

Sustainable Development Goals Annual Report - 2020/21



#### INTRODUCTION

During consultations as part of our Aberdeen 2040 strategy, the theme of sustainability emerged as one that our community was determined should feature prominently in whatever long-term commitments emerged. Moreover, the United Nations' Sustainable Development Goals were identified as a vital framework for us to adopt as we endeavour to convey the impact of our academic and operational activities.

The SDGs provide a compelling framework. They comprehensively articulate the intersecting economic, human, social, and environmental challenges facing the world. While the global focus in 2021 has naturally been on emissions and the COP26 process, the SDGs serve to remind us of the wider challenges we face – from public health to poverty, and educational access to inequality – as well as the pressing climate and ecological emergency.

The stories included in this report reflect the breadth of activity happening across the University of Aberdeen that has a positive impact on one or more of the 17 SDGs. It showcases initiatives and projects that address all 17 SDGs and includes commentary on research, teaching, community, and operational impacts. Inevitably there are areas of key focus that reflect our institutional strengths and as such climate action (SDG 13), quality education (SDG 4), good health and well-being (SDG 3), and partnerships for the goals (SDG 17) feature particularly prominently.

Our impact against the SDGs has been assessed in each of the past three years via the Times Higher Education 'Impact' rankings. In 2021 we ranked 57th out of 1,115 institutions, while the breadth of our contribution was reflected in the fact that we were in the top 20 in the UK for all 17 SDGs and ranked 12th in the UK overall.

This report contains only a fraction of the stories we could have shared but we hope that those we have selected provide a sense of the breadth and depth of the work going on across the University.

Our 1495 foundational purpose is to be open to all and dedicated to the pursuit of truth in the service of others. That purpose is reflected in the spirit and intent of the United Nations' Sustainable Development Goals and continues to frame our activities as we work to have a positive impact on the world around us.

We are delighted to share this, our first, SDG report with you and we welcome feedback on it. Our aim is to report annually, as well as finding other ways of collating and communicating our work in support of the SDGs.



**Professor George Boyne** Principal and Vice-Chancellor



**Professor Karl Leydecker** Senior Vice-Principal

# SUSTAINABLE DEVELOPMENT GENERALS





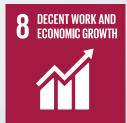






























#### **SUSTAINABILITY REPORT**

In February 2020, we launched our 20-year strategy, Aberdeen 2040, establishing sustainability as a core element of the University's long-term strategy. Alongside a headline commitment to becoming a Net-Zero institution before 2040, Aberdeen 2040 also acknowledges the importance of engaging and enthusing our staff and student communities to be leaders in protecting the environment.

The United Nations' Sustainable Development Goals (SDGs) also emerged through consultation as a key mechanism against which to articulate our academic and operational contribution to addressing complex societal challenges. We have therefore signed the global SDG Accord, reporting on progress in 2020 and 2021, and joined the associated Race to Zero.

In 2021, our impact against the SDGs was assessed for the third time via the latest Times Higher Education's 'Impact' Rankings. A global position of 57th out of 1,115 institutions, saw notable performances in SDG 17 "Partnership for the Goals" and SDG 11 "Sustainable Cities" where we placed 27th globally for both. The University ranked 12th in the UK overall and was in the UK top 10 for 11 of the 17 SDGs, and top in Scotland in six. An indicator of the breadth and depth of the University's impact is that we were ranked in the top 20 in the UK across all 17 SDGs.

In governance terms, the establishment of a Sustainable Development Committee, chaired by the Senior Vice-Principal, now provides a key forum in which academic staff, students, and professional services come together to progress the University's sustainability agenda. This group provides oversight of all aspects of sustainability, steering institutional strategy, reviewing risk, and providing a focus for discussion of our research, teaching, community, and operational

commitments. Post-pandemic, 2021/22 will see a renewed emphasis on the delivery of detailed implementation plans in respect of our Aberdeen 2040 sustainability commitments and a continued focus on the Sustainable Development Goals.

The University continues to report comprehensively on its emissions and climate change performance through the Public Bodies Climate Change Duties (PBCCD) framework. We welcome the emergence of mechanisms to enhance and harmonise the approach of public bodies to reporting, in particular through the recognition of the shared challenge in managing Scope 3 emissions.

We also play an active part in sector networks, working collaboratively to share and learn from best practice, in particular through the Environmental Association for Universities and Colleges (EAUC). 2020/21 has also seen colleagues contribute to sector developments in procurement and supply chain challenges through Advanced Procurement for Universities and Colleges (APUC) and as part of Universities Scotland working groups in areas such as business travel.

Although emissions data for 2020/21 is inevitably skewed by the impact of the pandemic, they highlight one particular outcome of online working – a significant reduction in business travel emission levels. With almost all work conducted online for



over 18 months, the challenge will be to prevent a return to pre-pandemic travel emission levels. We will introduce a new policy framework in this area in 2021/22 to assist colleagues in prioritising and reducing travel impacts.

In line with many workplaces, a policy shift to facilitate home-working has been introduced for 2021/22 that will result in an increase in hybrid working patterns. The inclusion of a mandated 'home-working' category in this year's PBCCD report is, however, a reminder of the need for all institutions to think holistically about their emissions and to adopt a more comprehensive approach to to their indirect (Scope 3) emissions. This will be one of our main challenges in the coming years.

Operationally, 2021 marks the final year of our 2016/21 Carbon Management Plan. The plan set out to achieve a 20% reduction in the basket of emissions categories considered in scope; a target that was exceeded early, with a reduction of 34% recorded by the end of 2019/20.

Our immediate priority remains the reduction of emissions associated with energy use and we are in the process of transitioning from a series of rolling five-year Carbon Management Plans to a longer-term net-zero strategy. Alongside continued efforts to reduce emissions through improvements in how we manage energy use, improved efficiency, and reduced demand, we will press ahead with strategic discussion with regional partners about issues such as the decarbonisation of heat and collaborative approaches to heat networks. Although at an exploratory stage, we are encouraged by the emergence of a real

desire to pursue collective solutions to the major challenges of tackling the ageing heating infrastructure at both our campuses, with the latter being supported by loan funding from the Scottish Funding Council.

In 2021/22 we have allocated initial resources to Net-Zero Carbon Works to support energy initiatives and associated feasibility. We will continue to review the level of financial support required to deliver our net-zero commitments.

