# **Global Reading, Global Goals**

# The University of Reading and the SDGs Update Report 2023









## PREFACE



This report showcases the wide-ranging contributions the University of Reading makes to support progress towards the 17 United Nations Sustainable Development Goals (SDGs) – through world-class research, innovative teaching, sustainable operations, and meaningful engagement with the broader community.

Our focus as an academic institution is on people — within our own academic community, within our neighbourhoods, and within the communities in which we work — and through our work, fostering positive, lasting change for society and the planet.

We are a broad university, with campuses in Europe, Africa and Asia, with students from more than 140 countries, and studying issues and topics relevant to every corner of the planet. Our research expertise spans critical areas through our themes covering research for the Environment, for Agriculture, Food and Health, for Heritage and Creativity, and for Prosperity and Resilience. Our internationally recognized experts are helping shape policy around the world.

Our core institutional values of community, excellence, sustainability, and engagement, are embedded in everything we do. By collaborating with partners across sectors, we maximise our contribution to the SDGs, and our academic community actively supports urgent global initiatives to combat poverty, inequality, and environmental degradation.

The climate crisis is an excellent example of where our work crosses disciplines and audiences, highlighting the agility of the University of Reading to address one of the biggest issues facing societies worldwide. In our long-term strategy, we have committed to becoming one of the "greenest universities in the world". Through our research into the science, policy, and people affected by climate change; our engagement at global, national and local levels, from the United Nations to the UK government and local climate action groups; and through our commitment to becoming more sustainable in our own activities, we are demonstrating the huge difference that a university can make.

It's a strong record, but there is more to do. We will continue to drive progress and advance educational and societal improvements, in alignment with the SDGs.

#### **Professor Parveen Yaqoob**

Deputy Vice-Chancellor, University of Reading June 2023

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SDG 1: End Poverty In All Its Forms Everywhere

# 2508

STUDENTS RECEIVED FINANCIAL SUPPORT FROM THE UNIVERSITY TO ATTEND COURSES IN 2022/23

## RESEARCH

#### **Supporting better livelihoods**

Through <u>the Zero-Budget Natural Farming</u> <u>initiative</u>, Reading academics are working with government and local partners in Andhra Pradesh, India, to enhance livelihood resilience of smallholder farmers to climate and land-use change, while increasing their income and improving food security, and soil fertility.



## OUTREACH

#### **Community-based research**

Reading researchers are working closely with a disadvantaged local community, using <u>participatory research methods</u> to explore topics such as financial exclusion, barriers to employment, and youth aspiration and attainment. One <u>current project</u> is investigating the impact of the cost of living crisis on local people across South East England.



## Socially responsible innovation

Through the <u>Aspect Angels initiative</u> at Henley Business School, the University supports more socially responsible innovation by facilitating investment in ventures that are driven by the highest-quality research into human behaviour and our relationship with the environment.

## **TEACHING AND LEARNING**

#### MBAid

#### Henley Business School Africa's MBAid

initiative has provided tens of thousands of hours of free consulting time over the last decade to non-profit organisations via thousands of Henley Business School Africa students. It also includes a Henley Alumni Pay-It-Forward Fund which assists African students who have completed their course work or dissertations but cannot afford to pay their final fees to graduate.

# Addressing poverty through social policy

Reading's School of Agriculture, Policy and Development offers a module titled Addressing Poverty and Inequality through Social Policy to students. The module aims to teach students the ways in which social policy is essential to the promotion of poverty reduction, equity, rights and sustainable development, and to the creation of resilient livelihoods.

## **STEWARDSHIP/OPERATIONS**

#### **Access and Participation**

Reading is committed to social mobility and has developed <u>Student Access and</u> <u>Participation Plans</u> to support students from low-income families to attend the University. It also sets targets for student attainment and to monitor student progression, which are published by the Office for Students.





SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

## RESEARCH

#### **Changing farming practices**

Improving crop yields and producing healthier food while reducing environmental impacts underpins <u>agricultural research at the</u> <u>University of Reading</u>. Crop and soil scientists from the University have been working with local partners to make <u>cocoa farming in</u> <u>Ghana</u> more sustainable. The project aimed to promote sustainable soil management using low-cost compost and biochar from farm wastes like cocoa pod husks, tree prunings and chicken manure, and has helped to increase cocoa yields and has led to additional private sector funding for extended field trials and dissemination activities.



#### **Improving nutrition**

Scientists from the University were part of a group that <u>successfully sequenced the faba</u> <u>bean</u>, an achievement which will significantly aid efforts to breed beans with optimum nutritional content and sustainability of production This also feeds into another University project to increase the amount of UK-grown pulses consumed, by incorporating faba bean flour into white bread. The <u>Raising</u> <u>the Pulse project</u> is part of the publicly-funded UKRI Transforming UK Food Systems initiative and will benefit from what is essentially now a genetic toolkit for breeding lines with beneficial traits.

## **OUTREACH**

## **Food Systems Equality**

Reading is involved in the <u>Food Systems</u> <u>Equality (FoodSEqual) project</u>, which aims to provide citizens of culturally diverse disadvantaged communities with choice and agency over the food they consume. It is working together with food industry representatives, civil organisations and policy makers to co-develop new products, new supply chains and new policy frameworks that deliver an affordable, attractive, healthy and sustainable diet.



