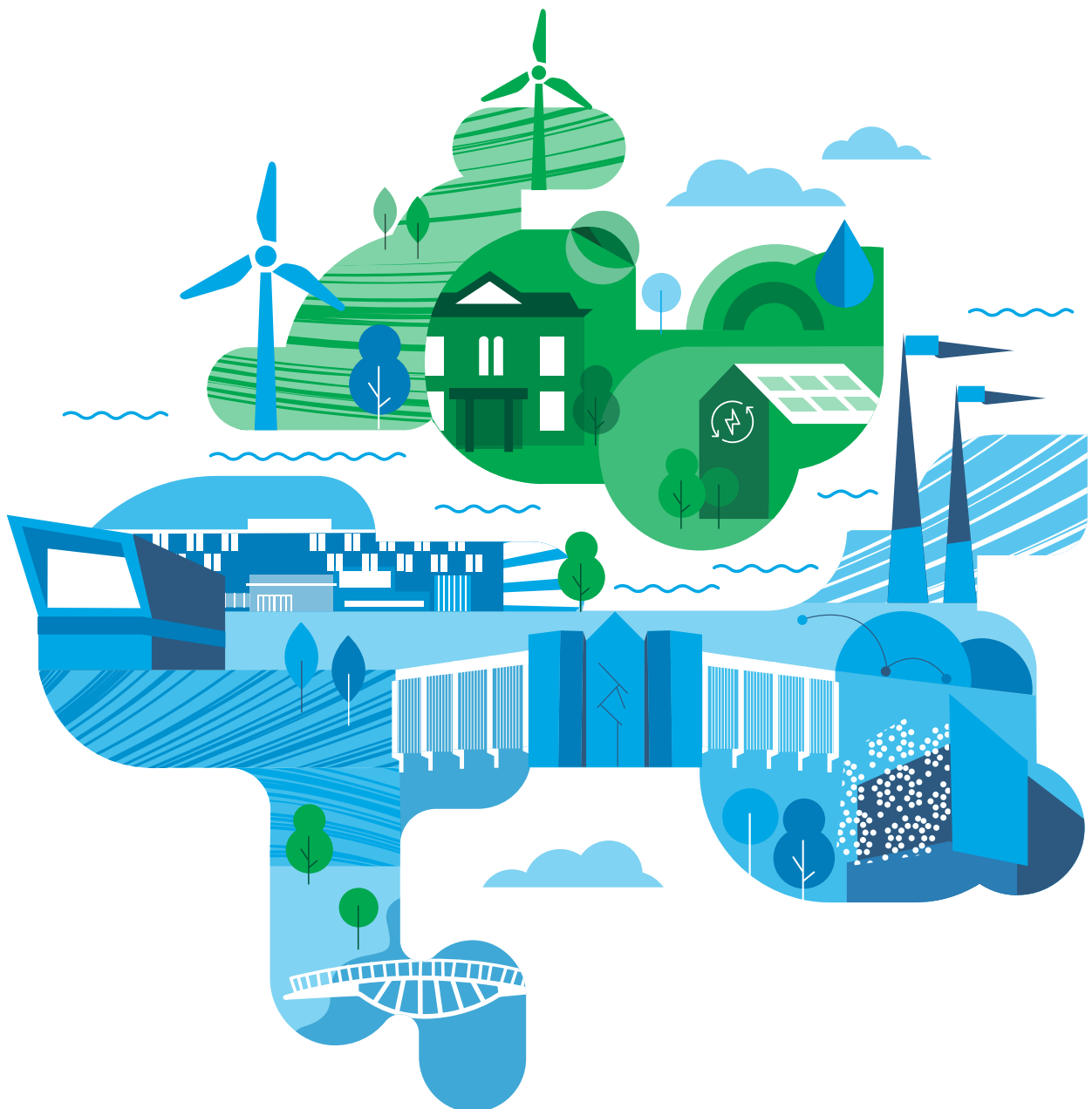




# Sustainability Report 2023



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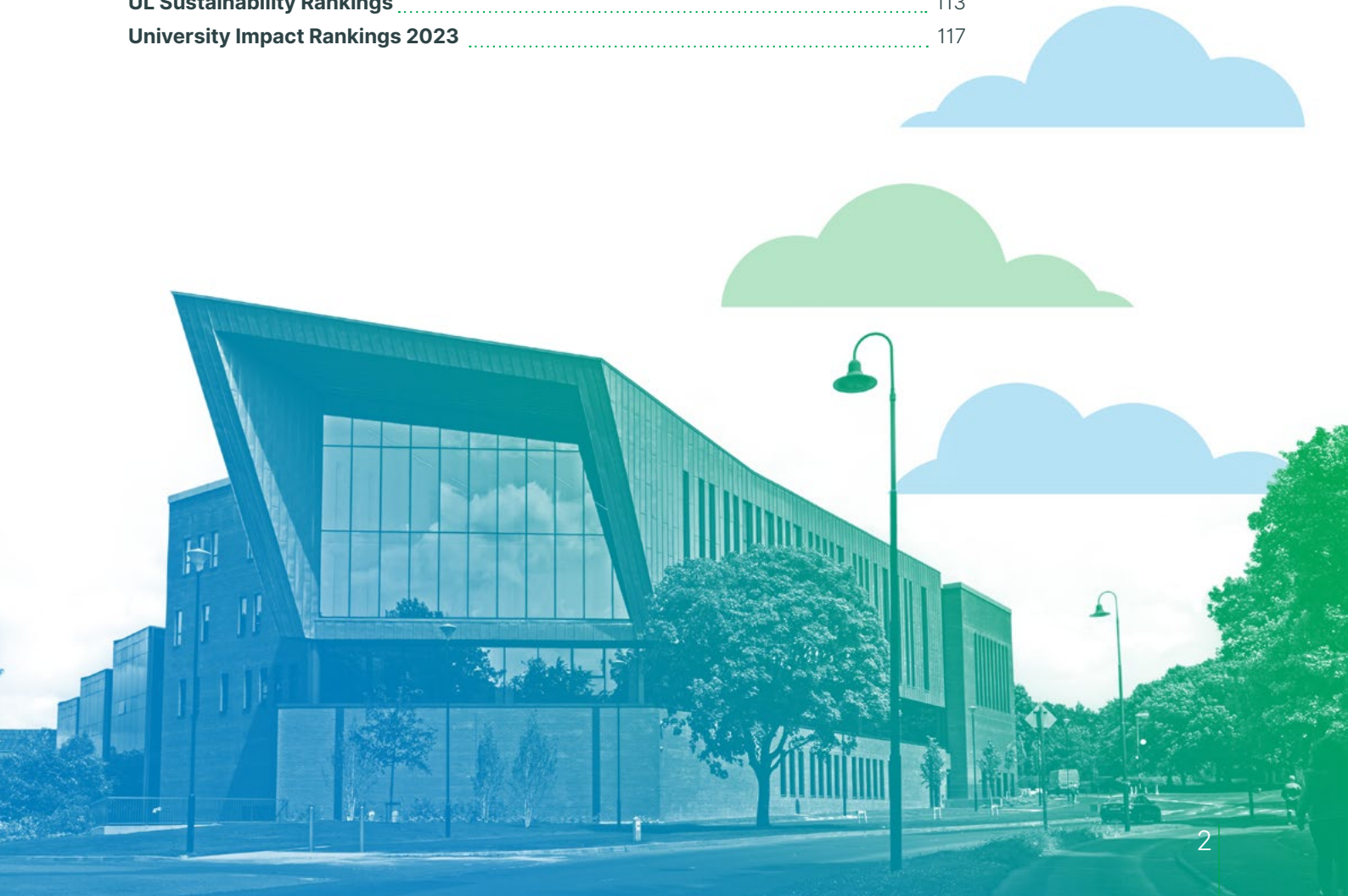
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# Acting Chief Officer and Provost's Foreword

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At University of Limerick (UL), we pride ourselves on being **a centre of intellectual rigor**, where future leaders, innovators and responsible citizens are shaped.

The focus of our institution is aligned in the understanding that universities have long been at the heart of knowledge creation and dissemination. They are places where ideas are cultivated, tested and refined. Through our education, research and community engagement, we have always sought to make a positive impact both locally and globally.

As a global community, we find ourselves challenged through our decision-making as the choices we make will significantly influence the future of our society and the wellbeing of our planet. As a university, we recognise the challenges that lie ahead, particularly in the realm of sustainability, and we are committed to addressing them with thoughtful action and responsible stewardship.

During 2023, here at UL we kept moving forward by marking notable achievements within our mission-based approach to sustainability. Our commitment to fostering socially responsible citizens remains and we are dedicated to equipping our students with the knowledge and skills they need to contribute meaningfully to society. Our missions continue to align with the the United Nations Sustainable Development Goals (UN SDGs) as we recognise the critical role we play in advancing sustainability.

The UL Sustainability Framework 2030 continues to help and guide our actions on the journey towards becoming a more sustainable institution, and this report documents the work we have done during 2023. Both the framework itself and the mission-based work align with ongoing efforts within the EU and beyond, providing a solid foundation for our future decisions and actions in higher education, research and institutional governance. As a community, we will continue to weave sustainability into all aspects of university life. It will shape our research agendas, influence our students' experiences, and be a cornerstone of our partnerships and collaborations. Moreover, it will help us build on the progress we have already made while encouraging further innovation and experimentation on our campus.

Sustainability is a challenge that no single person, team or discipline can tackle alone. It demands collective effort, shared vision, and a commitment to work together across boundaries. This collaborative work will benefit us all in the short term and future generations in the long term.

**As we move forward, we do so with a sense of responsibility and a commitment to careful, considered action, to inspiring others, and to making sustainability an integral part of our university, our community and our daily lives.**



**Professor Shane Kilcommins**  
Acting Chief Officer and Provost  
*University of Limerick*

# Director's Foreword

## University of Limerick: **Advancing Towards a Sustainable Future**

At UL, our commitment to sustainability is unwavering. Over the past year, we made significant strides in advancing our sustainability missions aligned with the UN SDGs. The cross-organisational Sustainability Working Group, with over 70 dedicated members, remains the driving force behind these efforts, turning global aspirations into concrete actions across all university operations.