In the coming year we will also review our operational support for sustainability, with the establishment of a dedicated unit to take forward the commitments in Aberdeen 2040 and to provide impetus for the wider staff and student engagement and behavioural change initiatives we recognise are required.

Academically, our Centre for Energy Transition was formally launched in May 2021, with the identification of key research areas and academic champions across a range of related disciplines. The Centre aims to facilitate a genuine interdisciplinary effort across research and collaborations. This includes co-ordinating collaborative funding bids; offering courses on the fundamentals of energy transition; working with partners on skills development; and collaborating with international colleagues, for example through the development of interdisciplinary research as part of the Aberdeen-Curtin Alliance.

This report gives an insight into some of the activities the University has engaged in during AY 2021 related to sustainability and the UN Sustainable Development Goals.

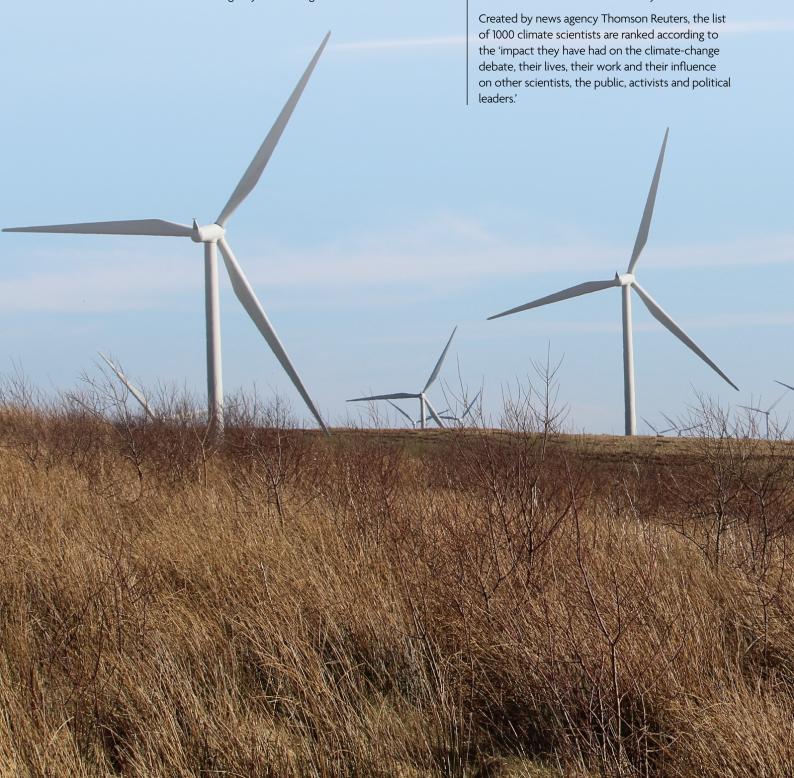


# TOP CLIMATE SCIENTIST APPOINTED TO KEY ENVIRONMENT ROLE AHEAD OF COP26

Professor Pete Smith, Professor of Soils and Global Change at the University of Aberdeen's Institute of Biological and Environmental Sciences, has been appointed to a new group of international experts who will advise the Scottish Government on environmental issues.

The First Minister's Environmental Council will draw on global best practice to help tackle the climate emergency and ecological decline. The group will meet regularly to discuss a range of environmental issues, such as biodiversity, marine resources, waste, the nature-based aspects of climate change and the Just Transition and will present their proposed work areas and future plans in a report at COP26.

Professor Smith has also been named in the Reuters Hot List - a list of the most influential climate scientists in the world today.



He is ranked 75th\* in the world and is the topranked climate scientist in Scotland for his work on how global change impacts on ecosystems, soils, agricultural and environmental sustainability.

Professor Smith, who is also the University's representative on the COP26 Universities Network, said: "Science is critical for evidence-based policy making and has never been more important than now. COP26 provides an important opportunity for experts and policymakers in Scotland to show global leadership in tackling the joint crises of climate change and biodiversity loss.

"I am delighted to have been appointed to the First Minister's Environmental Council and look forward to the group playing a pivotal role in addressing these important issues that affect us all."

Senior Vice-Principal Karl Leydecker, who leads on the sustainability theme of the University's Aberdeen 2040 strategy, congratulated Professor Smith on his appointment to the role.

"Professor Smith is widely recognised as one of the world's leading climate scientists, and his appointment to the First Minister's Environmental Council reflects his international profile as a respected voice in this area. "Aberdeen 2040 identifies Environment and Biodiversity and the Energy Transition as key interdisciplinary research challenges, and as a University we are committed to addressing the environmental and global energy challenges of our time.

"As COP26 approaches we will be using this opportunity to highlight the University's research and expertise that is helping to inform the climate debate, both in terms of climate science and through our Centre for Energy Transition. We will also be encouraging our students and staff to play an active role through the University's status as an Official Observer Organisation.

Professor Smith's work is a great example of how our experts are making a valuable contribution to the sustainability agenda, and I congratulate him on his appointment to this important role."







# APP TO HELP SCOTTISH SKIPPERS REDUCE BYCATCH SCOOPS INDUSTRY SUSTAINABILITY AWARD

An innovative app being used by Scottish skippers to share real-time information with each other about the location of hotspots of unwanted fish has scooped a sustainability award.

The Bycatch Avoidance Tool using Mapping (BATmap) was developed by scientists from the University of Aberdeen, Chordata Ltd and the Scottish Fishermen's Organisation and launched in June 2020. It is currently being used by 15 fishing vessels operating on the west coast of Scotland.

It was announced in The Fishing News that the ground-breaking collaboration had been named the winner of the Fishing News Sustainability Award.

BATmap is a web-based app that can be used on phones (iOS and Android), tablets and desktops. Skippers use the app to log the start and end time of each haul, and the total catch (kg) of cod, whiting and spurdog, all of which they wish to avoid catching. BATmap automatically collects information on vessel location allowing skippers to map their own catch. The data provided by all participating vessels is combined and alerts are automatically sent out when pre-defined levels of catch are exceeded in a specific location.

Dr Tara Marshall, from the University of Aberdeen's School of Biological Sciences, said: "I am delighted that BATmap has received this important industry award. We have been really pleased with the rollout on the west coast of Scotland and the feedback from skippers has been critical to the success of the app.

