

Sustainable Development Goals



Contents

SUSTAINABLE DEVELOPMENT GOALS

<div>1NO POVERTY</div> <div></div> <div>Page 10</div>	<div>2ZERO HUNGER</div> <div></div> <div>Page 12</div>	<div>3GOOD HEALTH AND WELL-BEING</div> <div></div> <div>Page 14</div>	<div>4QUALITY EDUCATION</div> <div></div> <div>Page 18</div>
<div>5GENDER EQUALITY</div> <div></div> <div>Page 20</div>	<div>6CLEAN WATER AND SANITATION</div> <div></div> <div>Page 22</div>	<div>7AFFORDABLE AND CLEAN ENERGY</div> <div></div> <div>Page 24</div>	<div>8DECENT WORK AND ECONOMIC GROWTH</div> <div></div> <div>Page 26</div>
<div>9INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div></div> <div>Page 28</div>	<div>10REDUCED INEQUALITIES</div> <div></div> <div>Page 30</div>	<div>11SUSTAINABLE CITIES AND COMMUNITIES</div> <div></div> <div>Page 32</div>	<div>12RESPONSIBLE CONSUMPTION AND PRODUCTION</div> <div></div> <div>Page 34</div>
<div>13CLIMATE ACTION</div> <div></div> <div>Page 36</div>	<div>14LIFE BELOW WATER</div> <div></div> <div>Page 40</div>	<div>15LIFE ON LAND</div> <div></div> <div>Page 42</div>	<div>16PEACE AND JUSTICE STRONG INSTITUTIONS</div> <div></div> <div>Page 44</div>
<div>17PARTNERSHIPS FOR THE GOALS</div> <div></div> <div>Page 46</div>			



Welcome

Welcome to this, our third annual report on the University's contribution to the global Sustainable Development Goals (SDGs).

At this, the half-way point towards the 2030 timeline for the SDGs, we acknowledge the words of United Nations Secretary-General António Guterres when he stated that "The SDGs aren't just a list of goals. They carry the hopes, dreams, rights and expectations of people everywhere." His comments came as the UN acknowledged that global progress towards the goals was behind schedule and saw world leaders adopt a political declaration to accelerate action towards achieving them.

This annual report showcases activities from all parts of the University, with research, curriculum, operational, and community developments all featured. As in previous years, the stories selected include examples of our inter-disciplinary and collaborative international research. These range from public health and medical innovation, to responses to the global energy security challenge, improvements in our understanding of the role and importance of biodiversity, and many more besides.

We also showcase some of the work our professional services colleagues support, such as our celebration of the 10th anniversary of the hugely successful Project SEARCH programme which helps young adults with complex learning needs find employment, to the launch of our Climate and Sustainability Assembly programme that gives staff and students the opportunity to influence the development of our sustainability commitments.

This breadth of activity has been reflected in positive progress in several league tables, where our commitment to sustainability has been recognised. In the Times Higher Education Impact Ranking, we saw our global position improve to 70th (18th in the UK) and our contribution to SDG 17 ranked 1st in the UK and 4th globally. This year also saw the first QS Sustainability ranking place us 64th globally and 17th in the UK, with the University's contribution to sustainable education ranked 13th globally and 2nd in the UK. This was further reinforced by the main QS World Ranking for 2024 which saw the University ranked 4th in the UK and 21st globally for sustainability.

We are, as ever, incredibly proud of the work happening across the University in support of sustainability and the SDGs. While these are complex, wicked problems that require sustained effort to tackle, we are delighted to again be able to reflect positively on the contribution of so many colleagues towards the Sustainable Development Goals.



Professor George Boyne
Principal and Vice-Chancellor



Professor Karl Leydecker
Senior Vice-Principal

Sustainability Report

With our Aberdeen 2040 strategy now well established, progress towards the embedding of sustainability continues on many fronts. 2022/23 has seen considerable effort to improve our emissions reporting, enhance our engagement with staff and students, showcase our institutional contribution to the United Nations' Sustainable Development Goals, and to develop an institution-wide approach to net-zero that reflects the pressing urgency of the twin climate and nature emergencies.

In January 2023, we welcomed the then Queen Consort, Camilla to an event in the new Science Teaching Hub. As well as providing an opportunity to visit this exceptional new facility and to meet with various local school pupils, the event's sustainability focus allowed the Queen to meet with staff and students involved in research, student campaigns, and those supporting our operational endeavours.

The United Nations' Sustainable Development Goals (SDGs) continue to inform our whole-institution approach to sustainability. Our annual SDG Reports, launched annually in November, collate stories from all parts of the institution, including cutting edge research and education, student activism, and operational developments. The latest report provided a compelling insight into the breadth of contributions being made by our community across these complex and urgent global challenges.

The 2023 Times Higher Education Impact rankings, based on the SDGs, saw a significant improvement in our global position, as well as some exceptional performances in individual SDGs. Overall, the University ranked 70th globally and 18th in the UK, with SDG 17 "Partnership for the Goals" ranking us 1st in the UK and 4th globally. Strong performances in several SDGs, with all 17 in the top quartile globally, represented a very positive result. 2022/23 saw the first QS Sustainability ranking published, with the University ranked 64th globally and 17th in the UK. This new assessment, based on environmental and social impact, notably highlighted the University's contribution to sustainable education, where Aberdeen was ranked 13th globally and 2nd in the UK. This was further reinforced by the main QS World Ranking for 2024

which saw the University ranked 4th in the UK and 21st globally for sustainability.

As part of an effort to engage our student and academic community more directly in discussion of our sustainability commitments, we launched our inaugural Climate and Sustainability Assembly programme with a biodiversity themed event in March 2023. These events are designed to enable staff and students from around the University to come together to share their thoughts on aspects of sustainability, with the explicit intention of informing policy and directing visible action on campus. The biodiversity event saw over 50 staff and students gather to discuss and inform opportunities to enhance our campuses and improve our nature-positive credentials. Subsequent work has included habitat mapping of our grounds, changes in the management of some greenspaces to encourage biodiversity and plans to develop a new policy and action plan that will focus effort on restoring biodiversity on our campus.

A further Assembly to galvanise and encourage a campus-wide focus on the greening of our laboratory practices took place in the autumn of 2023, and will support action to reduce laboratory waste, improve energy efficiency, and instil more sustainable approaches to the conduct of experiments and practicals.

In operational terms, the establishment of a new Sustainability team in the Estates & Facilities directorate has catalysed several areas of activity, including the Assemblies, but also notably around the ongoing development of a net-zero



strategy. A dedicated Working Group is taking forward the considerable task of developing a comprehensive, institution-wide approach to net-zero and is aiming to finalise this process in 2023/24.

The work of our Sustainable Heating Programme Board continues, with an options appraisal underway that is designed to inform recommendations for the decarbonisation of the heating networks on our Old Aberdeen and Hillhead campuses. Work to progress net-zero projects also continues, with the establishment of a Project Board to take forward the replacement of the heat distribution network at our Hillhead residential site, as well as work to modernise heat centres across our Old Aberdeen network and to install a



thermal store to improve the network's efficiency. With the recent establishment of a Board to support 'Re-imagining the Campus', the University has embarked on a process to envision the long-term future of our campuses, including how net-zero will shape our estate.

In this context we acknowledge the work co-ordinated by AUDE (Association of University Directors of Estates) on the cost of net-zero. This work has provided institutions with a tool to estimate the scale of investment required to achieve net-zero and we are using this tool to support dialogue on how best to embed net-zero investment into long-term financial planning.

For 2022/23 we have again embraced the expectation that we expand our statutory reporting of so-called Scope 3 emissions under our Public Bodies Climate Change Duty. These 'indirect' emissions relate to a variety of activities, in particular the procurement of goods and services, and staff and student travel. In 2021/22 we took the step of including procurement emissions for the first time, and in 2022/23 we will enhance our reporting further by including several new emissions categories, most notably emissions associated with student travel from around the world to study in Aberdeen, which in 2022/23 came to 14,463 tCO₂e. While this best practice approach considerably increases our reported emissions, this expansion is in line with expectations on public bodies to improve the granularity of their reporting. The collation and publication of a comprehensive range of emissions data via a user-friendly online platform has also contributed to reporting transparency by making our emissions data widely available online.

As part of improving our emissions reporting, we acknowledge the exceptional work of an intern who developed an emissions tool for us, and which is now being widely used by the sector. In a project undertaken as part of the successful Intern Plus scheme, an undergraduate Engineering student developed an innovative emissions calculation tool for the emissions impact of students travelling from around

the world to study in Aberdeen. Such is the sector's demand for improved emissions reporting, this tool has since been adopted and promoted in the UK as a best-practice resource by the Environmental Association for Universities and Colleges, while the student herself has been approached to develop a similar tool for Australian universities.

The year has also seen recognition for our sustainability research, with a variety of projects recognised or shortlisted for prestigious awards. In late 2022, we received multiple nominations in the 'Research with Impact' category at the annual Green Gown awards, with four Aberdeen projects shortlisted. The Cool Farm Tool, a greenhouse gas calculator for farmers, won the award, while the University's Lighthouse Field Station was highly commended for its work on renewable energy and marine wildlife. Two further projects have been shortlisted in the 2023 edition of the Green Gowns, including the work of Professor Azizul Islam on the Bangladeshi garment industry and the hidden costs of fast-fashion, with this work also shortlisted for the Times Higher Research Project of the Year.

Across our five interdisciplinary research themes, we continue to pursue research that addresses the challenges set down by the SDGs. We work from local to global, including focused research on Just Transitions for workers and communities in Aberdeen, sub-sea storage of hydrogen in the North Sea, rural attitudes to solar PV in the UK, and protecting marine biodiversity by understanding intellectual property rights on the high seas.

Sustainability thinking has also extended into our co-curriculum endeavours, with a new set of graduate attributes being developed that will see sustainability feature alongside global citizenship, and inclusivity as part of a cluster of skills that encourage our students to be active citizens. We are also opening campus-wide discussions and sharing of experience around sustainability in the curriculum and integrating education across the SDGs.

In summary, 2022/23 is a year in which we have seen the further maturation of our emissions reporting, the establishment of structures to encourage sustainability engagement with our staff and student communities, welcome recognition of our research impact, and gratifying league table performances linked to sustainability and the SDGs. The AUDE report has meanwhile, served a valuable role in flagging for the sector the considerable scale of the operational and financial challenges ahead. Tackling these and other related sustainability issues will continue apace in 2023/24 as we seek to further encourage our staff and student communities to recognise and address the sustainability challenges we face.





Fair trade award for Aberdeen academic shining a light on worker injustice

Professor Muhammad Azizul Islam has been honoured for his work improving the lives of garment workers in Bangladesh with a prestigious national fair-trade award.

