



introducing our

interdisciplinary research

UNIVERSITY OF
EXETER | MEDICAL
SCHOOL



European Centre for
Environment & Human Health

creative collaborative cross-discipline research



introducing the centre

“ There is a growing body of evidence that interacting with the environment can benefit health yet our relationship with this natural resource is far from straightforward. Our work is advancing understanding of the threats posed by a changing environment, and examining the role it can play in boosting health, wellbeing and sustainability. ”

Professor Lora Fleming, Centre Director

The European Centre for Environment and Human Health conducts **world-class research** into the complex connections between the environment and health.

The Centre is part of the University of Exeter Medical School where our work is helping to develop knowledge that will improve both public and ecosystem health.

We've assembled a diverse group of academics who use a wide range of research methods in their studies. Our teams use science, the arts and the humanities to improve understanding of the health opportunities – and risks – presented by the environment.

Collaborations with business, government, communities, and the third sector are at the heart of everything we do, ensuring our research is informed by local issues and real world challenges. This process is helping to sustainably enhance the economy of Cornwall and impact policy at a national and international level.

our research

“ From increasing levels of pharmaceutical discharge to warming of the deep ocean and seas, it is clear that our potential to damage the natural environment is a crucial area of research. It is vital that we gain an understanding into the impacts that changes to the environment can have on human health, and provide an insight that can drive changes in policy and behaviour. ”

Professor Michael Depledge,
Chair of Environment and Human Health

The European Centre for Environment and Human Health is examining environment and health issues with a **highly interdisciplinary approach.**

An integral part of the University of Exeter Medical School's research programme, we are home to a broad mix of specialists with expertise in areas that include epidemiology, policy analysis, psychology, systematic reviews, geography, health economics, public health, and microbiology.

Our academics form a team that is encouraged to break from traditional silos; working on projects that cross-disciplinary boundaries within five key themes:

Health and Climate Change

Weather and climate can directly influence human health. We are investigating the links between weather and a range of illnesses, and assessing how climate change might affect the risks of disease. Multi-institutional and international collaborations are at the heart of this work, which is also using pioneering big data techniques.

Life Course Wellbeing

As populations age worldwide our views of older people and how we navigate the life course will need to evolve. Our research is considering how interactions with the natural environment might improve health and wellbeing in later life, and exploring how eHealth technology can boost healthcare.

Microbial Ecology

Microbial systems underpin life on earth, yet antibiotic resistance is one of the 21st Century's biggest health threats. Using molecular approaches in our laboratories, we are analysing the ecology and evolution of microorganisms, helping us to understand how antibiotic resistance can develop and spread through the natural environment and affect human health.

Ocean and Human Health

Human wellbeing is closely connected to the health of our seas and oceans – a relationship which is under mounting strain as climate change, environmental stress and population growth increase pressures on coastal resources. In efforts to deliver a better understanding of marine environment and human health interaction, we are helping to lead a coordinated, transnational and interdisciplinary research approach in this emerging field.

Wellbeing and the Environment

A growing body of evidence suggests that time spent in natural environments can improve physical and mental health. Using a number of quantitative and qualitative research techniques, we are unpicking the possible therapeutic properties of both 'blue' and 'green' environments. By quantifying these effects our research is helping to ensure their inclusion in sustainable planning and policy.



working with business and communities

Partnerships with community groups, the voluntary sector and profit and not-for-profit organisations are fundamental to the success of the Centre's research.

Through joint studies, PhD projects, forums and events, we are working with a range of organisations to create meaningful collaborations and produce findings with clearly defined applications.

Being part of the research and innovation process can create a variety of commercial

opportunities, allowing companies to build evidence-based solutions, drive policy, and raise profiles.

The Centre works with organisations of all sizes including start-ups, sole traders, SMEs, social enterprises, the voluntary sector and community interest groups. The interdisciplinary nature of our work ensures that our research can be applied to a host of sectors. Whether you are a food manufacturer, landscape designer or surf school, we can work with almost any business to develop novel and beneficial investigations in environment and human health.

Introducing our interdisciplinary **RESEARCH**

For more information and details of how to get in touch visit www.ecehh.org/business

“ Collaboration with the Centre allowed us to gain a much deeper understanding of the way our work can improve health and wellbeing. Ultimately this will help us deliver targeted and effective activities that are genuinely beneficial to our clients. ”

Mod Le Froy,
GB Boardriders CIC

Case study: Mobile tech collaboration providing expertise in eHealth

A research-business partnership is using mobile technology to transform the treatment of Ménière's disease – a rare and poorly understood condition affecting the inner ear.

In an effort to transform how we treat this chronic illness, the Centre's researchers have partnered with Cornish digital company, Buzz Interactive, to develop a mobile application that can record symptoms and potential environmental triggers as they occur.

The team are creating a database of information on the disease to help in their analysis, and are feeding results straight back to sufferers – empowering them to

identify their triggers and manage their own symptoms more effectively, as well as supporting clinical understanding and condition management plans.

Linking the mobile app with weather information from the UK Met Office, the research is hoping to uncover associations between Ménière's and meteorological conditions, a move that could see the tool used to send out early warning messages to people to prevent symptomatic attacks.

The collaboration has attracted international attention and proved pivotal for Buzz Interactive, giving them invaluable experience

in eHealth and eWellbeing, and springboarding their expansion into the health and wellbeing sector.

Lindsey Axten, Director at Buzz, said:
“As a result of our work with the University of Exeter, Buzz is now well positioned to make a move into the eHealth sector. Our success with the Ménière's application has highlighted how technology can improve patient health and wellbeing, and we're really proud to be playing an integral role in this kind of collaborative research.”

“ Studying at a world-class university like Exeter in a great environment like Cornwall is a brilliant combination. I hope to use the skills I’m gaining for the benefit of research, education and social entrepreneurship in Ghana. ”

Gameli Adzaho,
MSc International Student

MSc Environment and Human Health

The University of Exeter is committed to training the next generation of researchers and our MSc in Environment and Human Health is designed to provide students with a detailed understanding of ecological public health.

Taught in Truro, the course uses Cornwall's diverse environment to explore a range of environment and health issues, as well as focusing on the wider social determinants of health.

Working through the latest theories and concepts, students are encouraged to develop the skills needed to analyse data and work effectively as a practitioner or researcher.

The programme includes contributions from the European Centre for Environment and Human Health, the Met Office, Age UK and the World Health Organisation. It has been developed with reference to the training requirements of the Chartered Institute of Environmental Health and the UK Faculty of Public Health.

Full-time and part-time study options are available.



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