



THE UNIVERSITY *of* EDINBURGH
Global Academy of
Agriculture and Food Systems

Healthy
People
Healthy
Planet



About us

The Global Academy of Agriculture and Food Systems is a leading interdisciplinary hub of researchers, teachers and students - developing new science, curating evidence and learning on the intersection and interdependence of the systems that underpin the health and wellbeing of people and our planet.

The Academy seeks to understand the drivers of food system and planetary health challenges, and drive the development of mutually beneficial solutions through our unique breadth of expertise, holistic approach and strong partnerships.



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Context

The global population will approach 11 billion by the end of this century. We are in the midst of climate, biodiversity, malnutrition and inequity crises.

11,000,000,000 **People by the end of the century**



We must tackle dangerous rates of global warming and dramatic biodiversity loss. At the same time, over a third of the global population is affected by one or more forms of malnutrition – be that hunger, obesity or micronutrient deficiency – with the most deprived being more vulnerable to threats to health and wellbeing. Our food, farming and land use systems are central to achieving food and nutritional security. They are extremely susceptible to environmental change, whilst also being important drivers of this change.

Ensuring that all people have access to healthy diets, while protecting the natural systems on which we all depend, is one of the greatest challenges facing humanity.

Achieving sustainable, healthy diets underpins many of the Sustainable Development Goals – especially those

concerned with hunger, poverty, health, gender equality, life on land and in water, responsible consumption and production, and climate action. We apply a 'Planetary Health' approach that explores the drivers, risks, impacts, connections among, and potential contributions to these and related global challenges of the Anthropocene era in which we live.

The Global Academy is based at the Royal (Dick) School of Veterinary Studies - part of the College of Medicine and Veterinary Medicine - at the University's Easter Bush Campus. Our remit is to catalyse interactions University-wide and with partners globally, drive progress towards regenerative and ethical food systems and land use for healthy people and a healthy planet.

Our Vision

Healthy people and a healthy planet,
through regenerative and ethical food
and land use systems.

Our Mission

Providing science and leadership for regenerative, ethical, food and land use systems for healthy people and a healthy planet through:

- Agenda-setting, impactful, trans-disciplinary research in
 - Food systems, nutrition and health
 - Sustainable land and environmental resource use
 - Planetary Health and One Health
- Inspiring, lifelong education and training for Planetary Health and food systems leaders, practitioners and advocates
- Partnership, engagement and co-creation to maximise the relevance and impact of our work and drive the development of solutions



Our Key Themes

Food System Transformation



Our research, associated education and engagement focus on two broad themes – Food System Transformation and Healthy People, Healthy Planet, and the interactions between them. Science-Policy-Industry Interface, Data-Driven Innovation and Governance and Ethics are cross-cutting themes.



Food System Transformation

Food System Transformation - from production to consumption. We seek new approaches to transform agri-food systems, exploring decision making on a range of scales, from policy through to farm and consumer, and how these decisions might be altered for better, more equitable outcomes. At policy level, this includes making the true costs of food systems explicit for decision makers, including those costs external to the immediate system. It also acknowledges the importance of animal health and welfare in supporting sustainable supply chains for the future.



Healthy People, Healthy Planet

Healthy People, Healthy Planet - focussing on how individual behaviours and governance affect the health of all organisms on the planet. Living within our planetary boundaries implies the provision and maintenance of well-functioning ecosystem services, including well-maintained and productive soils. There is an intrinsic link between the provision of nutritious food, healthier food systems/environments, biodiversity and human health. We seek to understand the determinants of and risks to health and wellbeing at local, national and international levels, spanning infectious, non-communicable, and emerging neglected diseases associated with food and land use systems. We apply a Planetary Health/One Health lens, to develop solutions to address transmission, health securities, waste and pollution, and factors such as habitat destruction and urbanisation. At a policy level, this includes making explicit how the promotion of health and healthiness, and the prevention, treatment and management of illness, depend on healthy food, healthy environments and wider planetary systems.

Healthy People
Healthy Planet



Cross-cutting Themes

The Science-Policy-Industry Interface, Data-Driven Innovation, and Governance and Ethics are strong cross-cutting themes in much of our work. We work together with industry, policy and ‘third sector’ partners on problem or opportunity formulation, and to co-develop theories of change and optimise interventions. We use data science, people-centric decision-support tools and technology to help transform the future of global food systems. This includes providing training and education in good practice for data analysis and management in our teaching, and working with new technologies to improve real-time data generation, communication and analysis. We work on development of data-rich decision-support tools and knowledge-sharing platforms for farmers and industry leaders, and we lead delivery of training for the Easter Bush Agritech Hub. Our governance interests span ethics of data acquisition and use, and societal governance to support sustainable, secure and equitable production and distribution of nutritious food.

Areas of Activity

Our key areas of activity include:

- Food and nutritional security in both the Global South and North, with particular emphasis on:
 - Sustainable protein supply, including the future role of animal-sourced foods (e.g. investigating the role of legumes, the optimal use of crop residues as livestock feed, novel low carbon animal feeds, regenerative grazing systems, climate smart agriculture, and sustainable aquaculture systems)
 - Environmental and health externalities of food systems (e.g. studying the co-benefits of large scale organic farming on human health, developing new metrics and decision support tools to manage food system externalities, including effects on climate change, improving understanding and managing risks of antimicrobial resistance, sustainable management for soil health, investigating levers to reduce high levels of red meat consumption in richer countries, crop and livestock breeding for sustainable systems)
 - Food and nutritional security in fragile and conflict affected states (e.g. working on science-policy communication and knowledge exchange with displaced Syrian academics and decision makers)
 - Forecast-based action on malnutrition (e.g. using earth observation and data science to improve forecast-based action on malnutrition in pastoralist communities)
- Planetary Health, health and food systems – the interconnections between human, animal and environmental health, and their relationship to food systems.
- Animal health and welfare – both because of their intrinsic importance and their importance for Planetary Health and food and nutritional security.