Bangladesh is the second largest garments exporter in the world, providing millions of garments to the UK market. Research funded by the University through the Global Challenges Research Fund (GCRF) exposed large numbers of high street fashion brands are using factories that struggle to pay workers the Bangladeshi minimum wage of £2.30. The survey, carried out by the University of Aberdeen and trade justice charity Transform Trade, also found that over 50% of suppliers experienced unfair purchasing practices including failure

to pay and discount demands, which led to forced overtime and harassment of workers.

After witnessing the tough life faced by workers in Dhaka as a child, Professor Islam has dedicated his life's work to improving the lives of garment workers. His research, education, and campaigning aim to give a voice to millions of unheard workers and enable policy change to ensure profits are not made at the expense of people. In recognition of this work, Professor Islam was named the winner of the Fair-Trade and Sustainability category in the Scottish Fair-Trade Awards 2022.

"I am truly honoured to have received this prestigious award," he said.

www.abdn.ac.uk/news/16528/

"It is extremely humbling for my work to be recognised in this way and I am committed to continuing to highlight unfair trading practices and driving change through impactful research to make workers lives better around the world."

Professor Muhammad Azizul Islam



Cost of living crisis is fuelling the obesity epidemic

Professor Alexandra Johnstone from the Rowett Institute has provided evidence that rising food insecurity is fuelling the consumption of highly processed foods, high in energy density, fat, sugar, and salt.

With an estimated two-thirds of UK adults already overweight or obese, Professor Johnstone calls for improved policy, behavioural interventions, retail strategies and the need for actionable evidence to address dietary inequalities in people living with obesity and food insecurity. Research undertaken as part of the "FIO Food: Food Insecurity in people living with Obesity" project found that food insecurity has seen a sharp increase since the Covid-19 pandemic. The cost-of-living crisis is now accelerating the trend with 40% of British consumers reporting that they are worried about being able to afford to purchase food in the next month.

Professor Johnstone highlights the intersection between low income and obesity, noting that it:

"is more complex than simply the 'energy in, energy out' concept. If the UK government's Obesity Strategy is not maintained then it will likely widen the existing health inequality gap even further, with the potential to worsen the health of the public and increase the prevalence of obesity in both adults and children. Urgent action is needed to find evidence-based solutions to deliver safe, healthy, affordable food, regardless of where people live or how much they earn."

www.abdn.ac.uk/news/16913/





Rowett Institute receives £25m funding from Scottish Government



The Scottish Government has continued its investment in human nutrition and food science at the Rowett Institute with a funding boost worth £25 million over five years.

It is anticipated the funding will support some 35 projects across a variety of topics including developing crop science and sustainability, tackling climate change and global food inequality and insecurity. Director of the Rowett Institute Professor Jules Griffin said: "Receiving this huge amount of funding is fantastic news to celebrate not just for the University but for the city of Aberdeen, the north-east area and beyond.

"This continued funding will allow us, alongside our collaborators, to build on the huge gains that have already been made in understanding the complexity

and intertwined issues that arise between agriculture, environment, and human health. The Rowett Institute has led landmark studies of diet and health for more than 100 years and is well placed to take forward research on how to achieve a healthy and sustainable diet as well as how to improve the health benefits of the food products we produce."

The funding will see Rowett Institute scientists informing food and drink policy by working with the Scottish Government and partners, as well as continued collaboration with stakeholders including the farming community, the food and drink industry, Food Standards Scotland, and Food and Drink Opportunity North-East.

www.abdn.ac.uk/news/16132/



Consumer attitudes to novel vertical farms explored



University PhD researcher Annika Bucky is researching Scottish attitudes to food grown in vertical farms as part of a project into the new farming technique. The research is being undertaken in consultation with the first facility of this type in the Aberdeenshire region, Vertegrow in Newburgh.

The project will question the perceptions of the general public, farmers, chefs and wholesalers as to whether vertical farming will be seen as an acceptable food source. Vertical farming enables farm horticulturalists to grow any crop at any time of year, using technology to mimic the light intensity, humidity and nutrients required for specific plants.

Producing food in these controlled environments could mean shortening the supply chain for local buyers, minimising transport emissions, and making fresh

produce available all year round. Other environmental benefits include a reduced physical footprint, freeing up land for other uses, and water conservation. Using rainwater storage and cyclical watering systems means vertical farms can reduce water use in growing by up to 95%.

Ms Bucky noted that "People don't really know about it that much yet because it's a very novel food source. We want to look at what Scottish consumers think of vertical farming, are they open to have it as a food source, especially with the technology that's involved." Annika's PhD is supported by the University's Rowett Institute and Scotland's Advanced Plant Growth Centre at The James Hutton Institute.

Video: www.abdn.ac.uk/news/17007/





Multi-million-pound investment to adapt 'game-changing' technology for Lyme disease and diabetes



The team who devised ground-breaking technology to create Covid-19 tests at the height of the pandemic have joined forces with US biotech giant Innova Medical Group (IMG) to adapt the technology to develop the tests for a range of other diseases including diabetes and Lyme disease. Vertebrate Antibodies Ltd (VAL) an Aberdeen University spinout and emerging biotech, secured the investment with IMG, a leading specialist in innovative solutions for rapid screening and diagnosis of diseases, to form a new holding company called EpitogenX.

During the pandemic VAL used their EpitoPredikt™ and EpitoGen® Technologies to develop antibody Covid-19 tests as part of the Scottish Government Chief Scientist Office Rapid Response in Covid-19 (RARC-19) research programme. EpitogenX will focus on the development of these technologies to reach industrial maturity for widespread distribution.

The potential applications of the technology are vast including immunogenicity profiling, antibody production, nanobodies display, lab-based point-of-care diagnostics, and vaccine screening. The immediate objective for EpitogenX is to develop lab-based and point-of-care diagnostic tests for Lyme disease and diabetes, both of which are notoriously difficult to diagnose early enough to enable timely intervention. The new tests will be cheaper and most importantly, have greater overall accuracy than currently available tests.

The long-term vision is to produce a portfolio of diagnostic products to detect autoimmune disorders and infectious diseases. Ultimately, fine-tuning of the technology could result in wider applications including vaccines and safer therapeutics for a variety of diseases.

www.abdn.ac.uk/news/16910/



University scientists fight back against global public health emergency

Following the declaration by the World Health Organisation (WHO) that antimicrobial resistance is one of the top global public health threats facing humanity, a 5-year long project is now underway to find the best and most effective forms of defence against this growing problem.

The UK Antimicrobial Registry (UKAR) study, led by the University's Professor Gary Macfarlane, will incorporate information from hospitals across the UK to achieve a multi-stakeholder registry of antimicrobial agents.

Funded by the British Society for Antimicrobial Chemotherapy, the study will determine which antibiotics are the most effective and best able to control the threat of antimicrobial resistance. Antimicrobial resistance occurs when bacteria, fungi and viruses mutate over time and no longer respond to medicines.

This can make infections harder to treat and increases the spread of disease. One common example, MRSA, often labelled a 'superbug' is an example of a bacteria that has become resistant to commonly used antibiotics and as such proves difficult to treat and can lead to serious illness and even death.

The UKAR study will look at how effective eleven new-to-market antibiotics are, how well they work, how good they are at treating different infections and how they are currently being used in UK hospitals on infections that cannot currently be treated. The resulting registry will help doctors and scientists navigate the ever-changing microbial environment and keep the threat of antimicrobial resistance at bay.

www.abdn.ac.uk/news/16956/



3

GOOD HEALTH AND WELL-BEING

Research reveals Orkney cancer gene link

A study published in the European Journal of Human Genetics has linked a gene variant that causes a higher risk of developing breast and ovarian cancer to an historic origin in Westray, Orkney.

Most breast and ovarian cancers happen due to chance damage to genes. However, some cases are caused in part by inherited alterations which increase the chances that women will get one or both conditions. One of the most common of these predisposing genes is BRCA1.

Around one in 1,000 women across the UK have a BRCA1 variant giving them a high lifetime chance of developing breast cancer and ovarian cancer.

Over many years, the North of Scotland NHS genetics clinic team found the same specific single variant in the BRCA1 gene repeatedly in women from Orkney with breast and/or ovarian cancer. The genetics team used clinical genealogy to show that the patients with the variant linked into one large family with an origin in the Orkney outer isle of Westray.

Professor Zosia Miedzybrodzka, Professor of Medical Genetics at the University, is Director of the NHS North of Scotland Genetic Service based within NHS Grampian in Aberdeen and has run the Orkney genetic clinic for over 20 years.

www.abdn.ac.uk/news/16704/

“**Developing cancer is not solely down to carrying the BRCA1 variant alone. There are many complex factors, and some people with gene alterations will not get cancer. However, we know that testing and the right follow-up can save lives.**”

Professor Zosia Miedzybrodzka



3

GOOD HEALTH AND WELL-BEING

Babies have air pollution in their lungs and brains before they take their first breath

Unborn babies have air pollution particles in their developing lungs and other vital organs as early as the first trimester, new research has revealed.

Working with scientists at Hasselt University, Belgium, University of Aberdeen researchers studied air pollution nanoparticles, called black carbon - or soot particles - to see whether these can reach the foetus. The ground-breaking findings published in Lancet Planetary Health show that the newborn baby and its placenta are exposed to air pollution black carbon nanoparticles proportionally to the mother's exposure. These nanoparticles also cross the placenta into the foetus in the womb as early as the first trimester of pregnancy and get into its developing organs, including its liver, lungs, and brain.

This latest study is the first time this has been shown to occur and the team behind the study say the findings are very worrying.

Professor Tim Nawrot said:

“**We know that exposure to air pollution during pregnancy and infancy has been linked with still birth, preterm birth, low weight babies and disturbed brain development, with consequences persisting throughout life.**”

The study authors conclude that now it is known that the developing baby in the womb is directly exposed to black carbon air pollution particles, uncovering the mechanisms involved in health risks has become even more urgent.

www.abdn.ac.uk/news/16424/

11

SUSTAINABLE CITIES AND COMMUNITIES

13

CLIMATE ACTION



£2.9m funding boost to promote mental wellbeing for young people in sub-Saharan Africa



A team of researchers from the University have been awarded around £2.9 million to help promote mental wellbeing in children and adolescents living in some of the least developed countries in the world.

Throughout the four-year project, the team will work alongside children and adolescents, parents, community members, teachers and policymakers in Rwanda and Ethiopia to improve mental wellbeing.

Led by Professor Pamela Abbott from the School of Education jointly with Professor Agnes Binagwaho, Vice Chancellor of the University of Global Health Equity, Rwanda, the multi-faceted

cross-disciplinary team includes Dr Lucia D'Ambruoso from the Aberdeen Centre for Health Data Science, Professor Graeme Nixon and Dr Rachel Shanks from the School of Education; and Professor Paul McNamee from the Health Economics Research Unit.