Examples of achievements in 2023 include:

— **Mission 02: Transition Governance Framework**

In collaboration with Healthy UL and Campus Life Services, we published a new food philosophy, setting the stage for a university-wide food policy that prioritises sustainable practices.

— **Mission 04: Digital Campus Commons**

Partnering with the Kemmy Business School, we launched a pilot project to develop a digital twin of our campus, enhancing our ability to report and actively track progress.

— **Mission 12: Biophilic Design Integration**

In collaboration with the Glucksman Library, we piloted biophilic design elements, leading to a campus-wide implementation toolkit that promotes wellbeing through nature-connected spaces.

— **Mission 15: Egalitarian University**

Working with the Human Rights, Equality, Diversity and Inclusion team, we are developing clear metrics to advance equality and inclusivity within our community.

— **Mission 20: Revitalised the River Shannon**

We are collaborating with stakeholders to secure funding for conservation efforts aimed at protecting the natural environment surrounding UL, alongside student engagement initiatives like the bio-blitz.

— **Mission 18: Carbon Neutral Campus**

We collaborated with the Buildings and Estates team and Executive team to publish the Climate Action Roadmap, mapping our carbon footprint and creating a pathway to carbon neutrality.

These projects exemplify our commitment to sustainability and systems-level change. The progress made is a testament to the collective efforts of the UL community, which is united in creating a sustainable and inclusive future. As we continue on this journey, we remain focused on learning, adapting and innovating, leveraging the strengths and insights of our community to achieve our ambitious goals.

In 2023, alongside our annual celebration of student sustainability projects, we introduced the Student Conversation and Workshop Series. The series focused on engaging students in discussions around the UN SDGs, sparking meaningful conversations and contributions. By empowering students to lead sustainability efforts, we are working to enrich their educational experience and strengthen UL's commitment to sustainable development. The workshops provided practical skills and knowledge, enabling students to integrate sustainable practices into their daily lives.

**We look forward to broadening our engagement and reach over the coming years and to continuing to deliver systemic change in line with our sustainability framework.**



**Andrea Deverell**

Director, *Centre for Sustainable Futures and Innovation*



**1** NO  
POVERTY



**End poverty**  
in all its forms  
everywhere.

## Mapping food equity: Limerick Food Partnership's vision for a fair and nutritious future

Limerick Food Partnership is a collaboration of community, voluntary, academic and statutory organisations committed to advocating for food equity and developing healthy food initiatives in Limerick city and county. The Partnership's primary objectives are to raise awareness, improve access and increase the supply of nutritious food options. Currently, the Partnership is undertaking a two-year research project to develop a Food Poverty Strategy, which will be an integral part of Limerick City and County Council's Local Economic and Community Plan 2023-2028.

This research aims to investigate the key drivers of food poverty, including economic, social, environmental and systemic factors. A crucial aspect of this study is understanding how food poverty is organised and addressed across Limerick. To provide valuable insights and inform policy recommendations, the project must first examine where and how people access food and the types of food available to them. A key deliverable of this project is the development of the "Food Finder" a geospatial food-mapping application that uses a geographical information system (GIS) to map Limerick's food environment. The application will visually represent the local food system, showing the locations of supermarkets, small grocers, food banks and community cafés.

Food provision is inherently cross-sectoral and multidisciplinary, intersecting with education, environment, community, planning and public health policies. The Food Finder project will engage a wide range of stakeholders across the city and county, including citizens, food infrastructure participants, healthcare professionals, educators and environmental advocates. This participatory approach aims to build capacity and ensure the project's relevance through meaningful stakeholder engagement.

While the Central Statistics Office's Survey on Income and Living Conditions (SILC) provides important baseline data, it lacks the detailed, localised analysis needed for Limerick. The Partnership's research will deliver a comprehensive socio-economic profile of Limerick city and county, providing an in-depth understanding of the food system through a static depiction of current food locations. The food mapping exercise will use GIS to make this information publicly accessible, offering easily understandable visual representations of the local food environment.

By analysing the geographical distribution of food sources, local government and community organisations can make informed decisions to improve food security, reduce waste and enable effective food recycling. The Food Finder will not only map commercial food outlets but also document food assistance resources provided by community and voluntary organisations. This project will highlight strengths and weaknesses in the food system, illuminating disparities, food deserts and inequities in planning and transport.

The findings from the Food Finder will inform the Food Poverty Strategy, ensuring its sustainability through evidence-based research. By creating a user-friendly geo-mapping process, the project will provide a visual catalogue of food provision patterns in Limerick. This will not only examine the supply of food but also its accessibility, leading to a deeper understanding of the food environment and helping to shape strategic policy.

Through collaborative efforts like the Food Finder project, the Partnership aims to raise awareness, improve access to nutritious food and provide data that will inform policy development, ultimately striving for a healthy, sustainable and fair food system in Limerick.

## LULITMI Marketplace: Ideas in democracy and public administration

On 13 April 2023, the 4th annual LULITMI Marketplace event showcased student responses to issues raised as part of an intensive, problem-based learning (PBL) exercise. LULITMI is a project undertaken by first-year UL students of public administration (BA Arts, Criminal Justice, Law Plus, and Journalism & Digital Communication). Students took on the challenge of creating a sustainable fictional country – LULITMI – by making social, environmental and economic decisions. Each group researched a specific scenario and associated SDGs and used a website to communicate its solutions.

As part of the exercise, groups researched solutions while learning about the UN SDGs and the challenges of implementing changes. The event covered topics and content spanning SDGs 1, 2, 3 and 4.



Annual LULITMI marketplace in action

## Student-led Sustainability Conversation Series

### Empowering communities: A conversation on **SDG 1** with Linda Ledger

On 4 October 2023, UL Student Sustainability kicked off the SDG Conversation Series with Linda Ledger, CEO of St Munchin's Community Centre. Focusing on SDG 1: No Poverty, Linda shared her journey and the Centre's initiatives, such as meals on wheels, community allotments, and a hair and beauty salon, which provide essential services and employment opportunities. Her emphasis on education and collaboration with UL's CWELL programme highlighted the importance of community-driven efforts in tackling poverty and promoting sustainable development.

### Giving Voice

Sustainability is about compassion for ourselves and our planet as well as for the other people and creatures that we share this world with. It is about re-establishing an equilibrium between us and Earth's resources to ensure we give back more than we take and that we create an environment in which future generations of people, plants and animals can thrive. Perhaps, more than anything, sustainability is about fostering hope – about finding our own place within this world that sustains us and discovering how we can, in turn, sustain and protect it.

#### Tom Spencer

Social Media & Digital Content Office, Marketing and Communications



2 ZERO HUNGER



**End hunger, achieve food security and improved nutrition and promote sustainable agriculture.**



## Fixing Food Together: A new vision for Ireland's food system

In May 2023, the Climate and Health Alliance launched a pivotal position paper entitled *Fixing Food Together: Transitioning Ireland to a Healthy and Sustainable Food System*. Co-authored by Professor Audrey Tierney, Discipline Lead in Nutrition and Dietetics at UL, in collaboration with the Climate and Health Alliance's Sustainable Diets Working Group, this document presents a transformative vision for Ireland's food system and aims to enhance human health, environmental sustainability and social equality.

The paper emphasises an urgent need for change, highlighting that the current food system significantly contributes to chronic diseases, environmental degradation and social inequality. It stresses the importance of transitioning to a healthier and more sustainable food system for the wellbeing of both people and the planet.

The Climate and Health Alliance identifies six key challenge areas to address:

- Ending the junk food cycle: The paper advocates for reducing the consumption of ultra-processed foods high in sugar, fat and salt, which are major contributors to diet-related chronic diseases.
- Promoting plant-based diets: Encouraging a shift towards more plant-based foods is crucial for health and environmental sustainability. The paper promotes more consumption of fruits, vegetables, whole grains and legumes.
- Harnessing guidelines: Leveraging international and national dietary guidelines to promote healthier eating habits is emphasised. These guidelines can drive positive change.
- Reducing food waste and single-use plastics: The paper highlights the environmental impact of food waste and single-use plastics, calling for efforts to minimise waste and promote sustainable packaging solutions.
- Improving agricultural practices: Sustainable farming practices are essential for reducing greenhouse gas emissions and protecting biodiversity. The paper advocates for practices that enhance soil health, reduce chemical use and promote carbon sequestration.

- Using policy to drive behaviour change: Structural changes and targeted policies are necessary to support the transition to a sustainable food system. The paper recommends policies that promote healthy eating, reduce food waste and support sustainable agriculture.

The position paper also provides detailed recommendations for a healthy, sustainable diet in Ireland. It emphasises reducing red and processed meat consumption, increasing the intake of plant-based foods, and minimising ultra-processed foods. Additionally, it calls for policies that support these dietary changes through public awareness campaigns and financial incentives for sustainable farming practices. Professor Audrey Tierney's research on diet quality, combined with the collaborative efforts of the Climate and Health Alliance's Sustainable Diets Working Group, has resulted in a comprehensive and actionable roadmap for a healthier, more sustainable food system in Ireland.

The Climate and Health Alliance's vision is clear: every person in Ireland should have the right to a life free from avoidable diet-related diseases and environmental harm. By working together to transform our food system, we can create a healthier, more sustainable future for all.

## Breaking barriers: Deaf men's group gains essential nutrition skills through innovative programme

A lack of appropriate communication methods creates barriers for the Deaf community to accessing important information. Through our links with AccessCampus and the School of Allied Health's MSc Human Nutrition and Dietetics, the School of Allied Health was made aware that a Deaf men's group had identified the need for more information and skills around healthy eating.

MSc Human Nutrition and Dietetics students delivered to the group a structured nutrition education and cookery programme entitled 'Healthy Food Made Easy'. The programme was funded by the charity CHIME and facilitated by an Irish Sign Language interpreter. Associate Professor Anne Griffin of the School of Allied Health provided clinical supervision.

The participants of the group discussed diet and nutrition-related topics, developed skills in cooking healthy foods and enjoyed the social aspect of the event by engaging and learning from each other and the students. For their part, the participating students learned how deaf people miss out on key health and nutrition messages that are commonly disseminated through the spoken word. They also learned how to adapt communication techniques to deliver the content in a client-centred way. The students will take this learning forward to improve health service delivery when they become practising dietitians.

According to Geraldine White of CHIME, “Transferable skills are being taught, and this is fostering independence and boosting confidence among the participants. New experiences are being enjoyed among the group.”



