crossing international borders. It also empowers individuals to check if their employer has relevant safeguards in place, providing tailored recommendations through blending original research, practical solutions and lived experience.

The tool's impact has been swift and signals a transformative shift in LGBTQ+ inclusivity. Twenty-seven universities across the UK, including the University of Reading, are using the tool to evaluate their policies. Endorsement from Stonewall, Pride in STEM, Advance HE, the University and College Union, Department

for Education, and invitations to present at the International Trade Centre and to write a podcast for the Universities Policy Engagement Network (UPEN), highlight the tool's significance.

Further outreach work is ongoing with potential business partners and invitations to present have been received by the Universities Health and Safety Committee, Society for Research into Higher Education and global conferences. Further funding has been secured (including from the Society of Legal Scholars) and will be used to evaluate use of the tool to date to inform improvements. A further 45 interviews with LGBTQ+ academics nationwide will provide a more robust account of challenges faced by LGBTQ+ persons when engaging in international travel, with intersectional factors addressed.

## Partners

Advance HE

Universities and Colleges Union

Pride in STEM

## Funders

University of Reading Rapid Response Impact Fund

Society of Legal Scholars

“This work can help institutions to look at what they can, need, should do in relation to posting staff internationally and / or setting up international campuses. It can also help people get awareness of the position of LGBTQ+ in different countries. There is very little work, if any, done in this area.”

Seth Atkin, Universities and Colleges Union

## Judges' comment

“An impressive project that represents a thoughtful and important intervention in response to a demonstrable need which has had immediate take-up by UK universities and wider engagement beyond HE, demonstrating the tool's significance.”



**“ The University of Reading’s research community is committed to engaging with public and professional audiences to ensure our research contributes to global debates and benefits the economic and social life of Reading and beyond. ”**

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