Funded by the National Institute for Health Research (NIHR) the project will design and test a mindfulness programme in schools that the researchers anticipate will 'make young people happier, less likely to develop mental and physical illnesses and better able to have fuller roles in society'.

www.abdn.ac.uk/news/16042/

“*Ultimately, we hope that our project will also train the next generation of African research leaders in health research and address one of the biggest burdens of preventable suffering of our generation.*”
Dr Rachel Shanks



Rwandan research project provides lesson in improving adult literacy



Only 10% of adults in the target areas had attended an adult literacy course with just 14% of those finding they had gained the skills they hoped they would. Of these adults, 66% still could not read, 76% could not write and 93% could not do simple calculations. Research shows that adult learners are generally poor and must prioritise earning a living, with many deterred from taking classes due to their time, location or lack of basic teaching and learning materials. While most of those who are illiterate are women and people living in rural areas, men are less likely to attend adult literacy classes.

A five-year international development research project led by the University has successfully trialled a new social practices approach to teaching which is helping improve adult literacy in Rwanda.

Researchers from the University worked with the Institute of Policy Analysis and Research in Rwanda, the University of Rwanda's College of Education and three Teacher Training Colleges across Western Rwanda to develop, implement and embed a social practices approach for adult literacy education that can be delivered by local institutions effectively and affordably.

In their final report, 'Fostering a social practices approach for adult literacies to improve people's quality of life in Rwanda', the team set out a number of recommendations for policy makers to scale up and sustain the provision of adult education nationally. These include training more community education tutors and making the role salaried to increase delivery, as well as running an awareness-raising programme to improve take-up of literacy education among males.

www.abdn.ac.uk/news/16772/





Women STEM students gaining skills to address global challenges thanks to new scholarships



Five women from Pakistan, India and Bangladesh are studying fully funded postgraduate degrees at the University with the aim of gaining the skills necessary to foster a career addressing some of the biggest problems of today in their home countries.

Aberdeen is one of ten UK universities partnering with the British Council to offer scholarships to women from South Asian countries including Bangladesh, India, Nepal, Pakistan and Sri Lanka. Syed Sophia, Thara Pappan Selvam, Tasnim Fateha, Nimra Ashfaq and Urvashi Prajapati are studying for degrees in Renewable Energy Engineering, Information Technology, Data Science, and Geographical Information Systems. The women intend to use their learning to address some of the most pressing global challenges of our time, including deforestation and environmental damage, education for special needs children, preparedness for extreme weather, and affordable energy.

Urvashi Prajapati who is studying for a Masters in Renewable Engineering said: "I want to set an example for women that they can strive for whatever goals they want and achieve their dreams. Renewable engineering is a growing sector and the Masters degree is something I can achieve that will benefit my career and home country."

Nimra Ashfaq, who is studying for a Masters in Geographical Information Systems, said:

"I have achieved what many people can only dream of - the opportunity to study in a place I feel safe and secure. Without the scholarship this great opportunity I have been given would not have been possible."

www.abdn.ac.uk/news/16467/



Treatment and recovery from stroke worse for women and 'racial minorities'



A major study on people with diabetes has found that following a stroke, patients from racial minorities experienced greater stroke severity, prolonged hospitalisation and received less specialised treatment than their white counterparts. The same data also showed that women were more likely to die if they were non-white.

The study from the University and led by Professor Phyo Myint, Chair in Old Age Medicine, analysed data from the US database - the US National Inpatient Sample. The research team which included colleagues from Keele University analysed data from patients with diabetes who had been admitted to hospital following a stroke encompassing some 462,020 admissions. The full paper was published in the journal Clinical Neurology and Neurosurgery.

Professor Phyo Myint explained: "Race and sex disparities are important considerations in managing any long-term conditions, as conditions may not only present differently between genders and ethnic groups, but also may warrant different management. Such differences may also have important implications for disease prevention. While these differences have been described in people with diabetes, it was still unclear to what extent these differences are also apparent in patients with diabetes after suffering a stroke. This is particularly important as diabetes is a significant risk factor for stroke and a significant proportion of diabetes patients unfortunately suffer from strokes as a result. These findings are important not only in the context of the United States but can also have important clinical implications in the UK given similar racial diversity."

www.abdn.ac.uk/news/22265/





University launches new Sustainable Water Management MSc

A new Masters programme in Sustainable Water Management, builds on the University's world-leading research to prepare graduates for a career in this globally vital sector. *The UN 2023 Water Conference* highlighted international efforts to improve the way water is used, consumed and managed, all of which are key aspects of the new programme which will provide the skills and knowledge required to solve complex water management issues including: water security; impacts of climate and land use change on water resources; flood risk; water pollution; maintaining ecosystem services; and related management approaches.

Experts from the School of Geosciences, internationally renowned for its water resource research, will provide input and teaching on the programme. Programme Leader Dr David Haro commented:



Sustainable water management requires technical expertise and innovation, but also an understanding of the social, economic, commercial and political aspects of sustainability. That is why we take an interdisciplinary approach that welcomes students from diverse academic backgrounds, including the social sciences, environmental sciences, geosciences and engineering.

The adoption of a new Water Action Agenda at the UN 2023 Water Conference in New York – described as a watershed moment in terms of achieving the UN Sustainable Development Goals – underlined the importance of sustainable water management in achieving a water-secure world. We're delighted to play our part in this effort through the launch of our new Sustainable Water Management MSc, which will provide graduates with the skills they need to make a real contribution in this important and growing area.

www.abdn.ac.uk/news/16925/



How much water do we really need?

Without water humans can only survive for a few days, however the exact amount we need daily is difficult to measure objectively. New research from the University shows the recommended water intake of eight glasses (around two litres) a day seldom matches our actual needs, and in many situations, is too high.

Previous research in this area has depended on questionnaires applied to relatively small numbers of people. Now, University researchers have collaborated with scientists from across the world to measure water turnover (which is closely related to water requirements) using a stable isotope technique. This technique involves people drinking a glass of water in which some hydrogen molecules have been replaced by deuterium. Deuterium is found naturally in our bodies and is completely harmless. The rate of elimination of the extra deuterium from

the glass of water tells us how quickly water in the body is turning over.

The work showed that water turnover is higher in hot and humid environments and at high altitudes, as well as among athletes, pregnant and breast-feeding women, and individuals with high levels of physical activity. Water turnover was also higher in developing countries, possibly because in developed countries air conditioning and heating protect individuals from exposure to environmental extremes that elevate water demands. The research resulted in a general equation for predicting water turnover that can be used to anticipate the effects of, for example, climate and population demography. This will help countries anticipate their future water needs.

www.abdn.ac.uk/news/16566/



Hydrogen 'bank' could see production advantage for Scotland



Scientists at the University are developing technology that will enable electricity generated by renewables to be 'banked' as green hydrogen in depleted oil and gas reservoirs alongside industrial carbon emissions.

The research could play a key role in helping Scotland achieve its net zero ambitions and even become a net exporter of hydrogen, while providing a new lease of life to depleted oil and gas reservoirs and aquifers, as well as the pipeline and well infrastructure surrounding them. It could also reduce constraint payments made to windfarm operators to stop generating electricity when production is too high, by allowing the excess electricity to be converted to green hydrogen and stored for use elsewhere.

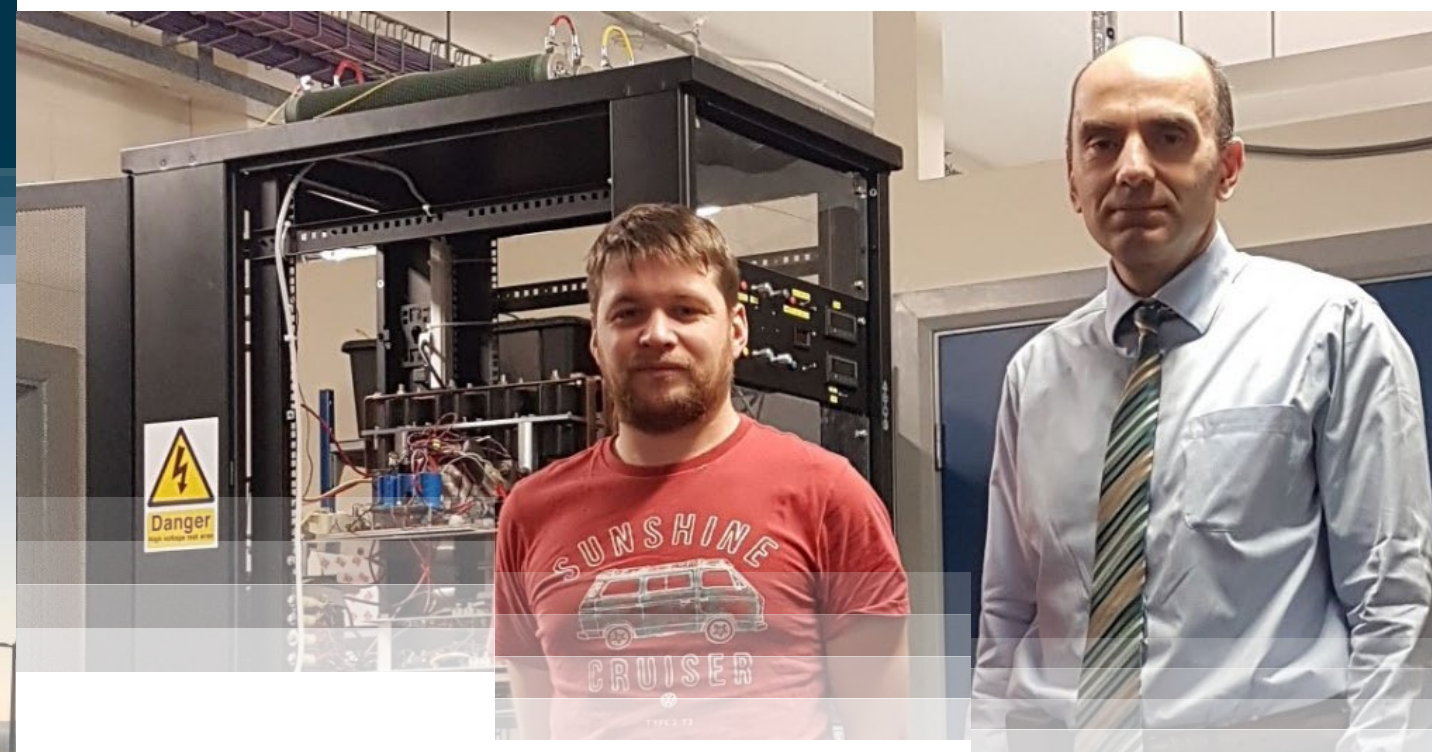
This Net Zero Technology Centre funded project, led by Dr Prashant Jadhawar (School of Engineering), will evaluate the most effective means of transporting hydrogen through the North Sea pipeline network, and will explore the co-storage of hydrogen and CO₂ in depleted hydrocarbon reservoirs and aquifers.