**Participants attending the 'Healthy Food Made Easy' Programme**

## Supporting families in emergency accommodation to make healthy food choices

NOVAS is a voluntary organisation working with families and single adults who are disadvantaged and socially excluded – primarily those who are homeless or at risk of being homeless. NOVAS's vision is that everyone can have their own sustainable home.

Students of the School of Allied Health's MSc in Human Nutrition and Dietetics who worked with NOVAS as part of their final-year community-led placement in November 2023 were asked to produce a nutrition education resource that could be used by families living in emergency hotel accommodation. The purpose of the resource is to help families make nourishing meals during a time when they have limited financial and food preparation resources.

A needs assessment carried out with the families identified key topics to be addressed, such as buying convenience foods, fussy eating, long shelf-life foods, takeaway foods, healthy eating, and making meals with limited equipment. Information on these key topics, which were identified by the service users, is now available in booklet format and is provided by NOVAS to all those supported by the organisation. Guided by reading and writing tips from the National Adult Literacy Agency (NALA), the booklet is an easy-to-read, visual resource with lots of images and simple language. It not only supports the families in an emergency situation but also provides nutrition information that can be used by families when they move to more long-term accommodation.

According to Nicola Canning, MSc Human Nutrition and Dietetics second-year student, “Working with NOVAS provided me with great insight into the barriers faced by those who are homeless or at risk of homelessness. Through working with NOVAS service users in facilitated focus groups, we were able to develop a nutrition resource that could be beneficial for all those accessing the service.” Another second-year student, Ailish Wrenne, had this to say: “Working alongside this service was an eye-opening experience, as I saw first-hand the struggles that this community faces and how our work can help these individuals to better manage one aspect of their everyday lives.”

## Student-led Sustainability Conversation Series

### Addressing hunger: A conversation on **SDG 2** with Jackie Bonfield

On 11 October 2023, Jackie Bonfield from Mid-West Simon discussed SDG 2: Zero Hunger. Jackie shared insights into addressing food insecurity through comprehensive approaches, including emergency accommodation and advocacy. Her discussion underscored the link between housing stability and food access, emphasising the need for sustainable community support systems to combat hunger effectively.

### **Giving Voice**

Developing a culture of responsibility and care is integral to sustainability, both on campus and in our community. We must take actions that support the wellbeing of our environment and one another so that future generations will have a healthier, more equitable world because of the choices we make today. It is possible to inspire positive change and strengthen community connections between our campus and the wider world by embedding sustainable practices in our daily lives.

#### **Eimear Scully**

Project Coordinator, EHS Faculty Office



**3** GOOD HEALTH  
AND WELL-BEING



**Ensure healthy lives**  
and promote well-being  
for all at all ages.

## UL's Health Research Institute unveils bold five-year plan to tackle global health challenges and advance UN SDGs

Established at UL in 2014, the Health Research Institute (HRI) aims to align researchers from various disciplines around common research goals with a focus on health across the lifespan and healthy ageing.

In November 2023, the HRI launched its ambitious five-year strategic plan (2023-2028), which places a focus on multiple SDGs. The HRI has a keen sense of responsibility for responding to and concentrating its efforts on the significant global health challenges that threaten our world. The HRI understands that being interconnected, interdisciplinary, cross-boundary, cross-cultural and entirely inclusive in approach is what is required to address these societal grand challenges. Critically, the HRI's vision, mission, goals and underpinning focal research areas are aligned with global and national strategies that seek to address such issues. Notably, the HRI includes sustainability in its core values – the centre is committed to undertaking relevant research with sustainable outputs to help address grand challenges and contribute towards a regenerative society.

The HRI focuses its research on four priority research areas: ageing; cancer; physical activity for health; and food, diet and nutrition, all of which are underpinned by expertise and excellence in implementation science (research), participatory and arts-based research (Participatory Health Research) and an emerging skillset in digital technology and advanced data analytics.

Of the 17 UN SDGs, it is with SDG 3 (Good Health and Well-Being: Ensure healthy lives and promote well-being for all at all ages) that the HRI's main areas of research are most closely associated. However, much of the work of HRI members focuses on multiple SDGs, as specified in the sections to follow.

### Ageing

The HRI Ageing Research Centre (ARC) contributes to the following UN SDGs:

- SDG 3: Good Health and Well-Being: Through research on new models of healthcare and rehabilitation for older adults and in collaboration with healthcare practitioners and older adults themselves
- SDG 4: Quality Education: By involving older adults and healthcare practitioners in research efforts and conducting research on intergenerational education
- SDG 10: Reducing Inequalities: By addressing potential access inequalities, actively including older adults from diverse backgrounds and ensuring that new healthcare models cater for everyone, regardless of circumstances
- SDG 11: Sustainable Cities and Communities: By conducting research on age-friendly environments and communities
- SDG 17: Partnerships for the Goals: By fostering collaborations between researchers, healthcare practitioners and older adults
- SDG 2: Zero Hunger: By addressing the issue of malnutrition in older adults

### Cancer

The HRI research area of cancer is represented by the Limerick Digital Cancer Research Centre. Besides focusing on SDG 3, the centre's work closely aligns with the following SDGs:

- SDG 4: Quality Education: By providing education and training to healthcare professionals on cancer prevention, diagnosis and treatment and offering comprehensive, multidisciplinary training programmes in and across degrees in biological sciences, engineering and computing
- SDG 5: Gender Equality: By fostering an inclusive environment where women have equal opportunities for leadership, research and career advancement through, for example, mentorship programmes, gender-balanced recruitment and support for work-life balance; by conducting research on gender-specific cancer disparities and offering tailored care and support services to address the unique needs of female patients and caregivers
- SDG 8: Decent Work and Economic Growth: By providing employment opportunities for healthcare professionals, researchers and support staff and by generating new knowledge, technologies and treatments to stimulate economic growth

### Physical Activity for Health

The Bangkok declaration on Physical Activity for Global Health and Sustainable Development endorsed at the 6<sup>th</sup> ISPAH (International Society for Physical Activity and Health) Congress on Physical Activity and Public Health illustrates how physical activity can contribute to the achievement of no less than 8 SDGs (3, 4, 5, 10, 11, 13, 15 and 16).

### Food, Diet and Nutrition

The research undertaken by the Food, Diet and Nutrition group aligns primarily with the following SDGs:

- SDG 3: Good Health and Well-Being: By promoting healthy ageing and understanding the nutritional needs of older adults; by conducting clinical trials to evaluate the impact of dietary interventions on health outcomes; and by conducting research on nutrition during pregnancy and gestational diabetes
- SDG 2: Zero Hunger and SDG 12: Responsible Consumption and Production: By promoting the Mediterranean diet; by conducting research on food security and functional food ingredients and testing their bioactivity; and by studying food protein ingredients and their properties
- SDG 4: Quality Education: By promoting health behaviours and creating education and policy initiatives

### Participatory Health Research (PHR)

The PHR unit contributes to the following SDGs:

- SDG 3: Good Health and Well-Being: By involving patients and the public as partners in health research
- SDG 4: Quality Education: By contributing to new teaching programmes on participatory health research, including the use of arts-based research methods
- SDG 10: Reducing Inequality: By generating evidence to optimise refugee and migrant health
- SDG 17: Partnerships for the Goals: By working in partnership across disciplines, between academia and community organisations and between academia and statutory health agencies.

### The influence of Collagen-1 on Annexin A2 in breast cancer progression

One of the biggest hurdles in the treatment of breast cancer is treating patients when cancer cells have spread to distant organs. By understanding this process (known as metastasis), we can develop new treatment strategies. UL researchers found that a protein called Annexin A2 played an integral role in the metastatic behaviour of breast cancer cells.

In the laboratory, we can grow breast cancer cells in plastic dishes to investigate their behaviour. However, in the body, cancer cells are in contact with and influenced by their surroundings. For example, the extracellular matrix (ECM) provides structural support and acts as a scaffold for cancer cells. Led by principal investigator Professor Kieran McGourty (Department of Chemical Sciences), principal investigator Professor Patrick Kiely and first author Dr Amira Mahdi (both School of Medicine), the research team grew breast cancer cells in the presence of an ECM protein called collagen-1, a fibrous protein that is a major component of breast tissue. When breast cancer cells were in contact with collagen-1, Annexin A2 on the breast cancer cells changed its shape and the cells adopted a more metastatic behaviour, which would allow them to spread in the body.

The team found that if it modified the breast cancer cells so that they no longer possessed Annexin A2, the cells were less likely to break down the ECM surrounding them, thereby decreasing their metastatic ability. The work gave the team an insight into the cellular mechanisms of breast cancer metastasis, highlighting Annexin A2 as a potential therapeutic target in the prevention of breast cancer progression.

The research was supported by grants received from the Irish Research Council, Mid-Western Cancer Foundation and Science Foundation Ireland Infrastructure Programme Opportunity Fund.

## Landmark study involving UL research demonstrates economic benefit of precision medicine in treating cancer

A landmark study involving UL researchers has shown how precision medicine can be a cheaper and more efficient way to treat cancer. Led by Queen's University Belfast, this is the world's first and most comprehensive study of the initial wave of precision oncology medicines in the marketplace. The study was conducted by the all-island eHealth Hub for Cancer in collaboration with a team of precision healthcare economists and researchers from SaluTem Insights Ltd, Diaceutics PLC and King's College London.

With the aim of examining the economic impact of precision versus traditional oncology medicines, the study found that it costs over US \$1 billion less in research and development (R&D) to develop an oncology medicine that is guided through clinical trials in a precision oncology approach compared to a 'one size fits all' approach to treatment. The findings were published in the *Journal of Pharmaceutical Policy and Practice*.

Precision oncology aims to develop medical treatments that target particular characteristics of an individual's tumour. Studies have shown that tumour shrinkage rates and progression-free survival are greatly improved with precision oncology medicines. However, with the average cost of getting a new oncology medicine into the market being estimated at US \$4.4 billion, the development of medicines is a major contributor to health costs. The study showed that the use of the CDx-guided approach, which uses a companion diagnostic to identify patients who are most likely to benefit from a particular medicine, increases the likelihood of a treatment being successful while also cutting costs.