#### **Dairy Research**

Reading's <u>Centre for Dairy Research</u> (CEDAR) is a LEAF Innovation centre and works with farmers, the food industry, scientists and consumers, to inspire and enable sustainable farming through research, innovation, knowledge exchange and education programmes. CEDAR have hosted numerous visits including farmer groups, research workshops and student groups, including international visitors and groups.

## **TEACHING AND LEARNING**

#### Access to food security knowledge

The University's Department of Agriculture offers free online courses for farmers, members of the food industry, and general public. <u>Participatory Integrated Climate</u> <u>Services for Agriculture (PICSA)</u> is a participatory approach for climate services and agricultural extension developed by Reading researchers, which helps farmers make informed decisions about their agricultural practices. The University also offers <u>free food and agriculture courses</u>, which cover a range of topics from food waste to exploring producing sustainable foods.

419

STUDENTS (6%) GRADUATED IN AGRICULTURE, WHICH HAS A STRONG SUSTAINABILITY FOCUS

## **STEWARDSHIP/OPERATIONS**

#### Sustainable food

The University is committed to providing food that is safe, healthy and nutritious, and has implemented a <u>Sustainable Food Policy and</u> <u>Framework</u> to achieve this. All of the University's food and drink outlets have been independently audited and certified through the Sustainable Restaurant Association's Food Made Good scheme, and were awarded the maximum of three stars.

#### **Menus of Change**

Reading has adopted the <u>24 key principles for</u> <u>crafting healthy and sustainable menus</u> developed by Menus of Change, an international collaboration between academic and food operator organisations. As a member of the Menus of Change Universities Research Collaborative, Reading carries out operational and academic research to inform and advance these principles, transforming how its food is produced and how its catering services operate.



SDG 3: Ensure healthy lives and promote well-being for all at all ages

# 1003

STUDENTS (14%) GRADUATED FROM COURSES THAT WILL TAKE THEM INTO THE HEALTH PROFESSIONS

## RESEARCH

#### **Blood testing network**

The University is part of the <u>Future Blood</u> <u>Testing Network Plus</u>, which aims to develop digital health technologies that support realtime blood monitoring, self-management and timely intervention in community health and care.

#### **Predicting inflammatory arthritis**

Reading researchers are exploring how to better <u>predict the onset of inflammatory</u> <u>arthritis</u> (IA) using artificial intelligence. Funded by UK Research and Innovation (UKRI), it is hoped the project will eventually ease pressure on the NHS by helping doctors to achieve earlier IA diagnoses.

## OUTREACH

## **Royal Berkshire Hospital**

The University maintains strong links with the Royal Berkshire Hospital NHS Trust through the <u>Health Innovation Partnership</u> (HIP). Its <u>Collaborative Innovation Funding</u> supported over 50 projects in 2023, enabling expanded research grants, improved education for students and better patient outcomes. An <u>artificial intelligence system</u> developed by a team of Reading researchers is being used by the NHS to tackle health inequalities by reducing the number of missed hospital appointments.



## **Specialist clinics**

The University runs several well-established clinics across <u>mental health</u>, <u>speech and</u> <u>language therapy</u>, <u>neuroscience</u> and <u>autism</u>. These directly benefit patients and raise the profile of our high-quality health-related research across Berkshire.

## **TEACHING AND LEARNING**

## **CBT training**

The award-winning <u>Charlie Waller Institute</u>, which was founded as a collaboration between the University, Berkshire Healthcare NHS Foundation Trust and the Charlie Waller Trust, is the NHS provider of choice for training for mental health professionals in evidence-based psychological treatments such as cognitive behavioural therapy (CBT).

#### Wellbeing Hub

The University's Centre for Autism runs a <u>Wellbeing Hub</u> that aims to create an inclusive community where school-aged autistic children, their families, and supporting professionals can collaborate. As well as supporting research projects, the Hub is also playing a role in the training of future clinicians, educators and researchers – through active participation in Hub activities, placement students receive valuable theoretical and practical experience in neurodiversity-affirming practices.

#### HealthReach

<u>HealthReach</u> is a mobile learning programme which supports access to health and life science careers and courses. Staff and students from the University team run sessions, online, in schools and on campus using interactive and experimental healthcare simulations and education sessions to inspire young people to consider healthcare careers.

## **STEWARDSHIP/OPERATIONS**

#### Staff health and wellbeing

The University of Reading is committed to <u>employee health and wellbeing</u> and aims to provide a workplace that embraces inclusivity and flexibility while providing everyone with the opportunity to manage their time and commitments in the best way that they can. Staff also have access to mental health support and counselling through the free, independent <u>Employee Assistance</u> <u>Programme (EAP).</u>



#### **Stay Active**

For over-55s in the local community, the University's SportsPark provides <u>Stay Active</u> classes, including Zumba, badminton and fitness. In addition, the Reading University Students Union works with the local Sports in Mind charity to run active walking groups on campus.



SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

## RESEARCH

#### Language learning

The <u>Progression in Primary Languages</u> project is a four-year study which will gather data on the development of young learners' language knowledge in French, German and Spanish. The project will build a detailed picture of language learning from ages 7 to 11 and explore the individual, instructional and contextual factors that influence language learning in classroom settings in Englishspeaking countries where exposure to the language being learned is limited.