Dr Jadhawar commented:



By offering the safe and effective storage of bulk quantities of hydrogen and CO₂, our project offers a unique opportunity to help Scotland meet its hydrogen production targets as well as offering the potential for Scotland to become a net exporter of hydrogen.

www.abdn.ac.uk/news/22242/



Renewables project receives £75,000 Scottish Enterprise funding

A project led by the University that is seeking to unlock the full potential of Scotland's renewable energy resources has been awarded £75,000 in funding from Scottish Enterprise High Growth Spin-Out (HGSP) programme. The LC Direct Current Circuit Breaker (LCDC CB) has been developed by Professor Dragan Jovic from the University's School of Engineering as an essential component of DC systems, which are seen as key to integrating Scotland's large amount of dispersed and remote renewable energy sources, replacing traditional AC-based systems.

While current DC circuit breakers are too slow and costly and have hampered the expansion of DC systems, the research and laboratory tests on hardware prototypes of the LCDC CB in the EU Horizon 2020 project PROMOTiON have delivered promising results. Professor Jovic is now working with Royal Society

Entrepreneur in Residence Paddy Collins to develop a spin out company to commercialise the LCDC CB, which may also contribute to the wider push for electrification in many industries as well as enabling large-scale green hydrogen generation.

Professor Jovic commented:



I am grateful to the Scottish Enterprise HGSP for its support, which will enable us to kick start the development of a company and open up routes to commercialisation for the development of this exciting technology which has the potential to help Scotland meet its Net Zero ambitions.



www.abdn.ac.uk/news/16641/

8 DECENT WORK AND ECONOMIC GROWTH



12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

Hemp has the potential to make Scotland's agricultural sector carbon neutral

For the first time a detailed analysis has been carried out on the market opportunities for the Scottish hemp sector. Hemp was once widely grown in Scotland and its cultivation dates back more than 6000 years. It has many uses including offsetting carbon dioxide, as a food, and as an eco-friendly fertiliser and pesticide. It is currently being used in building materials, as a biofuel, textile fabric and even as an alternative to plastic. As a food source it is high in protein, fibre and micronutrients, as well as having an exceptional fatty acid profile.

The "Potential Market Opportunities for Hempseed and Fibre in Scotland" report is a collaboration involving the University of Aberdeen's Rowett Institute and Scotland's Rural College (SRUC), partnering with the Scottish Agricultural Organisation Society (SAOS) and the Scottish Hemp Association (SHA). It analysed the supply chain for hempseed

and fibre in Scotland using data collected from farmers predominantly in the north east of Scotland as well as the Borders.

Personal Chair Professor Wendy Russell of the Rowett Institute, who has worked with farmers to support hemp production in Scotland and developed the project with partners, added:



We have already demonstrated the health benefits of this important environmental crop and will continue to support our farmers and processing sector on this exciting journey. Hemp oil, which has an optimal ratio of omega fatty acids has already been produced in Scotland, but this report also demonstrates the wider societal and economic potential of hemp production in Scotland.

www.abdn.ac.uk/news/16425/



8 DECENT WORK AND ECONOMIC GROWTH



3 GOOD HEALTH AND WELL-BEING

Link between performance-related pay and ill health



A study led by the University has found that workers who rely on performance-related pay (PRP) are at higher risk of chronic stress, heart disease and poor mental health. The study found that PRP contracts – often associated with the so-called 'gig' economy – were linked to poorer mental health and higher blood pressure. It also showed that PRP employees, particularly men, have higher levels of fibrinogen which is associated with chronic stress.

The study highlights a need for firms that use PRP contracts to consider implementing policies to alleviate worker stress. Previous studies of the relationship between PRP and health have been inconclusive and largely based on self-reported data which

is vulnerable to bias. In this study, scientists undertook a rigorous statistical analysis of data from the nationwide UK Household Longitudinal Study (UKHLS) which included medical information on physiological measures of stress, such as blood pressure and stress biomarkers in blood samples.

Professor Keith Bender, SIRE Chair in Economics at the University's Business School, co-authored the interdisciplinary study with academics from the Business School and the University's Institute of Applied Health Sciences. The study is part of a project funded by the Economic and Social Research Council. The results present the clearest picture yet of the link between PRP and ill health.

www.abdn.ac.uk/news/17020/



Digital solutions aim to make cement greener

Reducing carbon emissions caused by cement production is the aim of a major new project that will investigate how the use of substitute cement materials can be maximised.

Researchers from the University will work with other European universities and research institutes as part of the DETOCS research partnership led by multinational cement industry equipment provider FLSmidth.

The main aim of the project is to develop digital solutions to maximise the use of so-called supplementary cementitious materials (SCMs), which play a key role in the industry's net zero ambitions. When combined with traditional cement as a substitution for traditional Portland clinker (used as the binder in many cement products), SCMs significantly

reduce the carbon emissions associated with production. They come in many forms including naturally occurring pozzolans and industrial byproducts like fly ashes, blast-furnace slags, and silica fume.

However, a major challenge is the availability of good-quality SCMs at a large enough scale to make them viable in cement production. Key to unlocking this challenge is the ability to switch quickly and easily between SCMs during production. The DETOCS project aims to address this problem by using the vast amounts of data gathered by operators over many decades and combining this with their understanding of production processes to develop digital solutions that will supercharge the use of SCMs.

www.abdn.ac.uk/news/22206/



ONE BioHub marks a new life sciences research commercialisation milestone for the region

ONE BioHub, an iconic new location for life sciences in Aberdeen has launched at the Foresterhill Health Campus. Created to inspire ambition, give scientists and innovators skills and knowledge to turn research and innovation into businesses, and support them on the entrepreneurial journey, ONE BioHub will support start-up, spin-out, and scaling life sciences businesses, tackling modern health challenges. Facilities include incubator laboratories and offices, fully customisable grow-on space, commercialisation and growth programmes, and access to mentors, expert networks, and investors.

The new-build hub is a focal point for action and investment to diversify the economy and maximise the impact of life sciences companies, the University of Aberdeen, Robert Gordon University, and NHS Grampian. It will accommodate up to 400 bio-entrepreneurs at full occupancy.

An Aberdeen City Region Deal innovation project, ONE BioHub is led and co-funded by Opportunity North East (ONE)

with funding from the UK Government, Scottish Government and Scottish Enterprise. Professor George Boyne, Principal and Vice-Chancellor of the University of Aberdeen, said: "ONE Biohub recognises the leading life sciences research expertise we have here at the University of Aberdeen and across the region and will help nurture that expertise and take it closer to market which in turn will contribute to health, wellbeing and prosperity."

Alison Evison, Chair of NHS Grampian, said:

"We are delighted that our partners in innovation will be here on the Foresterhill Campus. This cements our commitment to exploring new and innovative ideas with industry and life sciences within our healthcare systems."

www.abdn.ac.uk/news/17048/



10 REDUCED INEQUALITIES



Project SEARCH celebrates ten-year anniversary

A project based at the University which helps local people with learning disabilities secure employment has celebrated its tenth anniversary. DFN Project SEARCH combines real-life work experience, training in employability, and independent-living skills to young people in the north-east of Scotland with learning disabilities and/or autistic spectrum conditions who want to go on to find paid employment.

As part of the anniversary celebrations, the DFN Project SEARCH University of Aberdeen Alumni Network was launched. The Network will allow graduates to keep in touch with each other beyond their time on the programme and act as a vital link between the on-site team and graduates to share information about job opportunities and to allow staff to improve the programme by receiving feedback and understanding how interns' careers and lives progress over the longer term.

Heather Crabb, who leads the University's contribution to Project SEARCH, said:



Over the past ten years our programme has made a real difference to the lives of our interns and their families by giving them the support and encouragement they need to help them learn, develop and grow as individuals in both their personal and professional lives. The success of Project SEARCH shows how much can be achieved through collaboration and partnership working and as we enter our second decade, we remain committed to ensuring that our young people leave us with the transferable skills, knowledge and experience which enable them to be a real asset to their employers.



www.abdn.ac.uk/news/22238/



4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH



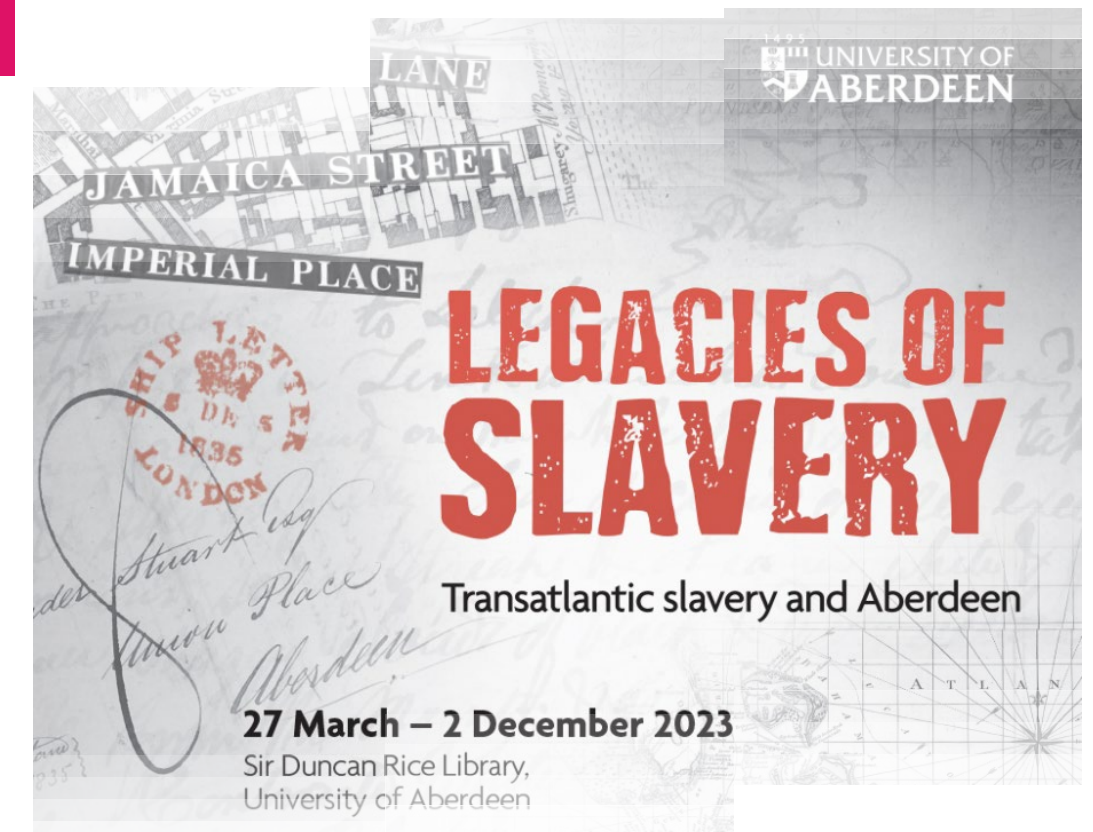
10 REDUCED INEQUALITIES



Exhibition to explore North-East's legacies of slavery



16 PEACE AND JUSTICE STRONGER INSTITUTIONS



The "Legacies of Slavery" exhibition, which featured in the Sir Duncan Rice Library from March to December, drew on a two-year research project which investigated the legacies of slavery for the University and the region, exploring the North-East's links to the slave trade.