According to Aedín Culhane, Professor of Cancer Genomics, Director of the Limerick Digital Cancer Centre at UL, and co-lead of the eHealth Hub for Cancer, "This work shows how we can deploy quality data to highlight the benefits and potential cost saving of a precision oncology approach. Treating patients based on their genomic make-up is the direction of travel that we should be pursuing, and this study highlights how it can be achieved in an efficient and cost-effective way."



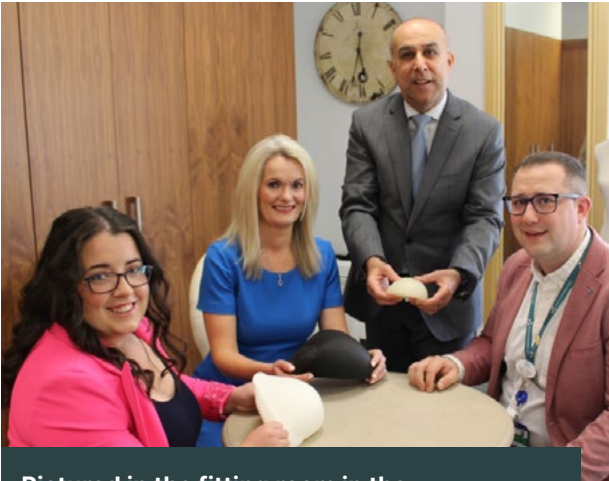
Professor Aedín Culhane

## 'World first' project creating bespoke breast prostheses for post-mastectomy women

Using state-of-the-art digital manufacturing, a unique Limerick project is creating bespoke breast prostheses for post-mastectomy women. The new pilot service is the result of a successful collaboration between the Rapid Innovation Unit at UL, the Symptomatic Breast Care Unit at University Hospital Limerick (UHL), and the Mater Private Network's Mid-Western Radiation Oncology Centre. The first of its kind globally, the service uses 3D scanning and printing to improve the quality of life for survivors of breast cancer.

The pilot project, which was awarded funding through the Public Service Innovation Fund and the Department of Public Expenditure, National Development Plan Delivery and Reform, was officially launched at an event in UHL on 17 May 2023. The service will enable women who have undergone a complete mastectomy to avail of bespoke prostheses produced onsite at the point of care. As well as creating a better experience for women who have had a mastectomy, the bespoke, 3D-printed breast prosthesis can be produced onsite for a fraction of the cost of current commercial solutions.

The prosthesis was developed collaboratively by Dr Kevin J. O'Sullivan, Senior Research Fellow at UL's Rapid Innovation Unit; Mr Chwanrow Baban, Senior Lecturer and Module Lead for Surgery at UL and Consultant General and Oncoplastic Breast Surgeon at UHL's Symptomatic Breast Cancer Unit; and Dr Lorraine Walsh, Consultant Radiation Oncologist at Mater Private Network's Mid-Western Radiation Oncology Centre and Associate Clinical Lecturer Radiation Oncology at UL.



Pictured in the fitting room in the Symptomatic Breast Unit at UHL are (left to right) Emmajude Lyons, PhD Researcher, Rapid Innovation Unit, University of Limerick; Dr Lorraine Walsh, Consultant Radiation Oncologist, Mater Private Network Limerick; Mr Chwanrow Baban, Consultant General and Oncoplastic Breast Surgeon, Symptomatic Breast Unit, University Hospital Limerick; and Dr Kevin J O'Sullivan, Senior Research Fellow, Rapid Innovation Unit.

### Fostering knowledge sharing and equality: Evolve Professional Support Staff Community of Practice

Sharing knowledge and building a supportive network is crucial for organisational growth and employee wellbeing. The UL Evolve Professional Support Staff (PSS) Community of Practice (CoP) aims to create a collaborative structure that empowers staff, promotes best practice and enhances common capabilities across the institution. By aligning with SDG 3: Good Health and Well-Being, the CoP strives to create an inclusive and equitable environment for PSS.

The development of the UL Evolve PSS CoP was informed by research (conducted by Denise Roche of the Department of Psychology) on barriers and enablers to knowledge sharing among PSS in higher education institutions (HEIs). Over 90 per cent of surveyed participants expressed a desire for a knowledge-sharing platform, highlighting the need for a structured community where insights can flow freely. The CoP seeks to address these needs by providing a safe space for staff to exchange ideas, learn from each other and contribute to organisational excellence.

The UL Evolve PSS CoP focuses on:

- Informal knowledge exchange: The CoP serves as a point of contact for PSS. Through regular interactions, members can share practical insights, troubleshoot challenges and learn from each other's experiences. Whether it is a quick chat over coffee or a virtual discussion forum, the CoP fosters meaningful connections.
- Work-life balance: The CoP recognises that a healthy balance between work and private life is a critical aspect of employee wellbeing. The CoP provides a forum for sharing knowledge and ideas about improving work-life balance, and themes are chosen by the community to add value to members' lives at work and at home.
- Idea generation and requirements gathering: Innovation thrives in collaborative spaces. The CoP actively seeks ideas and suggestions from its members. Whether it is a process improvement, a creative solution or a novel approach, every voice matters. We believe that the best ideas emerge when diverse minds come together. Each session has time allocated to initiatives upon which CoP members elaborate.
- Linkages and collaborations: The CoP connects with colleagues across departments to identify synergies and explore collaborative projects. Whether leveraging new software or aligning with strategic goals, the CoP acts as a catalyst for positive change and attempts to break down silos across the campus. The fact that UL PSS enjoy helping others (as evidenced by Denise Roche's research) is a significant contributing factor to the ongoing success of the UL Evolve PSS CoP.

Chosen by CoP members, topics covered to date include MS Teams, managing your personal brand, benefits of UL Connect, hybrid working, web team insights, finance systems, life outside the office, data security, further study options for staff, event management, giving back to our community, marketing and communications resources, and using AI to make life easier. Through regular interactions and open dialogue, CoP members share insights on wellbeing challenges such as stress management, mental health and work-life balance. The CoP hosts multiple in-person networking events, giving opportunities to members to reconnect and create relationships across the UL campus. In addition, the CoP's open Q&A forum, on both Teams and UL Connect, enables members to pose and answer questions.



The CoP plans to host sessions throughout 2024 and beyond. While the CoP is not currently supported financially, funding will be sought in 2024 to cover speaker fees and additional in-person events. Current members of the UL Evolve PSS CoP committee include Denise Roche, Laura Moloney, Kerry Betts, Katie McAuliffe, Liam P. Ryan, Barry Shanahan and Martina Ryan. Along with Denise, Laura, Kerry and Katie, Kevin O'Connor was a founding member of the CoP.

### Applying psychological perspectives to explore how the climate crisis impacts children's health and security rights

A team of psychologists responded on behalf of the Psychological Society of Ireland to a call from the UN for recommendations on improving children's rights laws in relation to the environment. Comprising Dr Elaine Rogers, UL; Dr Michelle Cowley-Cunningham, Dublin City University (DCU); and Dr Alexis Carey, Jigsaw (the national centre for youth mental health), the team addressed the mental health problems caused to children by environmental harm and its impact on security and health child rights. The research reveals how interventions mindful of children's educational and participatory capacity can moderate the effects of climate anxiety. Publications and written submissions were funded by a postdoctoral research grant from the DCU National Centre for Family Business.

The project is relevant to SDG 3: Good Health and Well-Being and SDG 16: Peace, Justice and Strong Institutions. We all know that the climate crisis not only affects children's wellbeing but threatens the health and security rights of future generations. The team's submission focused on how environmental degradation and children's awareness of it present an important linkage to children's mental health. The submission proposed (i) a psychological health account of climate anxiety and its effects on children and (ii) a psychological perspective on the UN Convention on the Rights of the Child regarding health and security as participation rights.

In terms of impact, the submission and its recommendations were catalogued with the UN Office of the High Commissioner (OHCHR), denoting the submission's relevance in assisting the Committee on the Rights of the Child (CRC) with Draft General Comment No. 26. The new General Comment No. 26

now clearly signposts climate anxiety as a pressing issue under II H.41 regarding children's right to the highest attainable standard of health (art. 24). Children's rights relevant to the business sector are also made explicit under IV C.81, particularly to ensure that marketing standards in relation to the environment do not mislead child consumers. Attention to the empowerment, education and participation of children in the climate crisis context is made explicit under II D.26.

The team consulted with experts to preserve the submission's recommendations. Drawing on psychological research and the UN's global consultation with 16,000 children, the consultation was developed into a paper for an academic audience. Entitled *The Climate Crisis, Climate Anxiety and Children's Rights: A Psychological Perspective on Human Health and Security*, the article was published in *Irish Studies in International Affairs*, the journal of the Royal Irish Academy. The research suggested that children across a range of ages not only demonstrate their understanding of the threat climate change poses but readily propose solutions. Limitations around the term 'climate anxiety' for describing the experience of children from the Global South were reconciled by igniting a debate around a narrative of physical and mental health parity and children's health rights.

### Promoting wellness while studying through HeadSpace@UL Library

Open seven days a week, the Glucksman Library is the primary out-of-classroom student learning environment and one of the busiest buildings on the UL campus. The 2022 Library survey highlighted a demand from students for more spaces promoting wellbeing, particularly given that many students commute long distances daily (due to a lack of local accommodation) or spend long hours studying in the Library. In response, the Library created HeadSpace@UL Library – two wellbeing zones intended to help improve health, wellbeing and productivity. The HeadSpace zones were created by the Library Spaces Manager in consultation with Library management, and the wellbeing spaces are based on international and national examples of best practice.



**HeadSpace zone at the Glucksman Library**

HeadSpace enables the UL community to recharge and refocus while using a new range of wellbeing facilities, including:

- Energy pods: Rest for up to 20 minutes at a time to rejuvenate mind and body. Between September and December 2023, 741 users availed of rest sessions in the energy pods and relaxed for a total of 19 days.
- Electronic height adjustable desks: Study desks where students can sit or stand
- Study bikes: Stationary bikes with an attached height-adjustable desktop, which encourages gentle movement while studying

UL created a social media reel to demonstrate how HeadSpace can be used to take a break from studies in the Library.

Under the Headspace umbrella, the Library held a 'Pause for Paws' Meet a Therapy Dog wellbeing session for students during the busy exam period in December 2023. The event was organised by the Library Spaces Manager, Library Assistant, Library & Information Services, the Librarian Student Engagement & Success Officer, the UL Health & Safety team and Building & Estates.