# Improving equity and inclusion through education

Reading's education specialists are helping to improve equity and inclusion through education by exploring areas such as education and social mobility, outdoor learning, SEN inclusion and social justice, and ethnicity and gender in educational engagement. "Through our engagement with teaching practitioners in the UK and beyond, we are filling gaps in education policy and practice that will significantly improve the lifechances of thousands of children"

## OUTREACH

## Reading initiatives in low-income areas

Reading's education experts ran a <u>community-based project</u> that aimed to foster a love of reading in families in Whitley and Whitley Wood, reported to be among the most deprived areas nationally. Researchers worked with families, schools, libraries, charities and community centres to co-design activities that would be engaging, self-sustaining and tailored to local needs.

## Teaching multilingual learners

The Talk Rich Teaching project is a joint project between US and Reading teacher educators that was set up to improve teaching for children whose home languages are not English. Using an innovative approach imported from the US, the project boosted multilingual children's English speaking, listening and reading skills in the four UK primary schools where it was implemented.



## **TEACHING AND LEARNING**

#### **Teaching future educators**

The University's Institute of Education provides training for a new generation of teachers, offering <u>PGCE</u>, <u>QTS</u> and <u>EYTS</u> <u>qualifications</u> in early years, primary and secondary teaching. Each year, 180 students graduate from teaching courses which partner with over 400 schools in Berkshire and surrounding area.



#### Life-long learning

In partnership with the FutureLearn platform, Reading supports life-long learning by providing a range of <u>free online short courses</u>, from <u>exploring the archaeology of early</u> <u>Roman Britain to understanding depression</u>, <u>microbes</u> or <u>the weather</u>. This enables the University to reach learners from diverse backgrounds and all ages around the world and share the important work it is doing to help tackle some of the major issues the world faces today.

For younger learners, Reading offers a range of <u>activities for under-16s</u> that support widening participation in higher education. These are delivered through school visits and on campus, including school conferences and assemblies.

# 315

STUDENTS GRADUATED WITH A QUALIFICATION TO TEACH IN PRIMARY SCHOOLS

#### **Healthcare Education**

The University's teaching specialists have also teamed up with the Royal Berkshire Hospital to create a unique <u>Healthcare Education</u> programme for all staff who teach doctors, nurses, allied health professionals and pharmacists. By strengthening teamwork and mutual understanding as well as improving teaching skills at the hospital, the collaboration is driving improvements in patient care and patient safety.



## SDG 5: Achieve gender equality and empower all women and girls

## RESEARCH

#### Equity in computer science

A <u>study co-led by Reading researchers</u> found that the English school system creates a gender imbalance in computer science that is reflected in the workplace. It is hoped that the study's findings will lead to more evidencebased education policies and practices, which will eventually enable more young people of all genders to see digital jobs as a possibility.

#### Supporting women in prison

A Reading research project funded by the Ministry of Justice and Thames Valley Violence Reduction Unit is examining how early intervention and training for criminal justice professionals can help to more effectively <u>support girls and young women</u> who are in contact with youth and criminal justice system.

## **OUTREACH**

#### **Maternal wellbeing**

A Reading researcher is exploring the wellbeing, opportunities, and workplace experiences of new mothers in the UK who want to continue to breastfeed on return to paid work. The project aims to find ways to better support working mothers who want to continue to breastfeed while also reducing skill and talent loss and increasing the productivity of working mothers.

#### **Staff networks**

The University is committed to gender equality, providing support for all colleagues, such as job share arrangements, mentoring and development schemes for students and staff, and a nursery on campus. It supports several <u>staff networks</u> including women@reading and a women's Springboard network to support female colleagues.



**51.3%** 

OF UNDERGRADUATES STARTING THEIR STUDIES IN 2022 WERE WOMEN

## **TEACHING AND LEARNING**

## Women in leadership scholarship

To support women in leadership, the Henley Business School runs a <u>scholarship</u> <u>competition</u> each year to offer practical support for the development of strong female talent. The competition is open to people of all genders and the winner receives a fullyfunded place on Henley Business School's part-time Executive MBA programme.

## **STEWARDSHIP/OPERATIONS**

#### **Equal opportunities**

The University has had a <u>Dean of Diversity and</u> <u>Inclusion</u> since 2015, supported by a dedicated staff team. There is a <u>Gender</u> <u>Equality plan</u> in place and in 2022, the University succeeded in <u>reducing its mean and</u> <u>median average gender pay gaps</u>. Reading continues to take actions to further close the gender pay gap by increasing focus on flexible working, improving guidance on starting salaries and equal selection processes, and supporting more women to gain promotions through development programmes.

#### **Athena SWAN**

Reading is one of only a small group of universities to hold an <u>Athena Swan Silver</u> <u>Award</u>, which was received in recognition of its work on gender equality. Its Schools of Mathematical, Physical & Computational Sciences; Archaeology, Geography & Environmental Science; Built Environment; Psychology & Clinical Language Sciences; and Chemistry, Food & Pharmacy all hold Silver departmental awards, while the Schools of Agriculture, Policy & Development; Philosophy, Politics & Economics; and Henley Business School hold Bronze departmental awards.



## SDG 6: Ensure availability and sustainable management of water and sanitation for all

## RESEARCH

#### Social inequalities and water use

Research by Reading academics found that social inequalities are driving urban water crises more than environmental factors. The study, published in the journal *Nature Sustainability*, found that urban elites overconsume water for their own personal leisure while under-privileged people live without taps or toilets and use their limited water for drinking and hygiene. It is hoped that the research will help to reduce unsustainable water consumption among elites.