No slaving voyages left from Aberdeen, but Aberdonian sailors and captains worked on slave ships departing from other ports, while others worked in the West African trading forts of the Royal African Company where enslaved people were sold. Goods produced by enslaved people arrived in Aberdeen's port and were traded in the city, including sugar, rum, cotton, and tobacco. Aberdeen was also the starting point for many Scots who

left for the Caribbean to make money from slavery.

The exhibition hosted original documents that recorded the brutal conditions people endured, but also how enslaved people resisted slavery. The exhibition also explored how individuals from North-East Scotland grew wealthy from slavery, and how these profits benefitted North-East institutions including the colleges of King's and Marischal (now the University of Aberdeen). The exhibition challenged visitors to reflect on the legacies of slavery and to give their opinion about what the University and the region should do next to address the continuing legacy of slavery.

www.abdn.ac.uk/news/16867/

The exhibition is an important step towards a truthful telling of this story and so an understanding of both how this shaped our past and the continuing legacy it has today.

Neil Curtis, Head of Museums and Special Collections

11 SUSTAINABLE CITIES AND COMMUNITIES



10 REDUCED INEQUALITIES



New outdoor exhibition celebrates Polish life in Aberdeen

The contributions of the Polish community to life in Aberdeen city have been celebrated in an outdoor exhibition in the Cruickshank Botanic Garden. 'Loons & Quines o'Seaton and Old Aberdeen' demonstrates the influences and contributions made by Poles who have made Aberdeen their home over the decades. The author and originator of the project is Marta Surowiec, an award-winning graduate of the Academy of Fine Arts in Wroclaw, Poland who currently lives in Scotland where she is engaged in activities for the Polish diaspora and popularizing the history, culture and national heritage of Poland.

Photographs featured in the free exhibition were taken by University of Aberdeen graduate Dorota Puskiewicz, Master of Letters in Visual Culture and Film at the University. The outdoor exhibition was the last event of a diverse six-part Polish-Scottish Mini Festival for 2023 organised by the Polish Association

Aberdeen. The festival had featured an indoor exhibition in the Trinity Centre, a 'Polish-Scottish Ceilidh' at Pittodrie Stadium, and various musical events.

Mateusz Łagoda, President of the Polish Association Aberdeen said:



Many Poles have made Aberdeen their homes, we feel proud of our contribution to our granite city and proud of our identity. What is more, we want to bring out a festival that celebrates Aberdeen as our city of choice so that our friends, neighbours and work colleagues can understand a different culture and in addition to this people from the other parts of the country will visit to see our events.



www.abdn.ac.uk/news/16911/



11 SUSTAINABLE CITIES AND COMMUNITIES



Digital museum lets visitors explore Yup'ik life in the past

Extraordinary archaeological discoveries from a frozen 16th century Alaskan village can now be viewed online for the first time. The Nunalleq Digital Museum features some 6,000 objects found over a decade of excavations in western Alaska, including dolls, ceremonial dance masks, jewellery, cooking utensils and sewing tools. Meaning 'the old village' in Yup'ik, Nunalleq is a site dating from 1570-1675 AD.

The permafrost has preserved tens of thousands of rarely seen artefacts and the collection ranks as one of the largest and best-preserved in the world. Using artists reconstructions and 3D scans, the digital resource brings to life Yup'ik life, with visitors able to cycle through the seasons and discover what village life was like before the Euro-American colonisation of Alaska.

The project, funded by the Arts and Humanities Research Council, is a collaboration between the University of Aberdeen, the 3DVisLab at the

University of Dundee, and Qanirtuuq Village Corporation in Quinhagak, Alaska. Dr Charlotta Hillerdal, lecturer in Archaeology said:



The Digital Museum is the latest step in a long-term relationship between researchers and residents of the Native Alaskan village of Quinhagak who first contacted us in 2009 to carry out a rescue dig after seeing their coastline being washed away due to global warming. This unique digital resource gives worldwide access to these important artefacts, alongside reconstructed scenes of life in the area in the 1600s which integrate the crucial Yup'ik perspective into the archaeological interpretations.



www.abdn.ac.uk/news/22118/



Quick and easy ready meals not the best for us - or the planet

A new study from the Rowett Institute has found that ready meals are not only not as nutritious as home cooked meals, but also have a higher carbon footprint.

Scientists compared nutritional quality, greenhouse gas emissions and cost of 54 chilled or frozen ready meals, and equivalent home-cooked meals, enabling them to compare animal versus plant-based meals, and assess the effects of various cooking methods on greenhouse gas emissions. The average level of free sugars (those that are added to food) in ready meals was significantly higher than in equivalent home-cooked meals. Ready meals also had significantly higher greenhouse gas emissions than equivalent home-cooked meals.

Dr Magaly Aceves Martins, a research fellow at the Rowett Institute, said: "Animal-based ready meals have a much

higher carbon footprint than equivalent home-cooked meals. Emissions are nearly 40% higher for animal-based ready meals than equivalent home-cooked meals. Plant-based ready meals and equivalent home-cooked meals had comparable greenhouse gas emissions. Cooking ready meals or equivalent home-cooked meals add further emissions – we found oven cooking added up to 20% to greenhouse gas emissions, whereas stove and microwave cooking added only up to 4% or less than 1% to greenhouse gas emissions, respectively."

With a market value of over £3.9 billion, the UK ready meal market is booming, however this study finds that there is significant scope for the food industry to improve their nutritional quality and reduce carbon footprint.

www.abdn.ac.uk/news/16743/



Research aims to make plant-based diets work for everyone



Making plant-based diets a realistic and enjoyable option for all is the goal of a new project that aims to promote healthy diets that are environmentally sustainable. A multidisciplinary team of scientists at the Universities of Aberdeen, Glasgow and Oxford has received a £940,000 award from the Wellcome Trust for the three-year project investigating the potential of plant-based convenience foods in encouraging healthy, climate-friendly diets that are affordable, practical, and compatible with modern lifestyles.

By taking a 'big picture' view of the complex driving forces behind dietary choices – including social and practical considerations – the team aim to come up with realistic options for plant-based diets that remove barriers to adoption. The study will work with groups of young women to understand the complexities of their lives and how this dictates their diets, developing real-life scenarios to create advice that encourages plant-based choices.

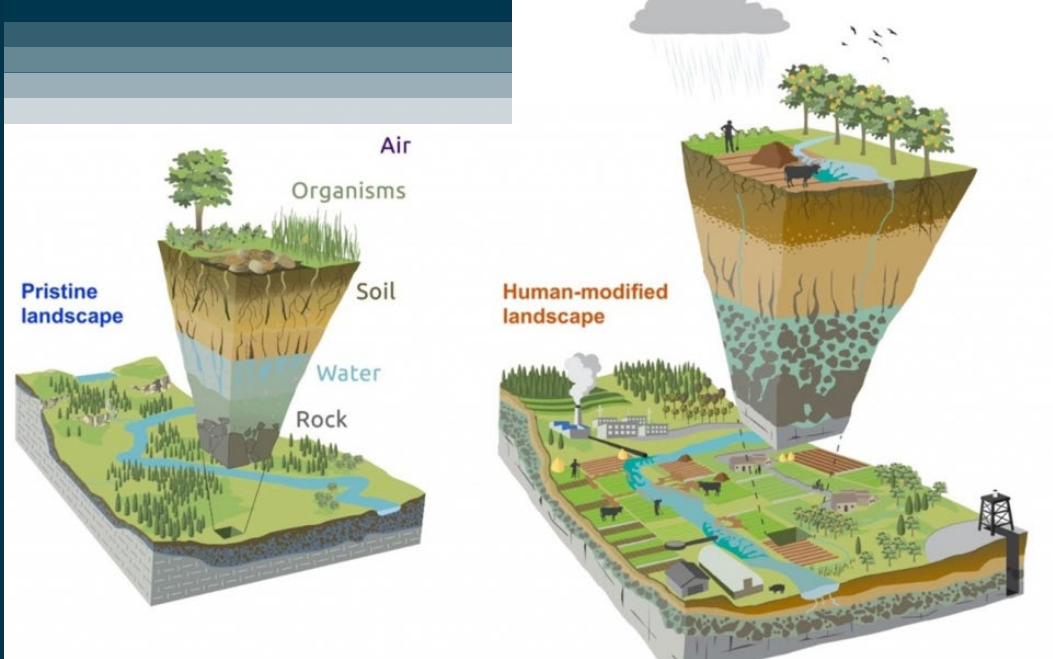
Professor Jennie Macdiarmid, the University's Interdisciplinary Director for Health, Nutrition and Wellbeing, is leading the project, said:



Transitioning towards climate friendly diets requires people to reduce meat consumption and increase plant-based food. While there is a growing trend towards plant-based diets, we know that changing diets is notoriously hard which presents a barrier to meaningful change. The strength of this project is that we are working with scientists from multiple disciplines including health and nutrition, climate science, psychology, social policy, and the creative arts to build healthy diets that consider the impact on the planet, health and have broad appeal.



www.abdn.ac.uk/news/22365/



Local knowledge vital to help tackle climate change

University scientists have contributed to new research which shows that plans to tackle the impacts of climate change on food security must integrate local knowledge to help preserve the Earth's critical zone. The critical zone is the thin layer of the planet's surface that stretches from the roots of drinking water aquifers to the tops of plants and trees. It supports and sustains animal and plant life by regulating the flow of water, greenhouse gases, nutrients and energy. Access to food, drinking water and clean air depend on the zone, but decades of human activity have degraded its condition globally.

The Aberdeen-led project involved 11 UK and 13 Chinese institutions. Professor Paul Hallett of the University's School of Biological Sciences was the project's lead investigator and one of many to lend their expertise to the research. Professor

Hallett said: "Across a number of critical zone observatories in China we obtained new knowledge on how the earth, from the bedrock up to the vegetation above, responds to the impacts of people. We explored how people are driven to make decisions about farming, considering the best ways that the environment and farmer livelihoods could be protected." The team's insights are summarised in a new diagram, which seeks to visually convey human impact on the critical zone more clearly than ever before.