"We wanted to design a practical solution to the problem of mixed fisheries. A mixed fishery exists where different species mingle on the fishing grounds, making it difficult to target one species without catching others. In the west of Scotland mixed fishery, a decline in abundance of cod has led to zero-catch scientific advice for this species from the International Council for the Exploration of the Sea (ICES). To continue fishing the healthy stocks in the area, such as haddock and monkfish, effective bycatch avoidance measures for cod were needed.

"It was really important to us that we worked closely with those who would actually be using the app to meet their requirements for data security and confidentiality. Any Scottish skipper fishing for whitefish on the west of Scotland can use BATmap providing they agree to contribute data. BATmap puts data into the hands of skippers to help them make more informed decisions about when and where to fish."

For more information about BATmap visit <a href="https://info.batmap.co.uk/">https://info.batmap.co.uk/</a>



# MAJOR FUNDING AWARD FOR GRADUATE AND UNIVERSITY SPINOUT COMPANY RESEARCHER

Dr Obinna Ubah, a drug discovery expert and University of Aberdeen lecturer has been awarded prestigious funding to help further the development of treatments for life-changing inflammatory diseases.

He has received a £2 million research award, of which £1.57 million is a grant from the UKRI's Future Leaders Fellowship (FLF) Scheme to further his pioneering studies. The Future Leaders Fellowships programme is a highly competitive scheme designed specifically to establish the careers of world-class research and innovation leaders across the LIK

With this new funding Dr Ubah believes that he can now go even further and faster and make additional improvements so that these drugs can neutralise more than one drug target at the same time, minimising the chance that therapies will fail; and, through research partnerships, these powerful drugs could be delivered as a pill at home, rather than the current need for repeated hospital visits and injections.

Dr Ubah commented: I am enormously grateful to have successfully secured this UKRI fellowship. It was a long application journey which started in March of 2020 and was complicated by the global pandemic and lockdowns. However, the entire process has been an enormously rewarding experience. I want to thank the FLF team, peer reviewers and panel members for all their time and effort in such difficult circumstances. Now I can't wait to get started with the task of developing some of the exciting science innovation that has

been funded, and attempt to deliver safer and more effective biologics (protein based) treatment for some of the most debilitating autoimmune, inflammatory diseases.

Dr Ubah added: "The management of chronic inflammatory diseases such as IBD, psoriasis, and RA has significantly improved over the last decade with the clinical availability of biologic drugs. Despite this undoubted treatment success, a combination of acquired resistance together with an increased risk of systemic complications, means that a significant number of patients either fail to find a suitable therapy or frustratingly discover that an approach that did work is no longer effective. Whilst working in Elasmogen I have isolated a new class of super-neutralising biologics, the building blocks (called variable new antigen receptor or VNARs) were originally derived from a blood sample taken from a shark. The simple, protein architecture of VNARs allows for easy and multiple reformatting options. Through reformatting, I have achieved a 50,000-fold enhancement in efficacy in what we call our soloMER Quad  $X^{\mathsf{m}}$  formats.

Dr Caroline Barelle (CEO/CSO Elasmogen Ltd). added, "We could not be more proud of Dr Ubah's achievements. This fellowship is a fitting reward for all his hard work, the innovative approaches he has taken in his research and the global network of colleagues he has established that are eager to collaborate, mentor and form partnerships".











A University of Aberdeen academic has been appointed to the Scottish Aquaculture Innovation Centre's (SAIC) board.

Pieter van West, director of the University's International Centre for Aquaculture Research and Development, is one of three appointments made to the organisation's leadership team to support the centre's drive towards a more sustainable future for aquaculture.

SAIC is one of eight innovation centres introduced by the Scottish Government to drive growth in areas of key economic and social importance

Commenting on the new appointments, David Gregory, chair of SAIC, said: "Our three new board members will be great additions to the leadership team. They are industry stalwarts, widely respected across the sector, and share SAIC's passion and vision for driving sustainable growth of aquaculture in Scotland and beyond.

"Greater collaboration will play a key role in supporting aquaculture's recovery from the impact of Covid-19, helping it to meet the rising demand for quality, sustainably sourced protein. By fostering collaborative networks we can help Scottish aquaculture to thrive with new technology and cost-effective, sustainable, data-led ways of working that can future-proof the sector."











# HYDROGEN SKILLS PARTNERSHIP LAUNCHED

A new cross-sector alliance has been launched to show the benefits a thriving green hydrogen sector would bring to Scotland and across the UK.

Announced in Aberdeen, the Hydrogen Skills Partnership comprises ScottishPower, the University of Aberdeen, Robert Gordon University (RGU), Energy Transition Zone (ETZ), and North East Scotland College (NESCol).

It also includes leading electrolyser manufacturer ITM Power, Arcola Energy, Skills Development Scotland (SDS) and the Hydrogen Accelerator, based at the University of St Andrews.

Working together, the partners will assess the readiness of the UK supply chain to support green hydrogen projects and highlight the potential economic value for the domestic supply chain.

They will also demonstrate the potential for the sector to deliver green, sustainable skills and high-value jobs.

Commercial insights from the partnership's work will support academic, public and private sectors as they look to maximise the positive impacts emerging from the growth of a green hydrogen economy.













Scientists from the University of Aberdeen and North Highland College's Environmental Research Institute, part of the University of the Highlands and Islands, will lead a new project to determine where offshore wind developments should be located in order to better protect marine life in the future.

The research will address knowledge gaps in offshore wind environmental characterisation, by improving understanding of fish migration patterns and providing a vision for next-generation monitoring techniques.

Led by the University of Aberdeen's Professor Beth Scott and Dr Benjamin Williamson from the Environmental Research Institute, the PREDICT project will investigate fish migration and how predictions of oceanographic changes to productive regions in time and space may be impacted by climate change, and knock-on effects on top predators (seabirds and marine mammals).

Duncan Clark, Head of UK Region for Ørsted says: "As the industry works hard to deliver the installed offshore wind capacity needed to hit Scotland's net zero targets over the coming decades, it is essential that we do this in a way that is in balance with nature."

The project began in October 2021, recruitment is currently underway for a Research Fellow to work on the project.







#### UNIVERSITY PARTNERS IN ABERDEEN BIOHUB

The £40m BioHub project will make Aberdeen one of the UK's most dynamic life sciences locations. Scheduled to open in October 2022, BioHub will house up to 400 scientific entrepreneurs with the goal of doubling the number of life sciences companies in the region by 2027. The University of Aberdeen is one of the BioHub's project partners along with ONE, NHS Grampian, and the ACRD.

