

Interdisciplinary partnerships generating sustainable solutions to global challenges



The Big Picture

Humanity faces global challenges that threaten ourselves and our planet. Feeding a growing population and coping with the effects of climate change, whilst protecting biodiversity and the services it provides, requires innovation, co-operation between diverse stakeholders and a willingness to cross the boundaries between academic disciplines.



What is YESI?

YESI is a pioneering interdisciplinary partnership spanning the social, physical and life sciences. We harness the talents of world class researchers to generate the evidence for sustainable solutions to global challenges. Our impacts reach across local, regional and global scales.

Research themes

Our research is focused around three themes:



YESI is a 'one-stop shop' connecting and supporting businesses, charities, government bodies, research institutes, universities, funding bodies and NGOs to provide solutions to their research needs. We have a strong track record in facilitating multi-partner research projects to deliver innovation and impact."

Professor Sue Hartley, Director of YESI

1 Sustainable Food



Image - Sue Hartley

2 Resilient Ecosystems



3 Urban Living



Why work with us?

Here's how we can help you...

Independent expertise:

Conduct research on your behalf, accessing our wide network of expert researchers

Practical support:

Work across departments to instigate and support new collaborations and develop funding proposals

Funding:

Provide knowledge of the funding landscape and a strong track record of facilitating successful applications

Horizon scanning:

Identify and disseminate upcoming research opportunities to partners and potential collaborators

Multi-partner research projects:

Connect partners from across our internal and external networks to foster innovation and collaboration

Events and workshops:

Host meetings to create networking opportunities, initiate research projects and disseminate outputs

Co-creation of knowledge:

Work with organisations and researchers to provide evidence-based solutions to key challenges

Showcase research:

Publicise the outputs and impacts of successful projects through our extensive communication channels





Image - Sue Hartley

“ Working with YESI has helped us to create a strategy that looks critically at our sustainable food future and has always assured that we create a balanced view of the challenges ahead. The breadth of insight and experience within the team provides impressive opportunities for problem solving and helps us really think through the issues that matter most to our business.”

Tim Finnigan, Director of R&D, Quorn Foods

“ Through YESI I've been able to take part in new interdisciplinary collaborations leading to successful funding applications. YESI not only brings people together, but supports them as they develop their programmes of research.”

Kate Pickett, Professor of Epidemiology, University of York



“ YESI researchers have developed innovative analysis of Butterfly Conservation's long-term citizen science datasets, gathered from tens of thousands of members of the public, to provide real insights into one of our key concerns; to understand, quantify and mitigate for negative climate change impacts on UK species.”

Richard Fox, Head of Recording, Butterfly Conservation



Image - Matt Berry/Butterfly Conservation

Sustainable food

Aims

- Developing global research into food systems resilience and sustainability
- Designing integrated solutions to deliver improved food security across the food system



Research Theme Leader: Prof Bob Doherty

Key focus areas:

- 1 Sustainable food production** - Developing resilient crop varieties and low cost agricultural technologies. Influencing governance, investment patterns, regulation and food policy.
- 2 Supply chain resilience** - Working with stakeholders in food production/distribution to develop models to identify pressure points and designing solutions to improve food security.
- 3 Food and the consumer** - Evaluating food purchasing behaviour and its effect on health and waste production. Exploring food waste reduction/reuse methods and influencing behaviour.

Example Research Project Integrating Knowledge for Food Systems Resilience (IKnowFood)

Systems of food production, trade and consumption are increasingly vulnerable to interconnected political, economic and ecological stresses associated with climate/environmental changes, shifts in farming practices, uneven power dynamics and consumer lifestyle changes. IKnowFood takes an interdisciplinary multi-

stakeholder approach to developing a unifying understanding of 'food system resilience'. The aim is to identify the obstacles to food system resilience and develop practical tools for farmers, manufacturers, retailers and consumers to enhance overall food system resilience. The team will produce new data sets, information resources, appropriate low-cost technology tools for farmers, decision making tools for business and persuasive tools for consumers.