The research, published in Earth's Future was supported by funding from the Natural Environmental Research Council, China CZO and MIDST-CZO, and the National Natural Science Foundation of China.

www.abdn.ac.uk/news/22294/



Half of replanted tropical trees don't survive

On average, about half of the trees planted in tropical and sub-tropical forest restoration efforts do not survive more than five years, but there is enormous variation in outcomes, new research has found. The study, an international collaboration involving scientists from 29 universities and research centres including the University of Aberdeen, analysed data from 176 sites in tropical and sub-tropical Asia. The team found that, on average, 18% of planted saplings died within the first year, rising to 44% after five years. However, survival rates varied greatly amongst sites and species. The findings were published in Philosophical Transactions of the Royal Society B.

Forest restoration is a powerful tool to tackle biodiversity loss and climate change, by locking away carbon and supporting important habitats. Reforestation projects are also used widely for carbon offsetting. While the main measurement used for many

projects is the number of trees initially planted, the research shows that many trees do not survive long-term. In some sites, survival rates were higher, showing that with the right approach restoration has the potential to be successful.

Co-author of the study and the University's Interdisciplinary Director for Environment and Biodiversity, Professor David Burslem, said:

The sites where active restoration is most needed – those that have already been cleared of trees – are also those where restoration is most risky and prone to higher numbers of trees dying. We need to understand better how to improve the survival chances of saplings on these sites, to ensure restoration has positive outcomes.

www.abdn.ac.uk/news/16531/

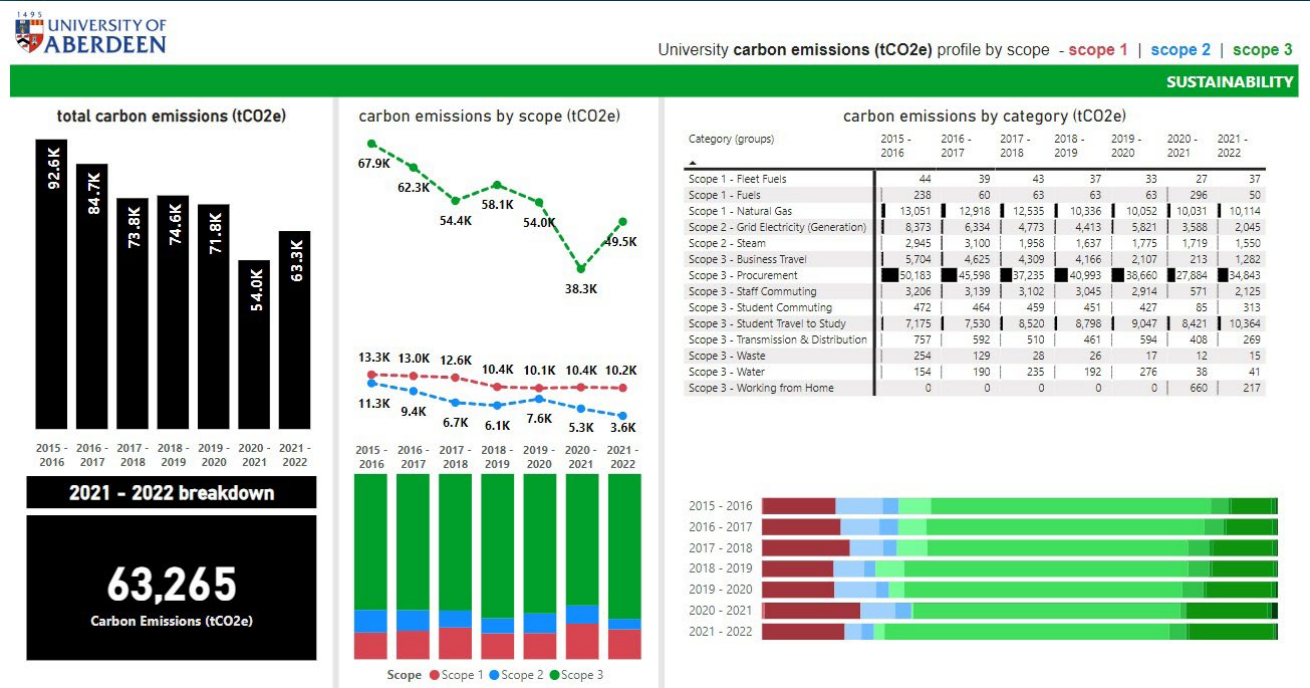




University emissions data now available via new online tool

As part of our efforts to make emissions data more publicly available, staff from the University's Sustainability and Planning teams have been hard at work creating an online tool that makes this data publicly available for the first time. Utilising the functionality of Microsoft's Power BI platform, emissions data going back to our reporting baseline year of 2015/16, is now available online for staff, students, and other interested parties to explore. The data highlights building-by-building energy usage, emissions associated with staff and student travel, and other categories of emissions such as those linked to waste management and the procurement of goods and services. The tool is part of the University's effort to respond to the reporting expectations placed upon us under the Scottish Government mandated Public Bodies

Climate Change Duty. That framework obliges all public bodies to report annually their emissions data and their progress towards achieving emissions reductions. The available data includes emissions from direct sources such as energy use, but also indirect emissions, or so-called 'Scope 3' emissions. These indirect emissions have traditionally been harder to track, but public bodies are now expected to make their best efforts to monitor and report them. Alongside improved emissions reporting, the University is also developing a comprehensive net-zero strategy, with targets and pathways being considered across a wide range of business functions. Publication of the strategy is anticipated during 2024. [Net-Zero-Dashboard](#)



EU project results in new guide to promote biodiversity in agriculture

Researchers at the University have played a key role in the development of a new handbook that aims to increase biodiversity in agriculture, by promoting innovative approaches to contract arrangements for government-funded payments to farmers. The handbook is the product of Contracts2.0, a four-year project funded under the EU Horizon 2020 programme. Working with farmers' groups and other key partners, researchers from several European universities including Aberdeen investigated new approaches to agri-environmental schemes to understand and promote incentives for farmers to manage wildlife and the countryside in a sustainable way. The handbook for policymakers contains numerous recommendations for the design of agri-environmental schemes across Europe, including how involving the right stakeholders can increase the acceptance of schemes. Dr Katrin Prager and Jennifer Dodsworth from the University's School of Geosciences investigated existing approaches as part of their contribution to the handbook. Dr Prager noted that

"Through our research we were able to show that farmers are willing to implement innovative approaches to land management that promote biodiversity, so long as the contractual agreements are motivating and reliable, rather than restrictive and vague". Jennifer Dodsworth added:

"In Scotland, NatureScot has already piloted results-based payments schemes which are attractive to farmers and motivate further action to benefit biodiversity and the environment. The handbook ... brings everything we have learned into one place, providing a valuable resource for policymakers that will help to further enable new approaches ... and promote biodiversity and sustainability."

www.abdn.ac.uk/news/22073/



14 LIFE BELOW WATER



13 CLIMATE ACTION



Seaweed found at new depths around Antarctica

Scientists have discovered a type of seaweed at new depths for the first time around Antarctica. Working at Rothera Research Station on Adelaide Island off the southwestern Antarctic Peninsula and by using a remotely operated vehicle (ROV) from a small boat, the researchers found the red alga *Palmaria decipiens* at 100m below the surface and collected samples for further examination. DNA sequencing was then used to confirm the type of seaweed.

Funded by the UK Natural Environment Research Council (NERC) and published in the *Polar Biology* journal, the research was a collaboration involving the University of Aberdeen, the University of Southampton, the British Antarctic Survey and the University of Thessaly, Volos, Greece. Seaweeds are hugely important to marine ecosystems, providing a habitat to a variety of marine organisms like barnacles, snails, sea urchins, crabs and mussels as well as being natural carbon sinks.

Professor Frithjof Kuepper of the School of Biological Sciences at the University said:



We know that carbon capture will be crucial to limiting global warming as we move forward and seaweeds sequester large amounts of CO2. Seaweeds have the potential to play a huge role in protecting the environment by storing carbon at the bottom of oceans when they die and reducing ocean acidification. Seaweeds are also an important food source to numerous animals and fish and have been eaten by people in many coastal communities in parts of the world for centuries.



www.abdn.ac.uk/news/16475/



14 LIFE BELOW WATER



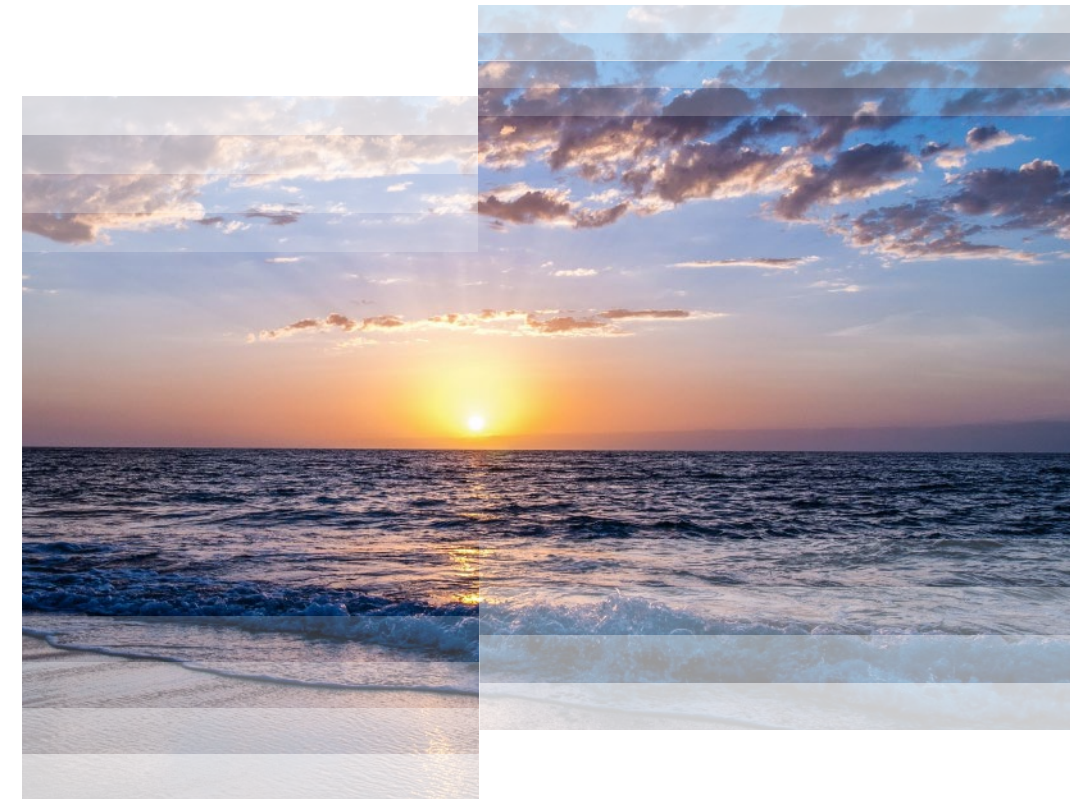
3 GOOD HEALTH AND WELL-BEING



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Aberdeen scientists in major European marine microbiome project



The marine microbiome, the community of microorganisms that can usually be found living together in any given marine habitat, is one of the fastest growing segments of the so-called 'blue bioeconomy'. Its study is vital for the discovery, understanding, protection and use of ocean resources. Scientists from the University of Aberdeen, who are working to develop life-saving antibiotics using ocean resources, are taking part in a major European research project which aims to harness the full potential of the marine microbiome.