It will be home to spinout, start-up and scaling businesses bringing new drugs, treatments, therapies and technology to market and creating high-skill jobs to drive economic recovery in this fast-growing industry sector.

BioHub is a flagship addition to the city's Foresterhill Health Campus, one of Europe's largest integrated clinical, research and teaching sites for life sciences and medicine and will catalyse further collaborative innovation across the academic, commercial, and healthcare community.







### BRINGING WATER TO INHOSPITABLE PLACES

The University of Aberdeen are working with partners to enhance an innovation that is providing vital water in some of the most arid places on the planet.

Ice Stupas are artificial glaciers used for storing winter water for use in the arid months when meltwater is scarce. The Ice Stupa was invented by engineer Sinam Wangchuk in Ladakh, India in 2013. Since then, the Ice Stupa project has grown and received international acclaim.

Shrinking glaciers combined with drier winters, as a result of climate change, have led to frequent and extended droughts, which are now threatening the life-sustaining crops that are cultivated by rural communities in some of the coldest and driest parts of the world.

The Cryosphere and Climate Change research group of the University of Aberdeen, in collaboration with the Jawaharlal Nehru University in New Delhi (India), has shown that 'glacier shrinkage' in Ladakh, northern India, has increased at a dramatic pace over the last two decades.

For Ladakh, a 'cold desert' with very little precipitations, the Ice Stupas have become a lifeline – providing essential meltwater to extend the otherwise very limited crop growing season by several weeks.

Watch our video to find out more about the project





#### SUSTAINABLE NOVEL CROPS RESEARCH

Ongoing research by Madelina Neacsu into novel crops, suitable to grow in Scotland, will identify sustainable sources of nutrients whilst vastly reducing food miles for local communities. Currently, the research involves crops including buckwheat, hemp, and potato bean. The information gathered from the high protein grain, forage and cover crops trials has featured in a range of highprofile engagement events aimed at a range of stakeholders, including farmers, the British Heart Foundation, and the Scottish Hemp Group, with leaflets and brochures developed to promote alternative crops.

https://sefari.scot/research/objectives/novel-crops

https://www.abdn.ac.uk/rowett/research/profiles/m.neacsu#research













# SUSTAINABILITY AND AFFORDABILITY OF SCHOOL UNIFORMS

Dr Rachel Shanks from the University's School of Education is exploring sustainability around school uniforms and how uniform banks can relieve financial and emotional pressures on families living in poverty.

School uniform offers a sense of belonging and can equalise children from households with differing income. The affordability and potential for recycling/up-cycling of uniforms are inextricably linked to production processes and fabric quality used to make uniform such as blazers, ties and polo shirts. Without careful consideration school uniforms could generate unnecessary environmental waste, and in addition, cause social difficulty to families less able to afford them.

Unlike in England and Wales, there is no current guidance on the expense of school uniforms or the wearing of branded items to schools in Scotland. Dr Shanks has also made a series of recommendations to the Scottish Government including developing statutory guidance on school uniform policies.









#### FOOD SYSTEMS IMPACT ON CLIMATE, POVERTY AND RESOURCES

Academics Pete Smith and Diana Feliciano are leading an outreach event in which secondary schools and their communities consider how food systems impact on the climate emergency, natural resources and global poverty. Pupils and their communities will design local strategies and actions that ensure sustainable food systems, i.e., those promoting all dimensions of individuals' health and wellbeing, have low environmental pressure and impact, are accessible, affordable, safe and equitable, and are culturally acceptable. This project aims to bridge the gap between science and practice, to understand and solve current social and environmental problems.









# SHARING THE BENEFITS OF THE OCEAN AND SONG OF THE OCEAN

Researchers Marcel Jaspars and Abbe Brown formed an interdisciplinary team to contribute expertise to support the shaping of the UN agreement on conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction. The collaboration expanded to include the arts to raise further public awareness of the importance of the ocean for us all in the production of Song of the Ocean.

https://www.abdn.ac.uk/stories/songof-the-oceans/





#### MODELLING HEALTHY AND SUSTAINABLE DIETS

Food systems are a major contributor to climate change, with a UN backed report estimating that food production, processing and packaging account for over one third of global greenhouse gas emissions. Until recently, dietary guidelines focused almost exclusively on nutritional value, failing to take environmental impacts into account. Working with the World Wildlife Fund UK, researchers at the University of Aberdeen have sought to fill this gap by creating a new modelling tool that combines nutritional and sustainability data.

Research led by Professor Jennie Macdiarmid at the Universty of Aberdeen has succeeded in linking healthy diets with sustainable ones. Initial work focused on developing a mathematical model. Using 'linear optimisation', the team tested the compatibility of diets that meet dietary requirements for health with the dietary changes needed to reduce greenhouse gas emissions. They then used the results of the modelling to create a database of individual food and drink items, enabling them to develop sample menus that combined detailed nutritional information with comprehensive product life-cycle analysis. This was the first time such analysis had been applied to nutritional guidance.

The modelling resulted in a new set of dietary guidelines – the World Wildlife Fund UK's Livewell Plate – designed to illustrate the balance of food and drinks required for a healthy and sustainable diet. The Livewell Plate, which has been updated an renamed 'Livewell: eating for two degrees', is being used to inform dietary guidance around the world, including in France, Sweden, Spain and China. Global companies including IKEA and Sodexo, and UK-based Tesco, are also using the research to ensure their food offerings are both healthy and sustainable.