## **OUTREACH**

#### **Flood risk reduction**

Reading scientists codeveloped a <u>new method</u> <u>that empowers citizens to identify solutions to</u> <u>local flooding threats</u>. This citizen-led adaptation planning process will help communities prepare for the significant impacts of climate change. The method was also piloted internationally in Ghana and India.

## **Doing UoRBit**

The University encourages staff and students to reduce water usage through its <u>Doing</u> <u>UoRbit</u> initiative. Doing UoRBit is an online platform rewarding staff and students with points and prizes for taking steps that boost sustainability and wellbeing. This includes water saving ideas such as limiting showers to 4 minutes, only boiling the kettle for one cup of water when making a single hot drink and reporting water leaks/issues identified around campus.

## **TEACHING AND LEARNING**

#### Water Resources

The University's Department of Geography and Environmental Science offers a module to students titled <u>Water Resources</u>, which focusses on water quality, public health and associated water resource management. The purpose of the module is to engage students with past, current and future water quality problems to enable critical examination of their impact, particularly on public health, and the effectiveness of water resource management strategies and legislation.

## **STEWARDSHIP/OPERATIONS**

## **Climate Action Network**

The University is a key partner in the <u>Reading</u> <u>Climate Action Network</u>, which oversees the Reading Climate Emergency Strategy. This strategy includes a Water Theme Action Plan that covers water stress, water supply, water conservation, water efficiency and water education.

## Water Management Plan

The University has a <u>water management plan</u> which it updates regularly. It promotes free drinking water for all staff, students and visitors, and has more than <u>30 water stations</u> across its Whiteknights campus.



SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

## RESEARCH

#### Supporting efficient energy usage

A Reading professor is leading the Flexibility Theme of the £15 million Energy Demand Centre, as part of a £53 million investment in six research hubs and centres aiming to help the UK meet its net zero target by 2050. The Flexibility Theme explores the capacity to shift energy consumption at different times of the day or the year to make the most of renewables.



# 100%

OF ELECTRICITY SUPPLIED TO THE UNIVERSITY IS FROM RENEWABLE SOURCES

## OUTREACH

#### **Changing behaviours**

To encourage students, staff and the wider public to think about how they might change their behaviour to live more sustainably, the University is running a campaign called <u>Partnering for the planet</u> that features suggestions from Reading academics on what people might do to reduce their carbon footprint. The University also offers a free <u>Planet Partners online course</u> to increase awareness around the key issues and impacts of climate change.

## **TEACHING AND LEARNING**

## Sustainable technologies

The University has a range of undergraduate and postgraduate modules that focus on sustainable environments and energy use. For example its <u>MSc Renewable Energy</u>: <u>Technology and Sustainability</u> in the School of Construction Management includes a module on sustainable heat and power that gives students the opportunity to learn from academics and industry experts about the challenges of designing sustainable technologies.

## **STEWARDSHIP/OPERATIONS**

## Net Zero by 2030

Reading has committed to becoming Net Zero Carbon by 2030 and has developed an ambitious <u>Net Zero Carbon Plan</u> to achieve this aim. <u>100% of the electricity supplied</u> to the University is from renewable sources and we continue to expand our solar PV generation capacity, significantly reducing our reliance on the Grid.

## Sustainable investments

The University of Reading has fully <u>removed</u> <u>fossil fuel shares and bonds</u> from its investment portfolio, instead diverting its money towards green schemes and sustainable investments.



SDG 8: Full and productive employment and decent work for all

## RESEARCH

#### **Four-Day Week**

A white paper informed by research at the University's Henley Business School is changing the way organisations and their employees work. The report <u>'The four-day</u> <u>week: The pandemic and the evolution of</u> <u>flexible working</u>', is based on surveys of 500 businesses and 2000 employees and explores the benefits of working fewer days to both organisations and workers.



#### Young entrepreneurs

Two teams of researchers and technicians from the University participated in the final of the <u>Young Entrepreneurs Scheme (YES) 2022</u>, winning the overall competition, best finance, best intellectual property, and the People's Choice award. YES aims to prepare scientists and engineers for future business endeavours and raise awareness on how research can be commercialised.



## OUTREACH

## Diversity in the workplace

A group of Reading researchers is working on a range of projects focusing on the best ways to <u>accommodate diversity in the workplace</u>. The group aims to create a two-way dialogue between researchers, and employers and other stakeholders to reach a shared understanding around issues related to diversity and inclusion in the workplace and their implications for good workplace practice and policy. Current projects include studies of <u>diversity in recruitment</u> and <u>pay gaps and</u> <u>career progression</u>.

## **TEACHING AND LEARNING**

## Campus jobs

<u>Campus Jobs</u> is the University of Reading's dedicated service that provides part-time work opportunities for students across the Reading campuses, helping hundreds of students to supplement their income and gain skills during their studies.

#### **Apprenticeships**

Henley Business School is one of the top providers in the UK for Senior Leader Apprenticeships and is supporting more than 200 businesses to drive growth and develop future leaders through its <u>apprenticeship</u> <u>schemes</u>.

## **STEWARDSHIP/OPERATIONS**

#### Fair work for fair pay

The University sets out clear policies on diversity and inclusion in the workplace, fair pay and equal rights to ensure all staff have fair and equitable working conditions. The University also reports annually on its <u>Gender</u> <u>Pay gap</u> to assess progress made and identify areas for further improvement.