The BlueRemediomics project, which was awarded funding through the European Commission's Horizon Europe programme, involves researchers from a range of universities and research organisations worldwide. Professors Abbe Brown and Marcel Jaspars, from the University's School of Law and Department of Chemistry respectively, have received funding through the UKRI

Horizon Europe Guarantee Fund to participate in this exciting collaboration.

Professor Jaspars is leading the use of genomic data for the discovery of new antimicrobial peptides to target bacterial infections. Meanwhile, Professor Brown is exploring innovative legal and policy approaches to improve access, protection, and governance of marine genetic resources and intellectual property rights. Their involvement underlines the interdisciplinary nature of the project, which unites an international consortium of experts to work on the discovery and production of high value sustainable marine microbiome-based products, processes, and services. It also builds on their work in supporting negotiations at the United Nations on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.

www.abdn.ac.uk/news/16727/



University launches Climate & Sustainability Assemblies

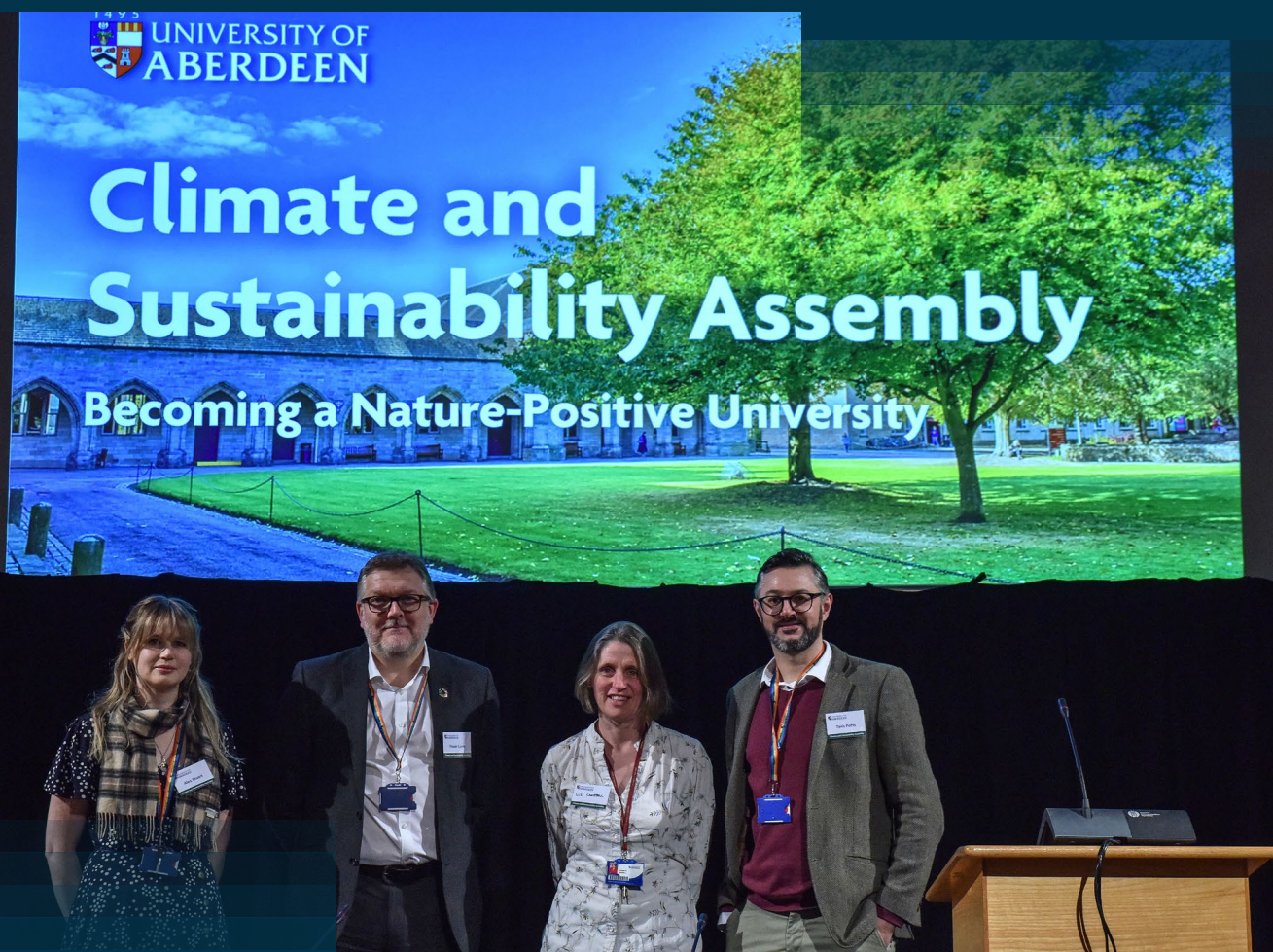
In March of 2023, the University hosted the first in a new series of Climate and Sustainability Assemblies, with an inaugural event focused on issues of campus biodiversity.

One of the ways the University aims to engage with its staff and student communities is through the use of these Climate and Sustainability Assemblies. Globally, nationally, and locally, there is a growing movement to include communities in policy making through forums that discuss issues related to climate change. This type of participatory approach actively involves people and communities in the decision-making process, generating new ideas for action on sustainability.

These forums will gather staff and student feedback that will in turn shape policy and action in support of a greener, more sustainable future for the University.

This biodiversity themed event sought views on a range of possible interventions across our grounds and greenspaces that would enable our campus to become more nature positive. These ranged from changing the regime for mowing lawned areas, to encouraging wildflowers and pollinating insects. Around 60 staff and students gathered to offer their views, resulting in recommendations that will inform the development of a new biodiversity policy and action plan for the campus. The report of that first assembly is available online. Further assemblies are planned, with a subsequent session on the greening of our teaching and research laboratories held in November 2023.

[Nature-Positive-Report](#)



Innovative research will support the expansion of forests and woodlands in the UK



A new study, led by the University, is one of six major research projects to benefit from a £3 million funding pot to explore the most effective ways to expand the UK's trees, hedgerows, woodlands and forests in rural and urban settings.

Forests and other treescapes account for 13% of the UK's land surface and capture approximately 21 million tonnes of carbon dioxide a year, providing an important contribution to the UK's goal of reaching net zero carbon emissions by 2050. They can also reduce flooding, improve biodiversity, reduce pollution and benefit people's wellbeing. The six interdisciplinary studies have each received a share of £3 million funding over the next two years from UK Research and Innovation. Each project will improve our understanding of the composition of

treescapes in the UK, and their value to people and the planet. The research will also support the Government's ambition to increase tree cover across the country.

The Farm Tree project, which has secured £0.5 million of funding, is focused on balancing farm and landscape-scale demands for integrating trees on agricultural land. It will see researchers build on existing agroforestry initiatives and develop practical tools for farmers to enhance the expansion of trees on agricultural land. Dr Josie Geris, Senior Lecturer in hydrology at the University's School of Geosciences, will lead the project team which includes a diverse group of environmental and social scientists from the University and the James Hutton Institute.

www.abdn.ac.uk/news/16371/

16 PEACE AND JUSTICE
STRONG INSTITUTIONS8 DECENT WORK AND
ECONOMIC GROWTH

World's largest companies are neglecting their human rights responsibilities



The majority of the 500 largest businesses in the world are neglecting their human rights responsibilities, new international research has found. An analysis of Fortune Global 500 companies operating across 33 countries and 21 industry sectors has shown very low levels of public disclosures, indicating a lack of corporate awareness, commitment and sensitivity towards human rights.

The study, which sought to evaluate the current level of disclosures and the underlying factors influencing them, was carried out by researchers at the University of Aberdeen Business School in partnership with the University of Hamburg and the University of Oldenburg in Germany, and Syracuse University in the United States. Published in Critical Perspectives on Accounting, the study analysed both the scope and quality of disclosures made by firms across 13 criteria which included measures such as adopting a human rights policy, implementing grievance mechanisms, and reporting on universal standards indicators.



Businesses face more pressure than ever before to show respect for human rights in their daily activities, both as a result of a rise in critical consumers but also the number of legislative acts that require them to act and report on their human rights engagement. However, some may shy away from publicly disclosing human rights issues either because of their complexity and sensitivity or because they are unwilling to allocate the necessary resources.

Dr Naser Makarem, researcher and lecturer in accounting in the University's Business School.



www.abdn.ac.uk/news/16506/

16 PEACE AND JUSTICE
STRONG INSTITUTIONS10 REDUCED
INEQUALITIES

New fellowships for scholars and students in danger

Two fellowships have been launched to help students and scholars caught up in conflict anywhere around the world. The new scheme draws on the University's relations with the Council for At-Risk Academics (Cara) which supports scholars in immediate danger due to persecution, violence, and conflict.

The Staff Fellowship will be awarded to an academic supported by Cara and will see the recipient employed by the University for up to two years. The At-Risk Fellowship for postgraduate students will see a Fellow, either a Masters or Doctoral student, hosted on a rolling basis.

Tracey Slaven, University Secretary & Chief Operating Officer, said: "Higher education institutions in the UK have a long tradition of providing a 'safe haven' for scholars who find themselves at risk in their home country and are forced to flee from conflict and persecution. Aberdeen's own institutional commitment to

supporting scholars and students in this situation underpins our efforts toward becoming a University of Sanctuary."

In 2022, the University launched a series of measures to help scholars and students affected by the war in Ukraine. Professor Karl Leydecker, Senior Vice-Principal, noted that:



A package of bursaries, scholarships and other support measures for Ukrainian students was introduced [in 2022] and seven Ukrainian scholars were given Honorary Fellowships. Now we hope our new Fellowship scheme will help academics and students impacted by conflicts elsewhere in the world.



www.abdn.ac.uk/news/16755/



17

PARTNERSHIPS
FOR THE GOALS

University staff undertake local beach clean

University staff from academic disciplines and professional services teams drawn from across the University, came together on a September afternoon to undertake a beach clean along Aberdeen's main seafront and the dunes and verges close by. Working in partnership with colleagues from the East Grampian Coastal Partnership (EGCP), a team of twenty volunteers ventured out along the north end of Aberdeen's beach boulevard to remove whatever rubbish they could find as part of EGCP's "Turning the Plastic Tide" project.