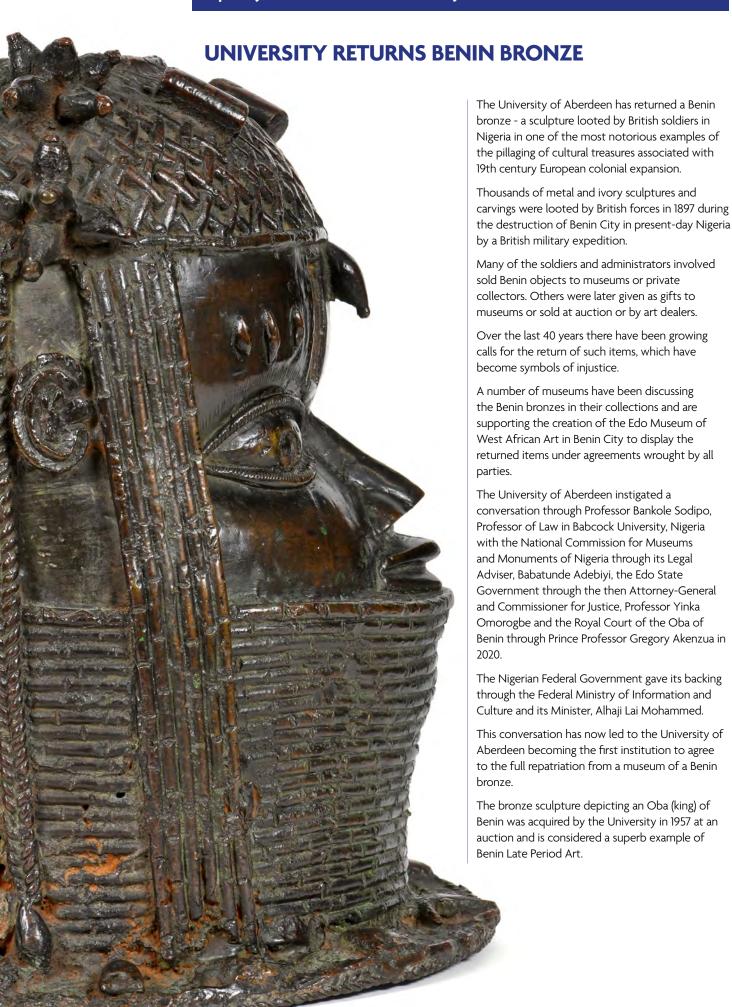








#### **Equality, Inclusion and Community**



Benin City was the centre of a powerful and long-lasting kingdom in West Africa of the Edo people, renowned for its tradition of high-quality metalworking from at least the 17th century.

The expansion of British trade and colonial control in the later 19th century brought it into conflict with the kingdom of Benin, ultimately leading, in 1897, to the city being attacked and destroyed by a British military expedition, the "Benin Punitive Expedition", with many inhabitants killed. The royal palace was burned and looted, and the Oba, Ovonramwen Nogbaisi, exiled.

The thousands of religious and cultural treasures seized have become known as the Benin bronzes.

Neil Curtis, Head of Museums and Special Collections said "The University of Aberdeen has previously agreed to repatriate sacred items and ancestral remains to Canada, Australia and New Zealand, and has a procedure that considers requests in consultation with claimants.

"An ongoing review of the collections identified the Head of an Oba as having been acquired in a way that we now consider to have been extremely immoral, so we took a proactive approach to identify the appropriate people to discuss what to do."

An expert panel, including academic specialists and curators, as well as representatives of the University Court, the Hunterian Museum in the University of Glasgow and the Nigerian claimants, discussed the proposal in detail and unanimously recommended its return to Nigeria.

The University's governing body supported the unconditional return of the Benin bronze to Nigeria.

Professor George Boyne, Principal and Vice-Chancellor of the University of Aberdeen said: "I welcome the decision of the University of Aberdeen Court to support the return of the Benin bronze. This is in line with our values as an international, inclusive university and our foundational purpose of being open to all and dedicated to the pursuit of truth in the service of others

"It would not have been right to have retained an item of such great cultural importance that was acquired in such reprehensible circumstances. We therefore decided that an unconditional return is the most appropriate action we can take, and are grateful for the close collaboration with our partners in Nigeria."

Alhaji Lai Mohammed, the Minister of Information and Culture of Nigeria said: "The reaching out by the University of Aberdeen and eventual release of the priceless antiquity is a step in the right direction. Other holders of Nigerian antiquity ought to emulate this to bring fairness to the burning issue of repatriation".

The proposed Edo Museum of West African Art being championed by Godwin Obaseki, the current Governor of Edo State in Nigeria where the ancient kingdom of Benin falls. This modern museum will be part of an unprecedented cultural hub that will include this museum and other cultural heritage infrastructure including the Oba's Palace.

It is being executed through the establishment of an independent trust (The Legacy Restoration Trust) established by the Edo State Government in collaboration with the National Commission for Museums and Monuments, and the Royal Benin Palace. This cultural hub is designed by the eminent architect, Sir David Adjaye. This Benin bronze being returned will ultimately be housed in this proposed museum.

As part of the University's commitment to being inclusive, the University Library is asking for the help of University students and staff to suggest ways of improving the diversity of their collections. Launched as part of Black History Month, students and staff are being asked to recommend relevant books, either in print or electronically, and funds have been identified to purchase these in the coming months.







#### **GATEWAY TO MEDICINE WINS INNOVATION AWARD**

A programme designed to support promising school pupils from rural and less advantaged backgrounds to study medicine has been recognised with an innovation award.

The Gateway2Medicine (G2M) programme was awarded the Pearson HE Innovate Award for Most Innovative Approach to Widening Participation in the Curriculum. This joint initiative created by the University of Aberdeen and North East Scotland College (NESCol) with support from NHS Grampian helps secondary school pupils overcome potential barriers to applying to study medicine.

Recognising that schools in less advantaged or more remote areas of Scotland may not be able to offer all the required subjects for entry in one year, or that some prospective students may face challenges in accessing work experience opportunities, Gateway2Medicine helps to deliver a sustainable and diverse workforce for the future of the NHS.

"Programmes such as G2M are designed to ensure that pupils from rural or less advantaged

backgrounds have the same opportunities as everyone else." said Professor Stephen Davies, G2M academic lead for the University of Aberdeen.

The initiative also helps meet Scottish Government targets to widen access to higher education. The Commission for Widening Access has set a target that by 2030 students from the 20% most deprived backgrounds should represent 20% of entrants to higher education in Scotland.

Marlene Olsavsky, Senior Vice President, International Higher Education, Pearson, said: "Covid has forced UK universities to create new and inventive ways of working, teaching and supporting students. The quality we've seen across the hundred plus submissions received for our Awards demonstrates how UK universities are more than capable of meeting this challenge.

"These Awards have been designed to showcase the stunning breadth of innovation going on every day in our UK universities, from making learning as engaging as possible, to connecting with as wide and diverse an audience as possible, to ensuring students graduate equipped with the workforce skills they need to succeed in life.

"I congratulate every single entrant to these, our first ever Pearson UK HE Innovate Awards. I hope our UK universities take time to look at the impressive range of projects shortlisted and learn from each other and I'm already looking forward to seeing what projects are put forward next year."

Since launching in 2017, over 85 students have completed the programme and gone on to successfully apply to medicine.