SDG 9: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

## RESEARCH

## Decarbonising commercial transport

Decarbonising the transport sector, including road, rail and shipping, has a key role to play in achieving net zero greenhouse gas emissions. Currently there is no single economically viable solution for heavy-duty trucks. Researchers at Reading are modelling how electrolyser-derived hydrogen, electric charging and localised energy might help tackle the issues.

#### Heating on demand

In the UK, heating and hot water for buildings make up 40% of energy use and 20% of greenhouse gas emissions. In partnership with the University of Nottingham and others, a Reading team is looking at ways to reduce energy consumption <u>using an innovative</u> <u>phase change material (PCM) called the</u> <u>Versatile PCM energy storage system</u>.

## **OUTREACH**

#### **Energy-efficient businesses**

The University is involved in a government project focused on <u>bringing down businesses'</u> <u>energy bills</u>. The project, which has been awarded over £46,000 through the government's Net Zero Innovation Portfolio, is developing a cutting-edge solution that revolutionises the way energy customers compare tariffs, thus empowering business and organisations to better manage energy consumption and aiding the drive towards sustainable economic growth.

## **TEACHING AND LEARNING**

#### School of the Built Environment

The University's <u>School of the Built</u> <u>Environment</u> is internationally renowned for its research and education in the design, construction and operation of buildings and places. Areas of expertise include architecture, construction management, energy systems and environmental engineering.

## **STEWARDSHIP/OPERATIONS**

#### **Greener buildings**

Reading has committed to becoming Net Zero Carbon by 2030. Thanks to new and existing initiatives, such as extending our district heating system and expanding use of solar panels, further carbon emissions reductions in 2022/2023 mean that our emissions are now 61.2% below our 2008/09 baseline.





## SDG 10: Reduce inequality within and among countries

## RESEARCH

## Participatory research initiatives

The University's Participation Lab focusses on the co-production of knowledge with local partners. Its members share learnings about participatory and community-led research methods, action-oriented research approaches and public engagement to enable people's voices to be heard and to achieve change. Its long-standing partnership with the Whitley Community Development Association, is giving disadvantaged people in Reading a voice in devising solutions to local issues. The <u>Whitley Researchers</u> conduct trusted research and generate knowledge that feeds into council decision-making and policy developments.



## **Transnational Families**

The University is part of the <u>Transnational</u> <u>Families in Europe</u> research project, which is investigating the relationships between care, inequalities and wellbeing among different generations of transnational families in the UK, Spain, France and Sweden. The project compares migrant carers' and transnational families' experiences within the four partner countries with contrasting welfare models, migration regimes & post-colonial legacies.

## OUTREACH

#### **Reading Scholars**

To encourage wider participation in higher education, the University's <u>Reading Scholars</u> <u>programme</u> gives Year 12 students a real taste of life as an undergraduate, and provides practical support as participants begin their higher education application process. The programme is targeted at students who may find it difficult to access higher education (e.g. young people from low-income areas or careleavers. It is delivered by academics and undergraduate mentors to help students develop study skills, self-confidence and a better understanding of university life and its opportunities.

## **University of Sanctury**

The University of Reading is recognised as a <u>University of Sanctuary</u> after achieving the award in 2023, and we are committed to welcoming and including sanctuary seekers across our teaching, research and community activities. The University also <u>offers</u> <u>scholarships</u> to eligible sanctuary seekers (people with refugee, humanitarian protected or asylum seeker status), which recognise the educational disruption that displaced people experience.

## **TEACHING AND LEARNING**

#### **Real Jobs**

<u>Real Jobs</u> is the University Typography department's scheme for bringing together students and clients for personalised work placements, providing valuable work experience and increasing employment prospects for participants post-university. Many of these projects centre around initiatives aimed at reducing inequality – in <u>one recent project</u>, students documented a live theatre performance held at the University by an activist who creates audience-led participatory events that focus on ideas of identity and race.

## Undergraduate research opportunities

Students undertaking paid internships through the University's <u>Undergraduate</u> <u>Research Opportunities Programme</u> (UROP) have been working with local community researchers to support <u>participatory research</u> <u>projects</u> while developing interpersonal and research skills.

27%

OF STUDENTS STARTING AT READING ARE THE FIRST GENERATION OF THEIR FAMILY TO ATTEND UNIVERSITY

## **STEWARDSHIP/OPERATIONS**

#### **Report and support**

The University has <u>equality</u>, <u>diversity and</u> <u>inclusion</u> and <u>anti-harassment policies</u> in place to ensure staff and students are treated fairly and without prejudice, at all times. It has developed an online tool – <u>Report and</u> <u>Support</u> – where staff, students and visitors can report issues and receive timely and effective support when required.



SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable



## **RESEARCH**

#### Warming cities

Striking data visualisations created by a Reading professor are showing the impact of climate change on UK cities. Graphics for individual cities were made available for the first time ahead of Earth Day 2023, and the visualisations for all 13 cities show they experienced their warmest years on record. It is hoped that the data will inspire local people to action and help communities avoid the worst impacts of climate change.

## **OUTREACH**

#### **Collections to explore**

The University's <u>Museums and Collections</u> website brings together digitised collections from across the University's diverse archives, including objects from the <u>Ure Museum of</u> <u>Greek Archaeology</u> to the <u>Cole Museum of</u> <u>Zoology</u>, making the collections of fascinating objects and stories of our past available to everyone.

#### **Music at Reading**

The University has a vibrant community of staff, students and alumni who come together to share their joy of music and who practise and perform a <u>range of musical events</u> throughout the academic year.