The registered charity My Canine Companion brought a small selection of therapy dogs to the Library for UL students to meet during the busy exam period while also raising awareness of how dogs can help to improve mental health and reduce stress and anxiety. Research has shown that interacting with therapy

dogs can improve students' moods, especially during stressful periods such as examinations. The 90-minute session was attended by more than 850 students, some of whom were visibly emotional, with many exclaiming what a magical and wonderful destressing experience the event had been. From setup to rollout, the event was shared with UL Student Life, which has since arranged its own session with the charity. The Library intends holding another session in 2024.

HeadSpace@UL Library was officially launched to the UL Community on 4 October 2023 by Dr Patrick Ryan, Director of the Doctoral Programme in Clinical Psychology; Ciara McCaffrey, Library Director; Ronan Cahill, Student Life President; and Emily Rosenkranz, Student Welfare Officer. At the launch, Ronan Cahill commented, "With so many students commuting and spending long hours on campus, it is great to see facilities that can help ease the stress." In his remarks at the launch, Dr Ryan said, "HeadSpace not only prompts us to take a break and offers a novel way of doing this, but it also reminds us that learning is not about toil and tears – comfort, relaxation and a different environment are great triggers for efficient and effective learning."

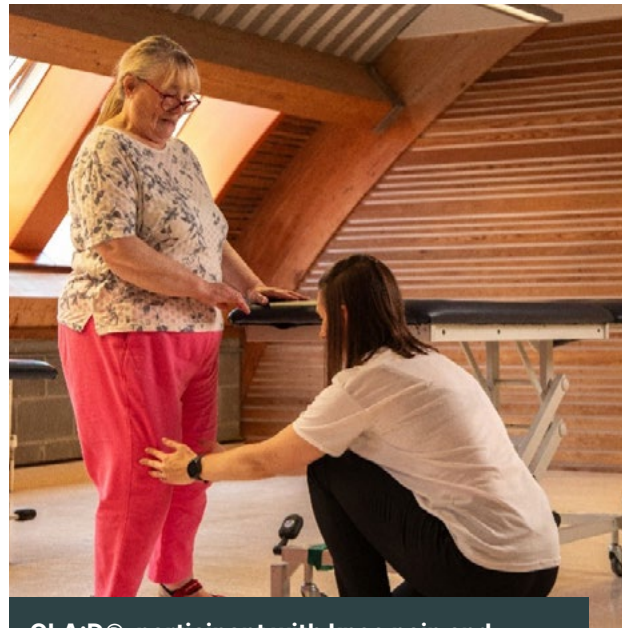
The HeadSpace initiatives support UL's Sustainability Framework (SDG 3: Good Health and Well-Being) and the aims of the Healthy UL Framework by improving the physical, mental and social health of students. HeadSpace@UL Library complements the University's commitment to equality, diversity and inclusion by supporting neurodiversity, creating calmness and encouraging student wellbeing.

## Implementing evidence-based programmes for hip and knee osteoarthritis in the Irish healthcare system through the GLA:D® Ireland non-profit initiative

Osteoarthritis (OA) is a leading cause of disability among Irish adults and the fastest-growing health problem in the world; it results in significant mobility limitations, poor quality of life and high occurrence of sick leave. Although OA is the most common chronic condition in those aged over 65 years, it is grossly under-prioritised in terms of funding and healthcare services, which means that those who cannot afford to pay are often on lengthy waitlists. Exercise and education are core recommended management strategies to offset progression; minimise the impact of pain and symptoms; and reduce the need for expensive treatment options such as medications, injections and surgery. However, the implementation of these evidence-based treatments in clinical practice is quite poor.

Funded by a Health Research Board Emerging Investigator Award from October 2020 to March 2025, the IMPACT (Implementation of osteoarthritis clinical guidelines together) project aims to explore how to make sure that exercise and education programmes for patients with hip and knee problems are available to all patients, regardless of age, severity of disease, location and budget. To achieve this, all stakeholders (e.g., researchers, clinicians, patients, advocacy groups) are co-designing implementation strategies to establish GLA:D® (Good Life with osteoArthritis Denmark) across public and private healthcare settings in Ireland. This physiotherapist-supervised exercise and education programme is already available in 10 countries across the globe.

To date, 210 physiotherapists across healthcare settings in Ireland have been trained in the GLA:D® programme and 350 patients with OA have been registered in the GLA:D® database. In the first year of implementation, 15 sites were offering GLA:D® (10 primary care, two public hospital and three private practice). Patients who participated in the eight-week GLA:D® Ireland programme at these sites reported 16-21 per cent less pain, 45-50 per cent less medication use, faster walking speed by 15-17 per cent and improved quality of life by 14-15 per cent. In



GLA:D® participant with knee pain and  
GLA:D® instructor

addition 93 per cent were satisfied with the programme, and three out of four participants rated their problem as improved. Follow-up in the coming year will help determine if these results can be sustained up to a year after participation, as has been shown in other countries. The impact on healthcare utilisation and cost implications will also be examined with a view to proposing a national rollout and health policy integration.

The project team includes primary investigator Dr Clodagh Toomey and UL colleagues Professor Norelee Kennedy, Professor Anne MacFarlane, Professor Liam Glynn and Professor John Forbes; UL PhD candidate Avantika Bhardwaj and research assistant Peter Hempenstall; and external researchers Professor Ewa Roos (University of Southern Denmark) and Professor Soren Skou (University of Southern Denmark).

Collaborators include Arthritis Ireland; Irish College of General Practitioners; Irish Society of Chartered Physiotherapists; IMPACT Steering Committee; National Clinical Programme for Trauma and Orthopaedic Surgery; and GLA:D® tutors and the physiotherapists implementing GLA:D® in their practices around Ireland with support from their managers, administrators, physiotherapy assistants, physiotherapy students and hospital consultants.

According to one 67-year-old participant with hip pain, “Before this programme, I was frightened, I was in pain. Now I know better and have an exercise plan everyday. I feel better. This programme has opened my eyes.” A 69-year-old participant with knee pain had similar feedback. “Thank you so much, a FANTASTIC programme, I now understand how to exercise . . . I have become so much stronger, I picked up 10 wheelbarrows of leaves from my drive in one go last week. Increased targeted exercise has made me stronger and more confident in improving my mobility and general function.”

### Irish World Academy Tower Seminar: *‘We will tell everyone!’* Learning about the experience of living with dementia through song

On 29 March 2023, a hybrid Tower Seminar took place at the Irish World Academy in collaboration with the Alzheimer’s Society of Ireland and the HRI. Written by a Public and Patient Involvement (PPI) group, a song entitled *We will tell everyone!* was launched at the event. The PPI group collaborated with Academy student Lisa Kelly on her PhD research on telehealth music therapy for people living with dementia and their supporters.

Facilitated by esteemed songwriter Carl Corcoran and Lisa Kelly, the group wrote the song about their experiences of living with dementia and performed it live on the day. Chaired by Professor Hilary Moss and launched by Professor Anne MacFarlane, the event included presentations from the PPI contributors, music therapists and eminent geriatrician Professor Desmond O’Neill.



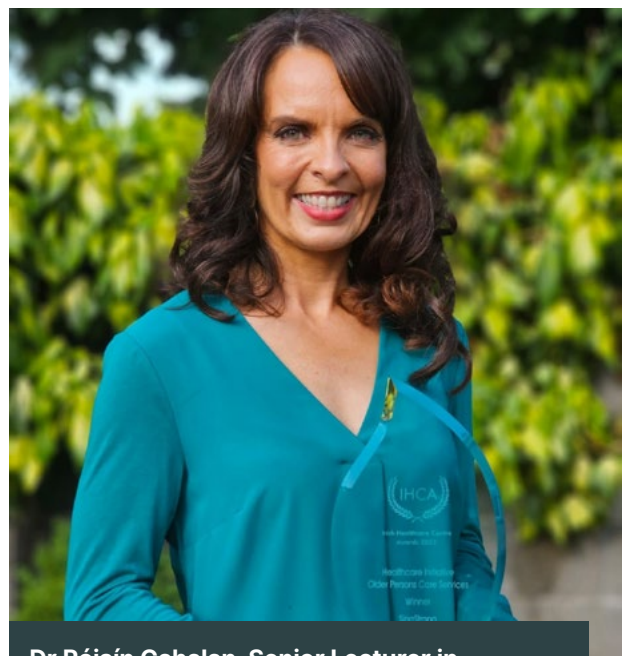
Irish World Academy Tower Seminar: living with dementia through song

### HSE funding for ‘Do Not Attempt Cardiopulmonary Resuscitation’ research

In February 2023, Dr John Lombard (School of Law) was awarded €89,810 from the Health Service Executive (HSE) to conduct research on Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) orders and to lead the development of a standalone DNACPR policy for Ireland. This research will shape DNACPR practice for all HSE and HSE-funded staff in Ireland.

### SingStrong

SingStrong is a group singing and breathing retraining programme aimed at people suffering from chronic lung disease. It uses song to help people retrain vital respiratory muscles to support disease management in a social, non-clinical setting. Founded by UL’s Dr Róisín Cahalan and Irish World Academy alumna Ciara Meade, SingStrong was a key support for people all over Ireland during the COVID-19 pandemic. In March 2023, an event was held to bring members face to face for the first time. The day featured talks from guest speakers, a meet and greet, and a long overdue in-person sing-song.



Dr Róisín Cahalan, Senior Lecturer in Physiotherapy, School of Allied Health was the proud recipient of an Irish Healthcare Centre Award (IHCA) for her project SingStrong

## Dr Ciara Breathnach elected Vice Chair of Cost Action CA22116 – The Great Leap

In September 2023, Dr Ciara Breathnach (Department of History) was elected vice chair of Cost Action CA22116 – The Great Leap. With representation from 31 countries, this four-year programme takes a unique, multidisciplinary approach from a historical perspective to gain a greater understanding of the roots and drivers of health inequalities across regions and countries in Europe and beyond.



Dr Ciara Breathnach

## UL's Ageing Research Centre improves healthcare services for older adults

UL's Ageing Research Centre (ARC) was recognised at the UL President's Research Excellence and Impact Awards for its leadership in championing interdisciplinary research on supporting older adults and family caregivers. ARC research has been instrumental in driving the adoption and integration of innovative healthcare models for older adults and their family caregivers and has played a pivotal role in shaping national policies pertaining to health and social care for older adults.