As well as lots of marine plastic retrieved from along the tide line, there was plenty of other litter to remove. Alongside evidence of beach parties and barbecues, lost or abandoned clothing and beach

toys, the team also tackled scrap metal, tyres, and other rubbish. In total around 87 kg of assorted litter and debris was removed from the beach in one afternoon.

The University's Head of Sustainability, Fraser Lovie noted that "These events are a tremendous opportunity for staff to take some time out of their busy schedules to make a useful contribution to the local environment. As well as assisting a fantastic local project, the volunteers left with a tremendous sense of satisfaction and with a great boost to their own personal wellbeing." This event was conceived and undertaken in line with the University's Staffing Policy on Volunteering.

12

RESPONSIBLE
CONSUMPTION
AND PRODUCTION

13

CLIMATE
ACTION

14

LIFE BELOW
WATER



17

PARTNERSHIPS
FOR THE GOALS

Funding boost for North-East Climate Assemblies

11

SUSTAINABLE CITIES
AND COMMUNITIES

16

PEACE AND JUSTICE
STRONG INSTITUTIONS



Researchers from the University's Just Transition Lab and local partners were awarded £386,152 by the Scottish Government's Just Transition Fund for a project to take forward a series of climate assemblies across the north-east. The project, led by the North East Scotland Climate Action Network (NESCAN), alongside the University, Aberdeen for a Fairer World, and tsiMORAY, funded a series of forums in which local people were given a say on what a just energy transition looks like for communities in the region.

Involving an interdisciplinary team of researchers, the project sought to establish the region as a leader in community engagement around the energy transition. Professor Tavis Potts (Geosciences), Dr Daria Shapovalova (Law), and Dr John Bone (Sociology) were part of the project. They examined how community climate assemblies work in different parts of the world, applied

this knowledge to a series of local assemblies with community stakeholders, and concluded with a multi-stakeholder event that drew the activity together, connecting local policy makers, planning, civil society and business, with a focus on practical action.

Professor Potts noted that:

“**Ultimately, this project aimed to examine how climate assemblies can influence decision making in the region as part of a just transition that protects our communities and is fair, inclusive and democratic. In the journey to Net Zero, it is vital that the benefits and opportunities are shared across society, and that those who have the least ability to pay or adapt are not negatively impacted.**

www.abdn.ac.uk/news/16534/





Award success for AUSA support services campaign

Aberdeen University Students' Association Vice President for Welfare Sai Shraddha S. Viswanathan was recognised with a 2023 Young Scot Award for leading the campaign to secure funding for vital student support services in the north and northeast of Scotland.

The Young Scot Health and Wellbeing award recognises those involved in 'supporting and inspiring others to improve their physical and mental health' and Sai's nomination recognised her work to ensure that the removal of Scottish Government funding for counsellors in Universities and Colleges, did not result in the reduction of services for students.

Sai worked with counterparts at RGU:Union, NESCol Students' Association, and Highlands and Islands Students' Association to raise the issue with government ministers in including the First Minister, Humza Yousaf. The campaign came at a time of inflation at record levels, a cost-of-living crisis, and increased pressure on students' mental health, making the affected support services more important than ever.

On winning the award, Sai said: "I'm very grateful for the nomination, the award, and the opportunity to work with such an amazing team, this is a win for us. To be nominated among such an inspiring group of young people is incredible and I'd like to congratulate all the finalists. I would like to thank our fellow institutions who have joined the campaign and NUS Scotland for making this campaign what it is. A special thanks goes to the University for also being extremely supportive about the initiative and working collaboratively on every level possible."

Nick Edwards, Deputy Director of People at the University extended his congratulations to Sai:



It is great to see Sai's exceptional work being recognised with this award. The University of Aberdeen considers the Health and Wellbeing of our students as paramount and we look forward to working with Sai in the future.



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AUSA responds to the cost-of-living crisis



Among the main focuses of AUSA, has been to help students with the cost of living by expanding and developing sustainability initiatives that also help alleviate costs. The Students' Union SwapShop distributes a couple of tonnes of clothing and homeware to students for free every year. Set up primarily with the intention of reducing waste by providing a space for the collection of unwanted and donated items, the cost-of-living crisis has seen use of the SwapShop increase and often left stock depleted. This has seen the team target donations, including from staff, and establish additional donation and collection points across campus. This has enabled the SwapShop to support themed campaigns, for example around winter clothing and essential items for new students.

Similarly, the FoodShare hub redistributes hundreds of kilograms of surplus food each month and has been in high demand. A partnership with CFINE has seen AUSA receive donations of food identified as surplus at regional distribution centres.

These donations supplement the "end of day" surplus volunteers already collected from supermarkets. Supported by a grant from the Vattenfall "Unlock the Future" fund, some of these ingredients now support community cafe events. This project sees a free hot meal event fortnightly to coincide with already popular AUSA events such as film screenings or games nights. This way a warm space and food access is offered discretely in the form of attending an existing event. Using a similar ethos, the weekly zero waste shop sells subsidised bulk items and donated surplus items at significantly below retail cost.

Other events and initiatives include discounted tea and coffee options at Union Brew, the successful free bike-hire programme, and emerging plans to offer a free laptop hire programme, and represent just some of the Students' Union's efforts to assist students through the cost-of-living crisis.

[AUSA-Swap-Shop](#)



Converge Awards Success

University supported projects celebrated continued success in the 2023 Converge Awards, a competition for businesses started by staff, students and alumni of Scotland's universities.

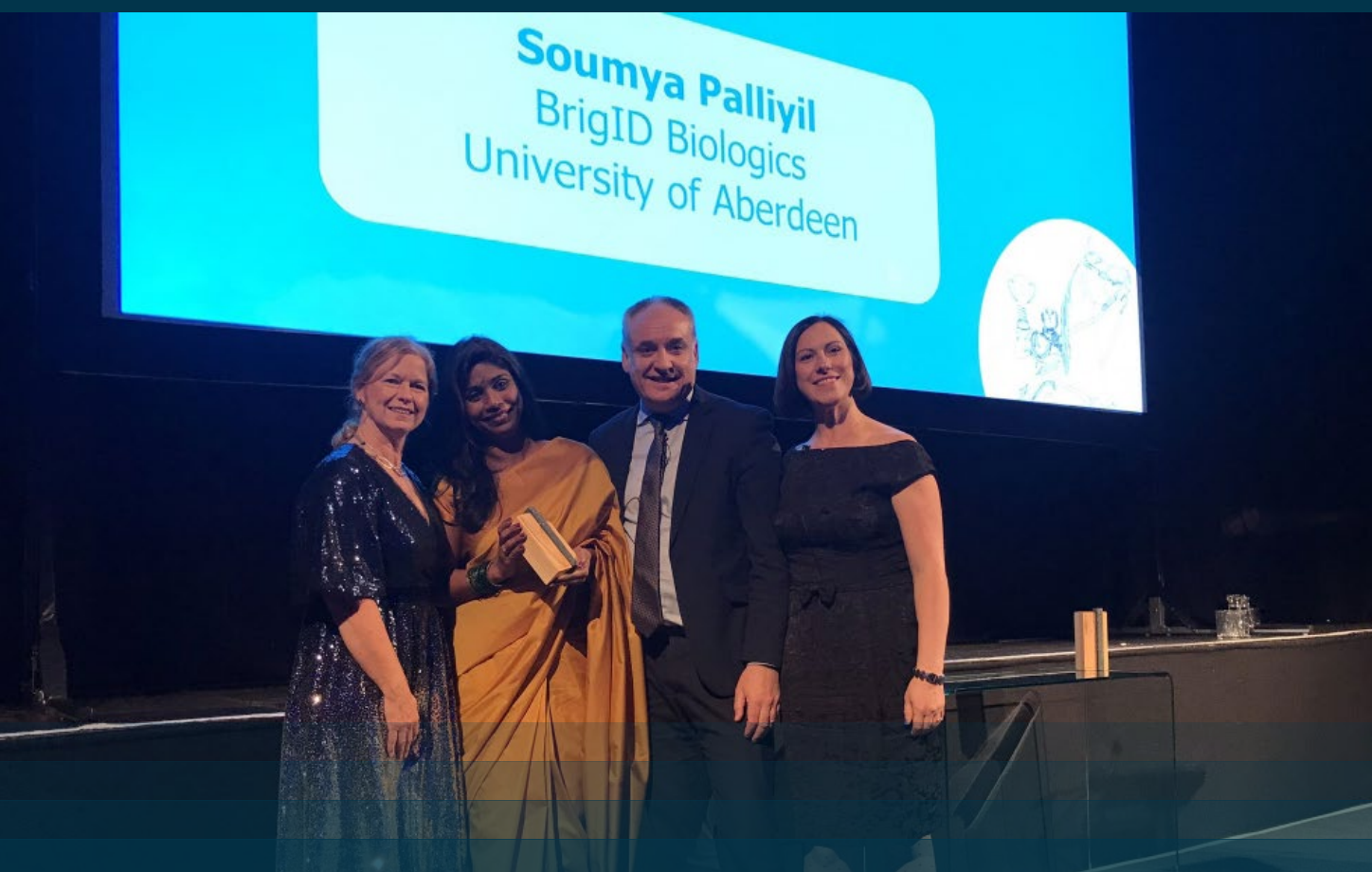


BrigID Biologics, represented by microbiologist Dr Soumya Palliyil, was runner-up in the main Converge Challenge, scooping a prize of up to £29K of cash and in-kind support. This staff-led start-up has developed a novel drug discovery platform which produces human monoclonal antibodies effective in tackling serious fungal infections. These infections can be life-threatening and result in at least 1.7 million annual deaths globally. The antibodies produced offer a promising therapy, especially in high-risk groups such as immunosuppressed patients.

In the Create Change Challenge, the start-up **Two Raccoons** was also a runner-up. This Challenge is for creative, social and cultural projects looking to become sustainable businesses. Two Raccoons uses soft fruit waste from the hospitality sector across the north-east to make different flavours of wine including strawberry, pear, mango, and orange.

Zephyrus Aerolabs represented the University in the Net Zero Challenge, a competition for entrepreneurs developing low-carbon solutions in the race against climate change. They are developing technology for remote real-time monitoring of uncontrolled emissions of harmful gasses to the atmosphere.

<https://www.abdn.ac.uk/news/22350/>





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