## **TEACHING AND LEARNING**

#### **Oxford Road Project**

Undergraduate architecture students are working with University researchers and residents of Reading's <u>Oxford Road</u> to explore people's stories of local life, amplify local heritage, and highlight the road's rich multicultural history. The project has strengthened Reading's existing community networks, while providing the foundation for further student-community research training and collaboration with local organisations and the arts sector.



## **STEWARDSHIP/OPERATIONS**

#### **Construction and refurbishment**

The University is committed to making decisions which enhance energy performance and building sustainability in all its <u>construction and refurbishment projects</u>. Reading has set targets for meeting its <u>Environmental Objectives</u> including achieving at least a 'very good' BREEAM environmental assessment rating across projects relating to its London Road, Whiteknights and Greenlands campuses.

#### **Sustainable Travel**

The University promotes sustainable travel and provides incentives to staff and students to use more sustainable modes of transport, including free cycle maintenance and help to purchase bicycles through a <u>salary sacrifice</u> <u>scheme</u>. Every two years we survey staff and students views on their travel arrangements, and in response to feedback have made improvements to <u>secure bike storage facilities</u> and shared pedestrian/cycle paths across our campuses. There is also a <u>free Park and Ride</u> <u>bus</u> to Whiteknights campus for staff and students, delivered in partnership with Reading Buses.



# SDG 12: Ensure sustainable consumption and production patterns

## RESEARCH

## The future of sustainable food

Research from the University has shown that younger age groups are significantly more likely to be open to the idea of <u>eating lab-</u> <u>grown meat or insects</u> than older people. Insect protein and lab-grown meat are two promising alternatives that avoid many of the environmental and ethical impacts of rearing animals, leading to an increase in sustainable food consumption patterns.

## **OUTREACH**



#### Inspiring children to be greener

Reading researchers carried out workshops at local primary schools to educate children on <u>how to dispose of food packaging sustainably</u>. The project emphasised the importance of inspiring the next generation using fun and interactive methods to promote a shift in their everyday sustainable food packaging behaviour.

#### Recycling

In 2023, the University recycled or reused 50% of its waste. As part of its commitment to waste reduction and management, it promotes recycling to all its staff, students and visitors. The University's Campus Commerce also encourages the use of reusable cups by levying a 20p charge on paper cups, and the profits of this tax are ring-fenced for Catering sustainability initiatives.

## **TEACHING AND LEARNING**

# Top ranked courses addressing sustainability

The University of Reading is <u>ranked 16th</u> <u>globally</u> for undergraduate courses in Agriculture & Forestry, and top in the UK in the QS World University Rankings, 2023. The classification includes study across agriculture, food science, ecology, and soil sciences. The University also ranks highly in the UK for Environmental Sciences (joint 10th) and Earth and Marine Sciences (joint 9th).

## **STEWARDSHIP/OPERATIONS**

## Waste and Resource Use Strategy

The University to maintains and actively progresses a <u>Waste and Resource Use</u> <u>Strategy</u>, including a focus on reducing singleuse plastics in line with UK Government Plans. It maintains a waste management strategy which sets out how it will minimise all waste, including plastic. The University also encourages increased re-use of plastic and other materials through the <u>Warp-It platform</u>, where members of staff can claim unwanted items for business use, and the <u>UniGreenScheme</u>, which donates unwanted equipment to third-party organisations.

# **50%**

OF WASTE ON CAMPUS IS REUSED OR RECYCLED

## Giving food more thought

The <u>University's Catering Team</u> is committed to continually improving its sustainability profile in a financially sustainable way. Regular suppliers are helping Reading to achieve its goals by adopting and embracing the Catering Team's <u>sustainability framework</u>. The University welcomes micro-, small and medium-sized local and regional suppliers to join its supply chain, either directly or via one of its appointed wholesalers.



## SDG 13: Take urgent action to tackle climate change and its impacts

## RESEARCH

## **Climate stripes**

The University of Reading is host to worldleading research into climate change and its effects on the planet. Its world-renowned Department of Meteorology carries out a wide range of studies that are helping understand how wildfires can be better managed and the impacts of sea level rise. Reading climate scientist Professor Hawkins developed the Climate Stripes visual to help start conversations about how world temperatures have increased dramatically during the past 50 years. The stripes are now widely recognised around the world, and were included in an Intergovernmental Panel on Climate Change (IPCC) Assessment Report in 2023.



## Land carbon stores threatened

A landmark study co-authored by a Reading climate scientist has found that <u>forests are</u> <u>losing their ability to absorb carbon</u> due to increasingly 'unstable' conditions caused by humans. The research shows how the shortterm impacts of rising temperatures, deforestation and farming on many vulnerable landscapes are making it less likely for carbon stores on land to recover in the longer term.

"Our academics and graduates are tackling some of the biggest issues of the 21st century aligned to the 2030 Agenda for Sustainable Development, including sustainable food production, biodiversity conservation, animal welfare, food security, poverty alleviation, international development, climate change adaption and mitigation, ethical food systems, consumer behaviour, diet and health."

## OUTREACH

## **Climate Ambassadors**

The University runs the <u>Climate Ambassadors</u> <u>Scheme</u> in collaboration with STEM Learning and with support from UKRI, backed by £2 million of funding from the Department of Education. The scheme connects volunteer climate and sustainability experts with education settings, providing free support and guidance to help them develop and deliver impactful climate action plans – covering decarbonisation, adaptation and resilience, biodiversity and climate education and green careers.