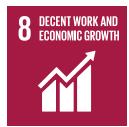
#### **PROJECT SEARCH**

DFN Project Search is an international transition to work programme committed to transforming the lives of young people. It supports young people with additional needs to gain skills and experience and to go on to employment. Launched in September 2013, the project is a partnership between the University of Aberdeen, VIAS, North East Scotland College, Skills Development Scotland, the Department for Work & Pensions and both Aberdeen City and Aberdeenshire Councils. It offers a one-year Internship programme to twelve young people aged 16-24 every year. In August 2021, a new cohort of 12 Interns commenced the programme and are making good progress across both curriculum and internship activities.

As a result of the Covid-19 lockdown, the programme for our 2019/20 Interns was extended to two years. During this time, they studied for additional City & Guilds qualifications and received training in using online platforms in the workplace including Zoom and Teams. The Interns completed their work experience in person (as restrictions allowed) and online, gaining confidence in undertaking hybrid working. Despite challenging local and national economic circumstances, 75% of the Interns who graduated in June 2021 are in a positive destination, while the others are receiving support to undertake work experience placements/and or nationally recognised workbased qualifications with large organisations in the local area.

The programme is delivered on the University of Aberdeen campus and participants receive support to undertake three work placements within the University, whilst studying to attain a vocational qualification. By the time they graduate, the Interns leave with a recognised City & Guilds qualification and over 800 hours of work experience on their CVs. Upon graduation, the Interns receive continued support to source and sustain paid employment and to date, 68% of our graduates are in employment in the Grampian area - nearly 10 times the average employment rate for those with a learning disability who do not enter any type of post-school programme. Since the programme began, nearly 80 young people have achieved employment in a variety of organisations across the North East of Scotland.













### RACE LITERACY TRAINING

During 2021 the University rolled out an extensive programme of race literacy training, with over 360 staff engaged and follow-up sessions offered to provide safe spaces for the discussion of anti-racism and the kinds of actions that can be taken at individual and organisational level. The University's Senior Management Team also engaged in specific sessions on leading an anti-racist university. Further training will be rolled out in 2021/22.







### STUDENT FOOD PROJECT

An Aberdeen student group has prevented thousands of kilograms of food going to waste while supporting the local community through the Covid-19 pandemic.

The Foodsharing Service, which forms part of the Aberdeen University Students' Association's Shared Planet Society, distributed surplus food from supermarkets to those in need or unable to leave their homes as a result of the virus.

The group, made up of student volunteers, collected over supplied or mis-labelled food from supermarkets as part of the FareShare scheme at selected local stores.

Between March and December 2020 they gave away hundreds of food packages and prevented around 15,000kg of food going to landfill, with the food donated by Tesco alone equating to more than 20,000 meals.







#### UNIVERSITY PROJECT HELPS LOCAL PUPILS 'REACH' UNIVERSITY SUCCESS

An outreach programme supporting disadvantaged school pupils secure university places has this year achieved record results. The Reach Programme is part of a Scottish Funding Council funded programme which supports pupils interested in high demand professional subjects. The programme in Aberdeen offers support for entry into Law and Medicine courses and this year has seen its best ever results with more than 20 young people from the local area securing a place in Medicine and 13 in Law. Reach Aberdeen is open to S4-6 pupils interested in Law or Medicine who meet a widening access criterion. For more information and to apply follow this link.







# AFBE-UK SCOTLAND & SCHOOL OF ENGINEERING AGREE DIVERSITY AND INCLUSION PARTNERSHIP

Social enterprise AFBE-UK Scotland has signed a five-year partnership with the University of Aberdeen's School of Engineering to support its diversity and inclusion strategy.

AFBE-UK Scotland will work closely with the School to help graduates bridge the gap between completing their academic studies and taking a first step on the career ladder.

In addition, AFBE-UK Scotland will support the School with its diversity goals. A particular focus will be the way in which it communicates the contribution of people of minority ethnic origin through its academic programmes and curriculum.

Aberdeen-based AFBE-UK Scotland supports all young people, particularly those from black and minority ethnic (BME) backgrounds, with career aspirations in science, technology, engineering and mathematics (STEM).

The School of Engineering already has an Equality, Diversity and Inclusion Committee, and is planning to participate in AFBE-UK Scotland's programmes in Transition, Real Projects and NextGen.







# DELIVERING THE NEXT GENERATION OF SUSTAINABLE DEVELOPMENT LEADERS

A new postgraduate degree programme which will provide the next generation of leaders and innovators with the knowledge and skills to take forward and deliver on the UN Sustainable Development Goals has been launched by the University of Aberdeen.

The MSc in Sustainability Transitions will address the current shortage of leaders capable of taking forward the complex changes faced by societies and economies as they attempt to mitigate climate change and address contemporary environmental challenges in line with the UN Sustainable Development Goals (SDGs).

The one-year degree is the latest in a suite of Masters programmes and scholarships related to sustainability offered by the University.

It will build upon Scotland's reputation as a leader in the field of sustainability, and Aberdeen's position as 'the energy capital of Europe', combining theoretical knowledge on environmental, economic, and social aspects of sustainable development.

The 17 SDGs were adopted by the UN in 2016, to provide a framework for developing the world in a sustainable way, addressing global challenges including poverty, inequality, climate change, environmental degradation, and peace and justice.

Last year, in launching its Aberdeen 2040 strategy, the University signed up to the Sustainable Development Goals Accord, demonstrating its commitment to achieving this ambition.

An indicator of the breadth and depth of the University's impact is that Aberdeen is ranked in the top 20 in the UK across all 17 SDGs and placed 57th out of 1,115 institutions worldwide in the 2021 Times Higher Education Impact Rankings, which recognise universities for their social and economic impact.

While a successful move from carbon-intensive systems to those based on renewable sources of energy is a core element of wider sustainability transitions, also encompassed are all corresponding changes in governance, legal regulations, policymaking, and everyday consumer practices and consumption patterns that must take place for such energy transitions to be successful.

Programme Director Dr Piotr Niewiadomski said the degree will attract new graduates, as well as qualified professionals from a range of backgrounds and occupations who are looking for an opportunity to lead the transition, and who will be vital for progress.

"Sustainability Transition is a very considerable issue and one that needs progressive policies to push it forward. The time for talking about it is over, and we now need to look at what must happen and what needs to change so as to achieve it," said Dr Niewiadomski.