Resilient ecosystems

Aims

- Investigating the impacts of animal and plant diversity loss on ecosystems
- Understanding drivers for these changes to protect biodiversity and the benefits it provides



Research Theme Leader: Prof Jane Hill

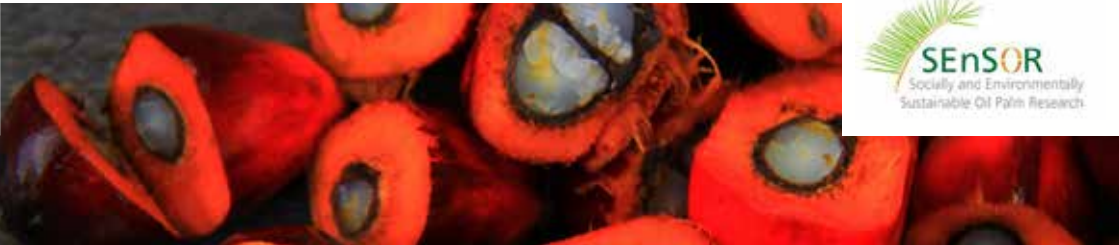
Key focus areas:

- 1 Biodiversity conservation** - Analysing the factors affecting species responses to habitat change, and using this knowledge to develop conservation strategies and influence policy.
- 2 Ecosystem services** - Assessing human impacts on ecosystem services and developing strategies to ensure resilience.
- 3 Climate change** - Understanding the impacts of climate change on ecological systems to predict future changes, and develop adaptation strategies on a range of temporal and spatial scales.

Example Research Project Socially and Environmentally Sustainable Oil Palm Research (SenSOR Project)

Palm oil is a globally important commodity that occurs in many supermarkets products, including food and cosmetics. Cultivation of oil palm is a driver of rainforest loss, threatening biodiversity, but it is also vital to local livelihoods, making it crucial to develop sustainable cultivation practices.

The Roundtable on Sustainable Palm Oil (RSPO) has developed Principles and Criteria outlining the practices that companies must comply with in order to produce Certified Sustainable Palm Oil. This project is assessing the impacts of RSPO certification, and how the effectiveness of the Principles and Criteria could be maximised.



Urban living

Aims

- Advancing knowledge around the natural, social and built environments of cities
- Formulating new ways of living with the pressures of worldwide urbanisation



Research Theme Leader: Prof Alistair Boxall

Key focus areas:

- 1 Pollution assessment** - Developing state-of-the-art pollution monitoring technologies to analyse pollution and its effects on human and environmental health to help influence policy.
- 2 Health and wellbeing** - Working with key stakeholders to design environmentally and socially sustainable communities to maximise health and wellbeing.
- 3 The total environment** - Understanding links between the natural, cultural, social and built environments of a city over different times to help predict future issues and influence policy.

Example Research Project

York City Environment Observatory (YCEO)

If not managed adequately, urbanisation can adversely affect the health and wellbeing of city populations, compromise natural capital and impact on the local economy. The aim of the York City Environment Observatory (YCEO) project is to establish York as an exemplar city for better understanding

the links between the quality of the natural, cultural, social and built environments (the 'total environment') and the health and wellbeing of citizens and the economy of the city. The YCEO will employ cutting-edge monitoring and data analytic technologies to provide intelligence to allow informed decisions to be made on the design and management of the city and surrounding environments. It involves York academics, city partners and York residents.



YESI impacts

**£25 MILLION
WORTH OF PROJECTS
WON SINCE
2013 LAUNCH**

Influencing business attitudes

Theme leader Prof Bob Doherty's work has encouraged Co-op to commit to being the first UK retailer to purchase cocoa for its own brand products from Fairtrade suppliers, as stated in their 'Co-op Cocoa for change, Fairtrade #TheCoopWay' report.



Professor Bob Doherty sharing his thoughts at the Scottish Fair Forum's 'Fair Trade Nation Lecture'.

Ecosystem Management

Research on African Savannas, vital for wildlife, is uncovering the role of fire in these grasslands, helping to conserve them more effectively as the climate changes.

**100 RESEARCHERS
ACROSS 17
DEPARTMENTS
WITHIN THE
UNIVERSITY
OF YORK
HAVE FORMED
PARTNERSHIPS WITH YESI**

Technological innovation

Through the continued development of SkyLine technologies for determining gas fluxes, new techniques are being created for greenhouse gas research. Funding has been awarded to increase the uptake and impact of these innovations, and to further develop new cutting-edge technologies.





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