Education

We offer a range of education and training opportunities relevant to sustainable, ethical food systems for healthy people and a healthy planet, rooted in our research.

These include:

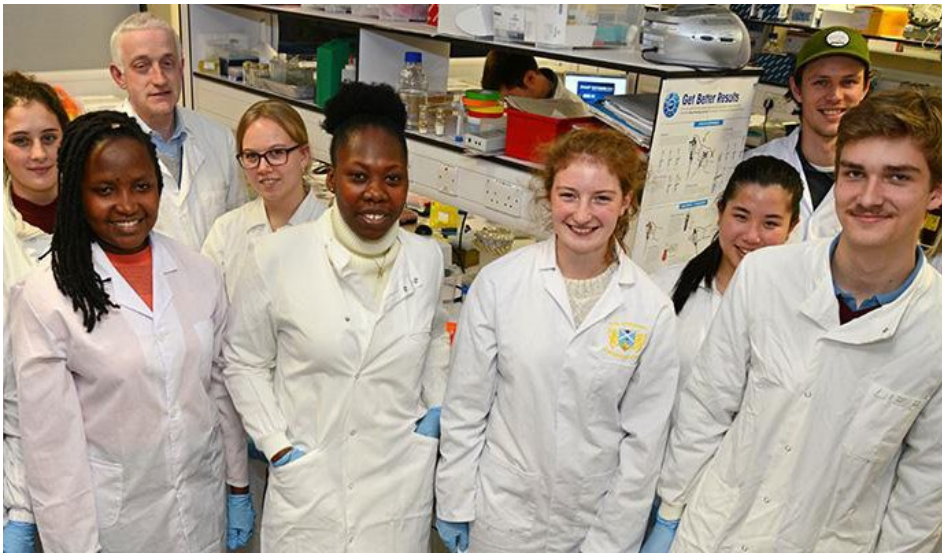
- Taught degree programmes and courses on global food security and nutrition, including exciting challenge-led interdisciplinary courses available to students across the University.
- Professional Development and Executive Education.
- A PhD programme in Agriculture and Food Security, and an outstanding interdisciplinary research and training environment, underpinned by first class facilities and research excellence. Our postgraduate students play a central role in this vibrant and collaborative community.

www.ed.ac.uk/global-agriculture-food-systems/admissions





Our people



30 Staff

40 Staff Associates

30 PhD Students

The Global Academy has over 30 staff with a wide range of disciplinary backgrounds – including agricultural and veterinary sciences, nutrition, public health, epidemiology, mathematics, data sciences, economics, social sciences, law - and strong interdisciplinary interests. A further 40 or so staff from different

Schools in the University are Associates of the Global Academy. Over 30 PhD students are based in or associated with the Academy, and we have a rapidly growing cadre of taught postgraduate students, as well as undergraduate students, studying primarily with us or taking our elective courses from other Schools.

Partners

Partnership is a key part of our ethos; academic, policy, industry and non/intergovernmental partners are all critical to our mission.



We have strategic partnerships with the International Livestock Research Institute and other CGIAR Institutes, UnaEuropa, University College Dublin, University of Sydney, Embrapa, Public Health Foundation of India, Government of Andhra Pradesh, Scottish Government, Community Jameel, Save the Children, the Council for At Risk Academics, the Cool Farm Alliance, Trinity AgTech, and more.

We host or co-host the:

One Health FIELD network

With partners in the UK and the MENAT region – providing food security intelligence and evidence-based interventions for local sustainable development in fragile and conflict-affected states.

onehealthfieldnetwork.org

Jameel Observatory for Food Security Early Action

Working with Community Jameel, the International Livestock Research Institute, Save the Children and the Jameel Poverty Action Lab with an emphasis on co-constructed, community-led, research and data-driven solutions to early action on food insecurity and malnutrition, that serve both frontline development agencies and higher-level policy makers.

Jameelobservatory.org



We are active partners in the:

Edinburgh Futures Institute (EFI), especially its themes on Sustainability and Health. www.efi.ed.ac.uk



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Edinburgh Futures Institute

Data-Driven Innovation (DDI), leading the Talent stream for the AgriTech DDI Hub. www.ddi.ac.uk



Edinburgh Earth Initiative (EEI), especially its themes on Sustainable lands and seas and Health in a warming world. www.ed.ac.uk/edinburgh-earth-initiative



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Edinburgh Earth Initiative

Strategic Alignment

We are strongly aligned with the University of Edinburgh's purpose: that our graduates, and the knowledge we discover with our partners, will make the world a better place.

Our work aligns closely with the University's Strategy 2030 and priority research themes on One Health and Food Security, Societal and Planetary Sustainability and Digital Living. Our work supports many of the United Nations' Sustainable Development Goals, especially those concerned with hunger, poverty, health, gender equality, life on land and in water, responsible consumption and production, and climate action.

We have strong interactions and collaborations with the University's Global Health Academy.

www.ed.ac.uk/global-health





www.ed.ac.uk/agrifood

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336.