"Scotland is currently very much at the forefront of this movement, and so the University of Aberdeen is in an excellent position to offer this course. We want our students to learn and understand how they can contribute to the great things happening, ensuring that the skills they learn can be applied globally, across government, industry, and business.

"With its focus on the social and political aspects of energy transition, which are so critical to progressing the sustainable energy agenda, the



course is a valuable addition to our current suite of programmes which aim to address all aspects of sustainable development and sustainability transitions."

Dr David Muirhead, Head of School of Geosciences said: "We are delighted to launch the MSc in Sustainability Transitions to our already varied and applied portfolio of MSc Degree programmes.

"This is a key component to the School of Geosciences activities as we, like everyone else, navigate the energy transition in a just and sustainable manner."

The MSc will be delivered by a team of academics from multiple disciplines including geosciences, engineering and business, as well as external partners such as NatureScot, the Aberdeen & Grampian Chamber of Commerce, Foundation Scotland, Aberdeen and Aberdeenshire Councils, Zero Waste Scotland, and numerous local environmental partnerships and organisations.

Joel Evans, Team Leader Sustainability and Climate Change (Acting) at Aberdeenshire Council welcomed the new MSc.

"The reason the Sustainability Transitions MSc is so promising is that it offers the chance to combine a breadth of relevant theoretical and practical knowledge and provides a great opportunity to develop and showcase workplace skills and aptitude in a Sustainability Project," he said.

For more information about the MSc in Sustainability Transitions, which was available to study on either a full or part-time basis from September 2021, go to the main programme website: https://www.abdn.ac.uk/study/postgraduate-taught/degree-programmes/82/sustainability-transitions/







## ONLINE MASTER'S LEVEL COURSE ON GLOBAL WOMEN'S HEALTH

A new online course that will explore global women's health issues has been launched at the University of Aberdeen.

Women's Health in a Global Setting investigates the factors affecting women's health around the world and will explore issues including LGBTQ+ health inequalities, gender bias, women's rights and the effects of Covid-19 on women in developing countries.

Dr Alyaa Mostafa, Clinical Lecturer and Research Fellow at the University's Institute of Applied Health Sciences, said: "This 10-week, postgraduate level course allows our students to better understand the global efforts needed worldwide to improve the health of women. We will explore how gender differences, inequality, women's family roles, community and society support, and approaches to healthcare systems all play a role in women's health and how these issues intersect with broader social and economic factors.

"With the help of expert health researchers and clinical academics, our students will learn how to analyse, monitor and improve healthcare for women and understand the barriers women face when seeking healthcare support, with the aim of improving women's health outcomes globally."

Participants can study from anywhere in the world and will gain 15 credits at masters level which can be used towards achievement of a further qualification such as a Master's degree including Master of Public Health, MSc Clinical Nutrition and MSc Global Health and Management, some of which can also be studied fully online.

Dr Mostafa said: "The course is aimed at anyone with an interest in women's health and we hope it will be of particular interest to GPs, nurses, midwives and allied health professionals or those working in epidemiology, family planning, community healthcare or third sector. There are many factors affecting women's health, but this course provides an opportunity to explore their impacts and identify and evaluate the actions that are needed to improve healthcare for women around the world."







#### **DEVELOPING GLOBAL WOMEN LEADERS IN STEMM**

Diversity in approach, thought, opinion and decision making will be critical in meeting the UN Sustainable Development Goals (SDGs). Yet, there are only 26 women serving as Heads of State and/or Government, representing only 24 countries around the globe<sup>1</sup>. At the G20 meeting in Rome ahead of COP26, the outgoing German Chancellor Angela Merkel was the only Head of Government present; and she was joined by just four other women at the negotiating table. More women leaders are needed globally to ensure an increased voice and diversity otherwise 50% of the population will be vastly under-represented in designing solutions to challenges such as climate change. Women from the global south, and indigenous populations are even less likely to be represented.

Homeward Bound is a ground-breaking, global leadership initiative, set against the backdrop of Antarctica, which aims to heighten the influence and impact of women in making decisions that shape our planet. Its three strategic focal points are: women who are willing and able to lead, we are stronger together and we are taking actions with impact.

Each year 100 women with STEMM backgrounds from across the world are selected as part of a cohort. Dr Clare Bond, an Earth Scientist from the School of Geosciences, has been selected for the sixth cohort and hopes to use the opportunity to promote women in STEMM and in particular in geoscience.

<sup>1</sup>UN Women calculation based on information provided by Permanent Missions to the United Nations. Only elected Heads of State have been taken into account. https://www.unwomen.org/en/ what-we-do/leadership-and-political-participation/facts-and-figures accessed 8/11/2021

"Geoscience is often conflated with many of the World's global problems, not least the extraction of fossil fuels driving climate change, with their associated greenhouse gas emissions. However, geoscience is critical to meeting net zero and achieving the energy transition. Geoscience skills are essential to finding the critical metals needed for batteries, wind turbines and digital infrastructure, for the roll out of geothermal energy and heating and for the storage of wastes: radioactive material, greenhouse gases and new energy sources hydrogen and compressed air. And that is why I work to promote geoscience as part of a climate change solution, developing skills in geoscience and encouraging diversity in the subject."

Dr Bond isn't the first member of University of Aberdeen staff to be selected as she follows in the footsteps of Dr Ana Payo Payo, from the School of Biological Science, who was part of the second cohort.

As part of the Homeward Bound cohort, Dr Bond has been following an online leadership program and developing a blog and podcast interviewing women in STEMM, raising the profile of women making a difference in science and technology and providing role models for young women interested in STEMM careers. You can find out more about Homeward Bound here www. homewardboundprojects.com.au and Dr Bond's activities through www.breakingtheiceceiling.com and her twitter feed @DrCEBond.









#### **UNIVERSITY PREPARES FOR COP 26**

A 'Mock COP' event for school pupils in Aberdeen and Aberdeenshire was one of several initiatives that the University of Aberdeen undertook as part of its 'Road to COP26' activities to mark the global climate conference in Glasgow in November.

Up to 60 secondary school pupils from schools across Aberdeen and Aberdeenshire took part in the online role play event. Mirroring the format of COP26, it saw small teams from each school participate in discussions, negotiations and voting on important climate issues.

As part of the University's Road to COP26 activities a time capsule was placed in the University's Cruickshank Botanic Gardens which contains, among other items, messages from local primary schoolchildren about their hopes for the environment. The capsule will be opened on the University's Founders' Day 2040 (10 February and the University's 545th birthday).