#### **Bee expertise**

Professor Simon Potts' <u>research at Reading</u> forms a large part of the first complete assessment of the world's pollinators, laying out the importance of insects in crop production and the reasons behind their plummeting numbers. He also supported <u>Bees' Needs Week</u>, a campaign organised by the UK government's Department for Environment, Food & Rural Affairs to raise awareness about the support that bees need to thrive in the UK.

## **TEACHING AND LEARNING**

## Agricultural, policy and development

Each year, 800 students from more than 80 countries are taught by world-leading academics on courses at Reading relating to <u>agriculture, policy and development</u>, supporting a new cadre of highly skilled professionals who go on to help address the significant challenges facing the world due to climate change.

#### Farm Management Unit

The University's Farm Management Unit develops high-quality farm management teaching in the School of Agricultural, Policy and Development. The curriculum is grounded within the changing needs of employers, and students undertake professional development opportunities during their studies, including work placements. Complemented by excellent research and strong partnerships, its courses produce high quality, policy relevant research and employable graduates.

## **STEWARDSHIP/OPERATIONS**

#### **Sustainability leader**

The University made considerable progress in improving its sustainability and reducing its carbon emissions in 2022/2023. Highlights included reaching a 61.2% reduction in carbon emissions against baseline, achieving a 35% reduction in waste generated per person against baseline, and launching the Our Future First sustainable behaviours programme – which included the setup of a network of sustainability champions across the University's schools and functions.



SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

## RESEARCH

#### **Deep-sea coral**

A Reading academic has contributed to a study that explored the <u>evolutionary</u> <u>development of scleractinian corals</u>, also known as stony or hard corals. The results highlight the relevance of the evolutionary processes occurring at different depths to explain the origin of existing marine biodiversity and the consequences of altering these processes by human impact.

#### **River Thames biodiversity**

Reading research played a key role in discovery about <u>declining biodiversity in the</u> <u>River Thames</u>. A Cambridge PhD zoology researcher used decades-old research by a Reading zoologist as a comparison for their work on mussel populations in the river. The study found that found that mussel numbers have declined by almost 95% since the 1960s, with one species – the depressed river mussel – almost completely gone.

## **TEACHING AND LEARNING**

## Geography and Environmental Sciences

Undergraduate and graduate students in Reading's <u>Geography and Environmental</u> <u>Sciences Department</u> have opportunities to carry out research relating to water quality and management of local rivers and catchments, including projects to monitor ground water sources to explore how metal contamination spreads from soil to the environment.



## **STEWARDSHIP/OPERATIONS**

#### Water quality on campus

To protect local ecosystems, wildlife and human health, the University adheres to local water quality standards and guidelines for water discharges. The <u>Emissions and</u> <u>Discharge strategy</u> aims to minimise the risk of incidents through monitoring and maintenance of drainage systems and compliance testing of servicing of relevant equipment.



SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

# 2000

SPECIES OF PLANTS, INSECTS AND MAMMALS ARE FOUND LIVING ON THE UNIVERSITY OF READING'S WHITEKNIGHTS CAMPUS

## RESEARCH

## Soil security

The University hosts a wide range of research that is helping to protect and restore land ecosystems and prevent biodiversity loss. For example, the <u>Soil and Food Security</u> <u>programme</u> looks closely at what is going on in soil at the root zone of plants, helping our understanding of nutritious food production. Research undertaken with the Royal Horticultural Society explored the <u>relationship</u> <u>between different types of compost and soil</u> <u>carbon quality</u>, which is important for improving soil fertility and helping plants grow.

#### **National Fruit Collection**

The University curates the UK's <u>National Fruit</u> <u>Collection</u> to protect approximately 3500 varieties of apple, pears, plums, cherries, and bush fruits as part of an international programme to protect diversity in food crops for the future. Reading scientists are also involved in the <u>FruitWatch project</u>, which monitors changes and trends in fruit tree flowering dates.

## **OUTREACH**

## Langley Mead Nature Reserve

Reading owns and manages a community nature reserve at <u>Langley Mead</u>, comprising of 18 hectares of wildflower meadows adjacent to the River Loddon which support a significant number of rare plant species. A number of outdoor learning spaces have been created on the reserve for use by local schools, and arable farmland is being steadily restored into meadow habitats to help sustain local biodiversity.



#### **Nature Park Project**

As part of its commitment to promoting better climate education for young people across the UK, the University is developing its own <u>Nature Park</u> aligned with the National Education Nature Park scheme. The park will offer local schools access to nature-based learning experiences across the University estate.

## **TEACHING AND LEARNING**

#### Sustainable farming

A <u>free online course</u> developed by academics at Reading in partnership with the FutureLearn platform is allowing learners to explore and learn about the processes that farmers and food produces use to ensure our food is sustainable.

#### **Climate and the past**

An undergraduate module – <u>Tropical Forests</u>, <u>Climate and Lost Civilisations</u> – available to Geography and Environmental Science undergraduates, draws on extensive research and case studies developed from historical research to explore the interrelationships between climate change, human land use and tropical forest ecosystems.

## **STEWARDSHIP/OPERATIONS**

#### Designated wildlife site

Reading's Whiteknights Campus is designated as a Local Wildlife Site for its mosaic of habitats that support more than <u>2000 species</u> <u>of plants, insects and mammals</u>. These include several protected and notable species, such as the Stag Beetle and Common Toad. Several endangered bird species have also been recorded across the site.