Older adults represent up to 25 per cent of emergency department (ED) users; they experience longer ED stays and demonstrate higher rates of poorer outcomes following emergency care, such as unscheduled returns to the ED. One of the studies undertaken as part of an ARC collaboration is OPTIMEND, which introduced a dedicated team of health and social care professionals into an ED to focus on timely assessment and intervention among people older than 65 years. Collaborators on the project included the UL Hospitals Group, Mid-West Community Healthcare, Irish National Ambulance Services, St Vincent's Hospital, Connolly Memorial Hospital, the Irish Gerontological Society and the Health Research Board.



Pictured (left to right) are Outstanding Research Collaboration Award recipients Professor Rose Galvin, Ageing Research Centre (ARC), UL; Bernard Collins, ARC stakeholder panel member; Professor Katie Robinson, ARC, UL; Una Breen, ARC stakeholder panel member; and Professor Kerstin Mey, UL President. (Photograph: Alan Place)

The OPTIMEND study was the first trial of its kind in the world. The evidence from the trial demonstrated the impact an interdisciplinary team of health and social care professionals operating within an ED can have on the outcomes and experiences of older adults. The study led to the establishment of such teams on a nationwide basis.

## UL study reveals smoky coal ban significantly reduced the probability of older people developing chronic lung diseases

A new UL study found that the ban on smoky coal in Ireland has significantly reduced the probability of chronic lung diseases in older people. Concerns about the effect of coal and other solid fuels on air quality and health led to the gradual extension of smoky coal bans during the last 30 years throughout Ireland, and the UL study focused on the estimated effects the staggered extension of the ban has had on lung health among the older Irish population.

Highlighting the strengths of the research, lead author Vincent O'Sullivan, Associate Professor of Economics at UL, said, "Many studies examine statistical associations between environmental regulations and health, but it can be difficult to rule out influences from other factors. For example, a simple comparison between cities like Dublin and Cork, where smoky coal was banned in the 1990s, and rural areas, where

smoky coal has only recently been banned, would not account for differences in traffic and industrial pollution between these areas. Our comprehensive analysis consistently showed that the bans reduced the incidence of lung disease among older people.”

The greatest damage to health from air pollution is caused by chronic exposure to particulate matter, primarily resulting from the combustion of fuels such as those used for domestic heating, power generation and in vehicle engines. This chronic exposure increases the risk of heart disease, stroke, lung cancer and respiratory diseases including asthma, bronchitis, respiratory infections and chronic obstructive pulmonary disease (COPD). According to Dr O’Sullivan, “We tracked the health status of over 4,000 older people in Ireland, who were interviewed every two years between 2009 and 2018.”

Giving context to the timeframe of the study, Dr O’Sullivan explained, “During the early 2010s, the smoky coal ban was extended to medium-sized towns of at least 15,000 inhabitants. In 2020, after our data were collected, the ban was extended to towns with more than 10,000 inhabitants. In 2022, the ban became nationwide. These thresholds were somewhat arbitrary, so we could estimate statistical models comparing towns with populations in and around the threshold at which the ban was imposed. Our analysis consistently showed a negative effect of the ban.” Dr O’Sullivan concluded that “The effect of extending the ban was quite large. We calculate that extending the ban to towns with more than 15,000 inhabitants, which occurred during the 2010s, reduced the incidence of new cases of chronic lung disease by around 23 per cent.”

The study specifically examined chronic lung disease, which encompasses COPD, chronic bronchitis or chronic emphysema, and examined data from five waves of the Irish Longitudinal Study on Ageing, a large, nationally representative survey containing detailed information on demographics, health status, health behaviours, housing and socio-economic status.



Smoky coal ban

In Ireland, the usage of solid fuels, including coal, is relatively high for Western Europe. According to the most recent census in 2022, nearly 9 per cent of households used solid fuels as their main source of heating. In contrast, the percentage of households in the UK using solid fuels as their main source of heating is less than 2 per cent.

One of the study’s co-authors, Dr Anne Nolan of the Economic and Social Research Institute, added, “Our study shows that even in Ireland, which has relatively good air quality and low levels of pollution by international standards, policy measures to reduce air pollution can still have positive effects on health. Indeed, increasing concern about harms at relatively low levels of exposure is reflected in new, much lower, thresholds for air pollution exposure that were published by the World Health Organization in 2021.”

### Public and Patient Involvement (PPI) Ignite Network action plan to include refugees and other migrants

The World Health Organization (WHO) calls for evidence-based policy and practice about the specific health needs of refugees and migrants and highlights the need for the meaningful involvement of refugees and migrants in the generation of that evidence. However, their involvement is rare, *ad hoc* and unevenly spread across countries (MacFarlane et al., 2021). There are challenges (e.g., linguistic barriers, mistrust) that inhibit partnership development between community, health and academic sectors. Culturally attuned methods support trust-building in intercultural social groups and, therefore, may facilitate new intersectoral research partnerships.

Funded by an Irish Research Council New Foundations Award, this project was initiated by the national PPI Ignite Network and co-designed by UL’s WHO Collaborating Centre for Participatory Health Research with Refugees and Migrants. The team worked in partnership with the non-governmental organisation (NGO) Doras, whose work focuses on the rights of migrants in Ireland. The project aimed to develop a national intersectoral network and action plan to build capacity for the involvement of refugees and migrants in health research in Ireland using arts-based methods. Based on evidence that the use of music and singing is effective for building trust and social bonding in intercultural groups, the arts-based



Participants taking part in the Irish World Music Café at UL.

method used in the project is the Irish World Music Café (Phelan et al., 2017). Twenty-five representatives from academic, health and community sectors took part in the project and co-designed a vision and action plan. Four music cafés were online and the final café was in person.

Bringing people from different sectors and diverse cultures together using the Irish World Music Café served as an important social capital intervention that laid the foundations for people from diverse backgrounds who have a shared vision to improve the involvement of refugees and migrants in research about their health.

According to a participant from the academic sector, “I think the use of music and song was a leveller, and I like the ritual of opening in a similar way and closing in a similar way.” One participant from the community sector thought that “the environment was nice. I also actually really liked the way it was structured . . . how it’s planned, and I thought it was very well done”, while another described how “On the day of the live café, one participant (a migrant) was chatting with another participant (also a migrant) and they chatted about movies from their different countries, and how each liked the other nationality’s movies . . . YouTube connects indirectly all the people around the world together [ . . . ] I remember lots of very, very fun times.”

### Promoting the health of refugees and migrants: Experiences from around the world

In April 2023, Dr Molly Manning, Associate Professor in Speech and Language Therapy at the School of Allied Health, represented the PPI Research Unit at a WHO Regional Office for Europe consultation event in Larnaca, Cyprus. Led by Professor Anne MacFarlane of the School of Medicine, the PPI Research Unit is a WHO Collaborating Centre for Participatory Health Research with Refugees and Migrants.

The focus of the consultation was a new action plan for refugee and migrant health, which defines priority action areas and supports the regional implementation of the Global Action Plan on Promoting the Health of Refugees and Migrants. The event was attended by delegates representing member states from WHO European and neighbouring regions across Africa and Eastern Mediterranean.

The action plan was informed by research completed by Dr Manning, Professor MacFarlane and Dr Kathleen Markey, School of Nursing. The research took the form of a compendium of global exemplar projects and initiatives entitled *Promoting the health of refugees and migrants: Experiences from around the world*, published in March 2023.

## Student-led Sustainability Conversation Series

### Prioritising health: A conversation on **SDG 3** with Cllr Daniel Butler

On 18 October 2023, Cllr Daniel Butler, a former Mayor of Limerick and Health and Wellbeing Improvement Officer, led a session on SDG 3: Good Health and Well-Being. Cllr Butler shared his experiences in promoting mental wellbeing and equitable healthcare access. The session highlighted the critical role of health in sustainable development and the collaborative efforts needed to build healthier communities.

### **Giving Voice**

We are all changemakers in our society and in the lives that we lead. We are collective custodians of our environment, and we have the opportunity to take positive action now. Whether our actions are small or large, we can effect positive change to prioritise the health and wellbeing of our communities and realise a more sustainable future in our world for generations to come.

#### **John O'Rourke**

Chief Operations Officer (Interim), Plassey Campus Centre Group, UL





4 QUALITY  
EDUCATION



**Ensure inclusive  
and equitable quality  
education and promote  
lifelong learning  
opportunities for all.**

## 'A new future': Syrian refugee completes childhood dream by graduating from University of Limerick

In August 2023, a refugee who came to Ireland from Syria eight years ago completed a remarkable journey by graduating from UL. Saleem Yateem, originally from Damascus, Syria, was conferred with an honours Bachelor of Science in Bioscience from the Faculty of Science and Engineering. Saleem is among over 3,500 students who were conferred across 10 ceremonies at UL in August – but Saleem's story is different from most who graduated.

Speaking no English when he entered the country in 2015 at the age of 21, Saleem embarked on an impressive education journey that saw him complete his Junior and Leaving Certificate with the Limerick and Clare Education and Training Board before undertaking the Mature Student Access Certificate at UL. The programme enabled him to apply for a primary degree at UL, and he has already secured employment with Regeneron in Limerick as an Associate Quality Control Analyst.

Speaking ahead of his graduation, Saleem said, "To graduate from university has always been my dream since I was a child. My life felt like it stopped somewhere in Syria before I came to Ireland, but now I have a new future. I would like to thank all my lecturers who supported me during my time in UL, the staff in the Science and Maths Learning Centres in the Faculty of Science and Engineering where I would spend a lot of my breaks, and the people of Ireland for being so welcoming. Your country is where you are allowed to develop and learn, and I am grateful that Ireland has given me this opportunity."

Offering congratulations to Saleem on his graduation was Bioscience Course Director and Saleem's final year project supervisor Dr Elizabeth Ryan from the Department of Biological Sciences. "Getting to know Saleem and hearing his story makes us appreciate the opportunities that come to us relatively easily in Ireland that might not exist elsewhere", Dr Ryan said. "People who come through the UL Mature Student Access programme really have a vision of where they want to be and having those alternative paths to education is really important. One of the nicest parts of my job is seeing our students graduate. I am delighted to have been just one part of Saleem's education journey and I hope he will go on to bigger and better things", Dr Ryan added.