Meanwhile, the University has been actively encouraging engagement in COP26 among its students and staff, with many students attending the summit as observers, facilitated by the University. An online 'hackathon' event was planned to coincide with the conference which saw teams of students share their ideas and solutions to tackle climate change and its consequences, by co-creating and presenting ideas related to COP26 topics.

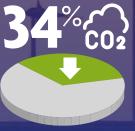
In addition, the University delivered a series of expert-led online seminars exploring topics such as renewable energy, transport, climate change and net-zero.

#### UNIVERSITY RESEARCH AND IMPACT

The University of Aberdeen is a world-leading research institution renowned for innovation, collaboration and international reach.

Our interdisciplinary and awardwinning research has an impact locally and around the world. A number of our current research projects relate to the COP26 themes; Adaption and Resilience, Nature, Energy Transition, Clean Transport and Finance.

Read more about these here - Case Studies | Research | The University of Aberdeen (abdn.ac.uk)



REDUCTION IN EMISSIONS FROM 2016-2020

57th
IN THE WORLD IN TIMES
HIGHER IMPACT RANKING





OF UNIVERSITY WASTE

15 Solution of the state of the

INTERDISCIPLINARY RESEARCH THEMES ESTABLISHED 2021



#### IMPROVING THE DESIGN AND EFFICIENCY OF HYBRID RENEWABLE ENERGY SYSTEMS

Dr Alireza Maheri from the University's School of Engineering is leading the development of a new tool to consider uncertainties in Hybrid Renewable Energy Systems (HRES).

HRES combine two or more renewable energy sources, such as wind and solar, to provide a more efficient energy system. The performance of HRES systems can be affected by uncertainties caused by the availability (or lack of) renewable resources and demand load.

The tool, known as the Multi-objective Optimisation of Hybrid Renewable Energy Systems (MOHRES), quantifies the uncertainties (such as how much solar or wind exposure will be available/per day), which allows the system to be optimised and take into account these uncertainties' - leading to more realistic results and ensures the customer's needs are met.



# TRANSFORMING DECOMMISSIONING WITH ACADEMIC AND INDUSTRY COLLABORATION

In January 2019, the National Decommissioning Centre was officially opened in north-east Scotland's Energetica Corridor, as part of the Aberdeen City Region Deal.

A £38 million partnership between the University, Net Zero Technology Centre (NZTC, formerly the Oil and Gas Technology Centre) and industry. The global research centre has been established to support decommissioning activity by combining academic excellence and industry expertise in a research and development hub.

Led by the University's Professor Richard Neilson and Roger Esson from the NZTC, research at the Centre is focused on evidence-based thought leadership and transforming the traditional approach to decommissioning. It also offers a wide range of industry-led research programmes for PhD and MSc students and provides a collaborative environment for academics to work across disciplines and fully maximise the opportunities presented by decommissioning.

By working in partnership with industry experts and business partners, the University is building on its world-leading research & development capability in areas such as decommissioning technology, predictive modelling, environmental assessment and the economic and regulatory aspects of decommissioning.



# PLANNING PEATLAND WINDFARMS WITH CARBON CALCULATIONS

Professor Jo Smith from the University's Institute of Biological Sciences was commissioned by the Scottish Government to examine the impact of peatland windfarms on carbon emissions. This work produced the Windfarm Carbon Calculator, a tool to estimate the net carbon savings of peatland windfarms and plan developments with reduced carbon emissions.

Despite covering just 3% of the planet's land area, peatlands store more carbon than all the world's vegetation combined. Scotland is particularly rich in peatland – since peat-rich areas are not considered to be valuable for farming, they present prime investment sites for windfarm developers. However, disturbing peatland can lead to the release of carbon, negating the ability of windfarms to mitigate climate change. This can affect the environmental credibility of a site.

The Windfarm Carbon Calculator is now a major part of the Scottish Government's planning process for new windfarm developments on peatlands.







#### **OUR RESPONSE TO COVID-19**

Our researchers are active in the response to Covid-19, working across disciplines to find solutions to one of the biggest global challenges we face today.

#### SCIENTISTS DEVELOP 'GAME-CHANGING' ANTIBODY TEST

Antibody tests that can detect whether people have been exposed to new variants of Covid-19 have been developed by the University of Aberdeen in collaboration with biotechnology group Vertebrate Antibodies Ltd and NHS Grampian.

The new tests, developed with innovative antibody technology known as EpitoGen, can detect antibody responses to infection by SARS-CoV-2 virus with more than 98% accuracy and 100% specificity. This is in contrast to currently available tests that are around 60-93% accurate and cannot differentiate unique variants.

Professor Mirela Delibegovic from the University of Aberdeen and academic lead on the project explains: "Accurate antibody tests will become increasingly important in the management of the pandemic and this is a truly game-changing technology with the potential to dramatically change the trajectory of global recovery from the pandemic.

"As we move through the pandemic we are seeing the virus mutate into more transmissible variants such as the Delta variant whereby they impact negatively on vaccine performance and overall immunity. Currently available tests cannot detect these variants. As the virus mutates, existing antibody tests will become even less accurate hence the urgent need for a novel approach to incorporate mutant strains into the test — this is exactly what we have achieved.

"Looking ahead, discussions are already underway to explore a possible roll-out of the tests to the NHS which we hope to see happen soon."





# UNIVERSITY OF ABERDEEN INVOLVED IN WORLD'S LARGEST STUDY INTO THE PSYCHOLOGICAL IMPACT OF COVID-19

Researchers from the School of Psychology at the University of Aberdeen are taking part in a global study investigating the impact of the Covid-19 pandemic on emotional wellbeing and resilience. The study will also use insights from psychology to support public health advice like handwashing and wearing face coverings.

Dr Clare Sutherland is leading the University's contribution to The Psychological Science Accelerator's Rapid-Response Covid-19 Project, an unprecedented global, multinational research collaboration which aims to understand the psychological and behavioural aspects of the Covid-19 crisis.

Spanning more than 500 research labs from over 70 countries, The Psychological Science Accelerator is the largest network of psychology labs in the world and this project has been formed to rapidly obtain informative, impactful, timely knowledge about the behavioural aspects of Covid-19.

Primarily, the aim of the project is to provide people with psychological strategies to increase resilience and decrease anxiety when thinking about the pandemic. However, the researchers will also examine strategies like hand washing and social distancing to encourage people to promote healthy behaviours.