#### **Green Flag Award**

For thirteen consecutive years, the University's Whiteknights Campus has been named as one of Britain's top green spaces in the <u>Green Flag Awards</u>, run by environmental charity Keep Britain Tidy. The scenic campus is set in 134 hectares of land and includes a lake, woodlands and the popular Harris Garden, which are all available for students, staff and the local community to enjoy.



SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

6%

OF STUDENTS GRADUATE FROM LAW AND LAW ENFORCEMENT RELATED COURSES

## RESEARCH

#### **Global Law**

The <u>Global Law at Reading</u> research group has particular strengths on topics relating to international peace and security, such as cyber warfare, the role and responsibilities of the UN, peace operations and human rights.

#### **Diversifying drone stories**

A Reading academic led an Economic and Social Research Council-funded <u>research</u> <u>project</u> that explored the use, perception, and impact of drones in changing UK airspace. The project produced a report aimed at lawyers working on drone cases and drone policy makers that explores the <u>legal dimensions of drone incidents and misuse</u>.

## OUTREACH

#### **Development Studies conference**

The University hosted the <u>2023 Development</u> <u>Studies Association Conference</u> at its Whiteknights campus, which saw a record number of delegates attend. This gathering of global experts, policymakers, researchers, and activists in the field of development studies shed light on the pressing challenges posed by human-induced environmental changes and explored their implications for development interventions and practice.

## **Climate adaption in Laos**

The Walker Institute at Reading is developing climate risk assessments for six focus provinces in Lao PDR, which will form part of the country's first National Adaptation Plan. This work is helping to strengthen local and national capacity to take up the latest climate and adaptation science to effectively address climate change and achieve sustainable development.



## **TEACHING AND LEARNING**

#### Law at Reading

<u>Master's courses</u> in Law at Reading are taught by leading experts in global governance. Modules cover the contemporary issues that affect the relationship between legal systems and the legal regulation of human rights, armed conflict, refugee movement and the use of force. <u>Undergraduate courses</u> include a module on Conflict and Global Development.

## **STEWARDSHIP/OPERATIONS**

## **Freedom of Speech**

The University adheres to a <u>Freedom of</u> <u>Speech Code of Practice</u>, developed to ensure freedom of speech is protected, within the law, across all University activities. It is part of a suite of <u>governance policies and procedures</u> that ensure the University remains accountable.



SDG 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

7

AUTHORS FROM THE UNIVERSITY OF READING CONTRIBUTED TO THE IPCC 6<sup>th</sup> ASSESSMENT REPORT – THE LARGEST NUMBER FROM ANY UK UNIVERSITY

## RESEARCH

## Sustainable food chains

To understand what drives consumer behaviour when it comes to food, Reading academics in partnership with the EU knowledge innovation community, EIT Food, have developed the <u>EIT Food TrustTracker</u>. This evidenced-based model of what drives consumer trust in the food value chain now forms part of the EIT Food's Consumer Observatory programme, and more than 23,000 consumers from 18 different European countries were surveyed using TrustTracker in 2022.

## OUTREACH

## **IPCC climate change report**

Reading climate scientists <u>played a leading</u> <u>role</u> in the latest Intergovernmental Panel on Climate Change (IPCC) report. Six researchers in Reading's Department of Meteorology were lead authors in the Working Group I report, making the University the most represented institution in the list of Working Group I authors. An additional six scientists at the National Centre for Atmospheric Science (NCAS), based at Reading, were contributing authors, and other Reading researchers were involved as reviewers.

## **Reading and EIT Food**

Academics in the <u>University's Institute for</u> <u>Food Nutrition and Health</u> are part of <u>EIT</u> <u>Food</u>, a Knowledge and Innovation Community of over 50 leading companies, universities, and scientific partners covering the entire food value chain. It is supported by the European Institute for Innovation and Technology (EIT) to transform the way we produce, distribute and consume food throughout Europe.

## **TEACHING AND LEARNING**

#### Sustainability learning

Sustainability is a cornerstone of the <u>University strategy</u>, and efforts are made to <u>embed environmental sustainability</u> across both the curriculum and staff training programmes. All students can access modules or extra-curricular activities relating to sustainable development, such as the <u>Reading</u> <u>Experience and Development (RED) Award</u>, which provides volunteering opportunities with organisations such as Reading Climate Action Network and conservation group Instant Wild.

#### **COP Climate Action Studio**

Each year a delegation of doctoral students from Reading compete to attend the UN's Conference of the Parties (COP) on climate change, either in person or remotely. <u>More than 20 Reading students</u> from a wide range of disciplines including Archaeology, Meteorology, Henley Business School, Geography and Biological Sciences benefit each year, gaining valuable insights and opportunities to interview key stakeholders which are <u>reported in blogs</u> and videos.

## **STEWARDSHIP/OPERATIONS**

#### An engaged university

The <u>University strategy</u> is built on four principles – Community, Excellence, Sustainability and Engagement. In every aspect of its work, Reading aims to build thriving partnerships, locally, nationally and internationally to bring about positive societal change.

#### **Community involvement**

Reading's university-level decision-making benefits from partnerships with local people through the <u>University Council</u> and <u>Community Forum</u>, and helps the University to better coordinate its regional engagement. In addition, the University's long-standing collaborations and <u>participatory research</u> <u>activities</u> with communities across Reading are supporting <u>local and regional</u> <u>improvements</u>.



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