When asked if he had any advice for others who find themselves in a similar situation, the newly minted UL graduate said, "Never give up, and just keep on trying because life has its ups and downs. Learn from your mistakes and from others. Education is key for your future."



Saleem Yateem pictured after the UL ceremony getting a congratulatory kiss from his mother Suad Heder and fiancée Reem (Photograph: Arthur Ellis)

## Collaborating on innovative curriculum projects in Kenya

Technical communication is a relatively new academic and professional discipline that promotes the clear communication of specialised, often technical, content. Graduates of technical communication programmes, including the MA in Technical Communication and E-Learning at UL, have excellent job opportunities. This profession is highly accessible to women, who are often excluded from other technology roles. Two related projects are introducing technical communication in Kenya, where no comparable programme is currently offered.

In the autumn and spring semesters of 2022, as part of the VIEL project (funded by the Baden-Württemberg Stiftung in Germany), students on the MA in Technical Communication and E-Learning participated in a virtual exchange project with students from Karlsruhe University of Applied Sciences (Germany) and Pwani University (Kenya). Students from the three institutions had virtual meetings and regular online workshops on topics related to technical communication. At the end of the semester, students had the opportunity to meet in person at one of the participating institutions.

Funded by DAAD, the German Academic Exchange Service, the MCM project (Master of Arts in Communication and Media at Pwani University) began in January 2022, and a pilot programme ran from September 2022 to March 2023. Dr Yvonne Cleary of UL's School of English, Irish, and Communication helped to develop the pilot programme curriculum and worked with Pwani and Karlsruhe colleagues to design and develop the full master's curriculum, which is partly based on the technical communication curricula at UL and Karlsruhe and uses outputs from the Erasmus + TecCOMFrame project, in which Dr Cleary was a partner. Following on from the successful pilot, in Autumn 2023, the MCM was offered for the first time to a cohort of eight enthusiastic and pioneering students.

Dr Cleary is the UL partner in both projects, which are led by Professor Sissi Closs from Karlsruhe University of Applied Sciences, Germany. Dr Cleary and Professor Closs first got to know each other when they worked together on the TecCOMFrame project. Dr Cleary has been coordinating the UL side of the VIEL project and has been involved in all stages of the design and delivery of the MCM programme.

Both VIEL and MCM address inequalities, including gender inequality, and have already led to – and will lead to further – work opportunities for graduates and economic growth in the region.

Explaining about the benefits to students of the VIEL exchange, Dr Cleary said, "Our students are excited to learn about different cultures, broaden their horizons, make international contacts, and get to know the international field of technical communication. I'm delighted that they can be part of the VIEL project, which is truly life-changing for them."

Dr Cleary also explained how the MCM project will change the lives of the Kenyan students. "The pilot programme was so successful. All those graduates are either working in a technical communication role now or are bringing new methodologies and professional skills to their current workplace. Now the master's is up and running, with eight committed students. I'm really excited to see where it takes them."



Colleagues and students from the VIEL/  
MCM projects.

## MEASURE: Designing a resilient future through architecture education

The objective of this project is to develop practices in teaching and learning and to explore subject matter relating to architecture that will support our effort to rewrite the curriculum for architectural education so that module learning outcomes align with the UN SDGs and the RIAI 2030 goals as part of the Building Change Project. The Building Change Project is a HEA Human Capital Initiative and a collaboration between six Irish schools of architecture: UL, UCD, CCAE, ATU, TUD and SETU.

Through talks from invited experts and collaborative workshops, the aim of the events was to create a space for students to learn and discuss a number of themes that relate to building a resilient architectural response to climate change.

In Measure I, we covered subjects from studies in material cultures, reuse and circular design strategies to investigating the technologies required for carbon calculation, digital survey and modelling.

In Measure II, we tested a Local:Global format of investigation by making contextual investigations and detailed studies that have relevance and application globally. Using the data and mapping previously gathered and investigated at the School of Architecture, we explored the River Shannon and its wider context of Limerick and the city under four themes of study: soil, ecology, energy + infrastructure, and urbanism.

Measure III incorporated a student symposium where students from all six participating schools of architecture came to UL to develop key takeaways for student and staff involvement in rewriting curricula that is responsive to the climate crisis and expanded practices in architecture.

The project aims to equip our graduates with the skills and tools they will need for a future in architecture but also with an education that underwrites sustainability as a way of thinking through design processes. Representatives of the partner schools of architecture joined the RIAI taskforce for re-writing the educational standard for Knowledge, Skill and Competence for Architects.

Enterprise partners who have been actively engaged include the Grangegorman Development Agency, Sisk, LDA, Arup, IGBC, EcoCo, IGBC, Carrig Conservation, Waterford Wexford Enterprise & Training Board, Engineers without Borders Ireland, Renzo Piano Building Workshop, Green Building Solutions and Self Organized Architecture (SOA).

According to Danny Zhao, Year 3 UCD student, the project is “definitely very integrated within our studio project. I found it a kind of unique approach to architecture, this sets more considerate constraints onto your design process; after you learn more about embodied carbon, its operation and energy use, you think more material palette and how that sits within your building.”

### Sustainability and heritage collections at UL Glucksman Library

Sustainability is a key consideration for the archival and librarian professions and has a direct impact on what material we collect for future generations – and how we do that. Sustainable collecting goes beyond just taking a considered approach to energy and materials use – it goes to the very question of what we collect and why.

The Special Collections and Archives Department in the Glucksman Library runs an annual advent calendar, which highlights items and themes from the Library’s unique archive and rare book collections. The 2023 advent calendar focused on the issue of sustainability in relation to preserving and caring for heritage collections in perpetuity.

For each day in December 2023, the department highlighted a different topic relating to sustainability and its collections, from the history of sustainability in UL, to recycling practices in sixteenth-century bookbindings in the Bolton Library, to the digital reuse of materials to support teaching and research at the University.

Dr Kirsten Mulrennan, UL Glucksman Library Archivist for Engagement, Exhibition and Outreach, Special Collections and Archives, who was involved in the initiative, said, “Outreach initiatives such as this advent calendar are key in raising wider awareness about the very real issue of the unique sustainability concerns relating to heritage collections, in a fun and engaging way for a wider audience.”

The advent calendar provides sustainability examples in relation to UN SDGs 3, 4, 5, 6, 7, 11, 12 and 13.



**Beekeeping in 17th century: from The Compleat Library, Bolton Library**

### Building sustainability literacy in UL

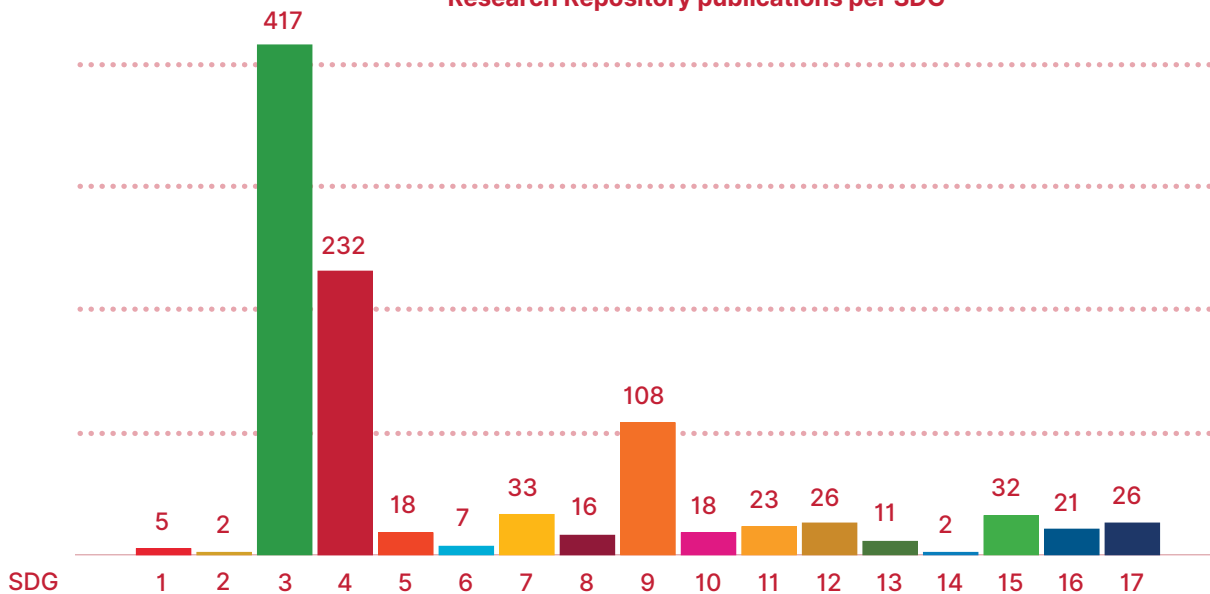
In 2023, the Glucksman Library worked with members of the UL Sustainable University Working Group to develop a guide to sustainability literacy. Librarians Michelle Breen and Micheál Ó hAodha collaborated with Dr Ronan Courtney, Dr Audrey O’Grady, Professor Ken Byrne, Dr Yvonne Ryan and Professor Colin Fitzpatrick to produce UL’s Sustainability Literacy Guide. The LibGuide highlights resources that support learning, teaching and research across the entire gamut of sustainability research, counters tranches of misinformation, equips students with necessary appraisal skills and links them with current, peer-reviewed sources across aspects of sustainability research. The LibGuide helps students and researchers to identify new avenues in research and scholarly resources specific to sustainability in their particular research areas. Subjects and resources in sustainability highlighted in the LibGuide include biodiversity, climate change, mobility and transport, sustainable construction, agriculture and food production.

The LibGuide is a starting point: As more resources become available, they will be added. The guide serves as an excellent supplementary resource or reference for students, and academic staff could consider integrating elements of it into their teaching.

### Sustainability ebooks in the Library’s collection

In 2023, the Glucksman Library invested in a resource on sustainability for staff and students. A new subscription to a collection of 7,000 sustainability ebooks was made available to the UL community. Whether you are an academic looking to enhance your curriculum, a researcher looking for data to

Research Repository publications per SDG



stay informed about the latest developments in sustainability, or a student eager to expand your knowledge, the ebook collection is an invaluable asset that can greatly benefit academic and research pursuits.

The ebooks cover a wide range of topics related to sustainability, from climate change and environmental policy to sustainable business practices and renewable energy. The ebooks can be used in teaching by linking them directly via Leganto on a Brightspace module site. The ebooks in this collection are all listed in the Library's online catalogue and searchable by topic or you can go directly to the ebook collection and select the books you want to use.

### Research Repository showcases the SDG activity of UL researchers

The UL Research Repository is an important tool for promoting and sharing the research output of the UL community. As an open-access resource, the full text of items that would otherwise sit behind paywalls can be freely read, used and cited. The Library launched the repository in 2008 (as the Institutional Repository) and since that time, has adapted to ensure compliance with best practice and frameworks as they develop.

In 2023, the Library began assigning SDGs to research projects and publications – new uploads to the repository were labelled with the relevant SDG tag. With over 800 open-access items in the repository with SDG tags, the top-performing areas are SDG 3: Good Health and Well-Being, SDG 4: Quality Education and SDG 9: Industry, Innovation and Infrastructure. All goals are represented.

### A disability services interdisciplinary resource for allied health students and professionals: Finding a common lens to help build relationships

Securing clinical placements for allied health students and filling needed positions for professionals on the Children's Disability Network Teams (CDNTs) have been challenging nationally. This is partially due to the transition of the children's services to a family-centred model of care through Progressing Disability Services (PDS). Having fewer placements results in a smaller pool of new graduates who are prepared to enter the profession, specifically among the CDNTs. The School of Allied Health and Health Sciences Academy at UL have committed to working collaboratively with the HSE Midwest CDNTs to create an interdisciplinary forum and evidence-based multimedia PDS learning resource for allied health students to work towards meeting this challenge.

The main objective of the project is to provide clear information on family-centred practice and how professional core competencies align. Using research, clinical experience and educational design in tandem with a placement framework will reduce the workload on clinicians, streamline the educational component of placements and enable more quality cross-disciplinary supervision. The project can help to facilitate a future-ready workforce of allied health professionals prepared to work within the current model of practice in line with Sláintecare. The resource was piloted in 2023 and was granted ethical approval for further development. The interagency, interdisciplinary nature of the project means that it could be implemented nationally.

Project collaborators and partners include the Occupational Therapy, Physiotherapy, and Speech and Language Therapy Practice Education teams from the School of Allied Health; the Health Sciences Academy; HSE Midwest CDNTs managers and clinicians; health and social care professionals; and the national Practice Educators Co-ordinators Network (PECNET).

At the project launch, Lexi Keating, School of Allied Health Physiotherapy Regional Placement Facilitator and project primary investigator, thanked all partners for their support and looked forward “to continuing to develop learning opportunities for allied health students and professionals. We’d like to encourage students and educators to access the PDS interdisciplinary learning resource throughout their placement experience, and we welcome your engagement.”

### Creating effective assignment briefs to promote inclusive assessment practice

In June 2023, Dr Elaine Walsh, Assistant Professor of technical communication and instructional design at UL, delivered a talk entitled ‘Promoting inclusive assessment practice and student wellbeing through effective assignment brief design’ at the Assessment in Higher Education (AHE) annual conference. Dr Walsh discussed best practice in designing effective assignment briefs. This was a culmination of over a decade of Dr Walsh’s research on this often-neglected aspect of assessment design. Previously, in an article entitled ‘The role of effective communication on students’ emotional responses to assessment’, Dr Walsh wrote about the negative influence of assessment on students’ wellbeing due to increased feelings of stress and anxiety stemming from poorly designed assignment briefs.

Merging her work with the professional experience and doctoral findings of John Knight (Head of Learning and Teaching at Buckinghamshire New University), presenting at AHE was an exciting opportunity for Dr Walsh to combine the results of two independent and discrete doctoral studies pertaining to the impact of assignment brief design on students’ experiences of assessment. In particular, this presentation focused on inclusive practice and student wellbeing. Dr Walsh’s key argument was that an effective assignment brief can reduce extraneous cognitive load and increase students’ capacity to focus on the assignment task.

The presentation was well-attended and well-received. Having been invited to do so, attendees showed much interest in joining a community of professionals to further explore assignment brief design.

### AHSS-LCETB training for teachers in language and culturally sensitive teaching

A teacher training event led by the Faculty of Arts, Humanities and Social Sciences (AHSS) in inclusive pedagogies was held at the Radisson Hotel in September 2023 for more than 150 teachers from the Limerick and Clare Education and Training Board (LCETB). The training focused on upskilling teachers in intercultural and pedagogical skills to help pupils from diverse language and cultural backgrounds integrate into schools and vocational training programmes.

The training was led by Assistant Dean International Dr Angela Farrell with academic staff from TESOL/ Linguistics – Dr Catherine Martin, Dr Jane Seely and Michelle Daly. The event was the first in a series of teacher training workshops that will be offered within the framework of the new Memorandum of Understanding between UL and the LCETB. Dr Farrell is a member of the regional ESOL and Migrant Learner Steering Group.



**(back row l-r): Dr Jane Seely, Dr Catherine Martin, Michelle Benson, Michelle Daly, Triona Lynch and Paul Patton  
(front row l-r): Tom Lodge, Tara Robinson and Dr Angela Farrell**

## Celebrating success: Cohort One completes the GLSD programme

After six weeks of immersive learning and collaborative project development, the UL Student Sustainability Global Leadership for Sustainable Development (GLSD) programme concluded with a triumphant showcase of student-led initiatives. Held on 26 October 2023, the final presentations and graduation ceremony marked the culmination of Cohort One's transformative journey towards sustainability.

Cohort One comprised 21 students from 13 different home institutions across Asia, Europe and North America, who came together to deepen their understanding of sustainable development and drive positive change in their communities. Throughout the programme, students formed six teams across five of UL's sustainability missions, working diligently to co-create student-led projects aimed at making UL a more sustainable place.

Through guided workshops, students delved into the complexities of sustainable development, exploring challenges and opportunities across the economy, environment and society. The programme's collaborative approach fostered innovation and interdisciplinary collaboration, empowering students to become pragmatic advocates and innovators in their respective fields. Together, Cohort One has demonstrated the transformative power of collaboration, innovation and commitment to sustainability. Their journey may have come to an end but their legacy will endure, inspiring future generations to build a more sustainable and equitable world.

As the programme concluded, six impactful projects emerged, spanning areas such as transport, food systems, accommodation and energy. These student-led initiatives represent the culmination of months of hard work and dedication and the beginning of a journey towards tangible sustainability outcomes for UL.

The most important lesson participant Sathvika Kommera, a University North Carolina Freshman, learned from the programme was "realising just how broad sustainability really is, and not only looking at it through an environmental standpoint but also a business and other sectors view. Back home the only area of focus would be the environment, and

this programme really opened my eyes to the bigger picture." Sathvika also felt that "being part of the GLSD program was a transformative experience that broadened my understanding of sustainability beyond environmental concerns. The program's structure, with all activities taking place outside of classroom hours, was well suited to our schedules. The blend of classroom learning, the many site visits, and practical real-world projects was extremely effective. I cherish the opportunity to meet and work with and learn from passionate peers and inspiring mentors like Jack."

Noah Milivojevic from the University of Alabama in Huntsville said, "What better way to learn how to tackle some of humanity's greatest challenges than with a bunch of other students interested in the same stuff? GLSD was a great way for me to learn about all the different ways in which we currently come short in building, living, and working sustainably, what people around Limerick and Ireland are currently doing to help fix this, share ideas with other students from all sorts of backgrounds (who I can guarantee will come up with things you'd never have thought of), and even start figuring out how to implement some of those changes to move us to a more sustainable future"

A heartfelt appreciation was extended to key partners, including Limerick Chamber, Limerick City and County Council, Cloughjordan Ecovillage and UL's AccessCampus, for their invaluable contributions to the programme. Through site visits and guest lectures, students gained firsthand experience of the realities of sustainable development, which enhanced their learning experience and inspired them to take meaningful action.

Looking ahead, the momentum generated by Cohort One's success will continue to drive progress and innovation in sustainability at UL. With ongoing support from programme coordinators and industry partners, students are poised to turn their vision into reality, creating a more sustainable campus for future generations.

The GLSD programme has equipped Cohort One with the skills, knowledge and determination to effect positive change in the world. As this cohort of graduates embark on their respective paths, they will carry with them the legacy of sustainability leadership, ready to make a meaningful impact in their communities and beyond and inspiring future generations to build a more sustainable and equitable world.

## Open Science and the SDGs in the Glucksman Library

Traditionally, scientific outputs were associated with barriers that impeded or dissuaded the broad dissemination of scientific data. Research publications were published in scientific journals that required subscriptions. Data was often poorly formatted and described or the use of proprietary software made it difficult to re-purpose. This slowed the research process and acted as a barrier to citizens and other researchers attempting to engage with scientific literature and projects.

According to the Open Science Policy Platform report 2018, "Open Science is scholarly research that is collaborative, transparent and reproducible and whose outputs are publicly available." Open Science has the potential to make the scientific process more transparent, inclusive and democratic. It is increasingly recognised as a critical accelerator for the achievement of the SDGs and a true game changer in terms of bridging the science, technology and innovation gaps and fulfilling the human right to science. In 2021, UNESCO published recommendations for Open Science in recognition of its importance to the realisation of the SDGs.

The Glucksman Library has a long history of supporting Open Science, originally through the establishment of UL's first Institutional Repository in 2008 to make the research output of the University freely available to all. The Library has continued to provide better functionality and supports to UL researchers in the area of Open Science.

Since 2020, as part of the IReL consortium, the Library has signed over 20 open access publisher agreements. In 2023, approximately 340 articles published by UL researchers were made open access using these agreements. This accounts for approximately 60 per cent of all articles published by UL corresponding authors. Then Minister for Further and Higher Education, Research, Innovation and Science Simon Harris congratulated Irish libraries on their leadership in this area, saying, "Open Access benefits everyone and is particularly important in helping us meet our ambition on climate change, sustainability and disease control."

The Library has also supported the Open Science pillar of FAIR (Findable, Accessible, Interoperable, Reusable) Data with the launch of a FAIR data training series and data management plan consultation service. In 2022, the Library launched the updated

Research Repository with functionality to support datasets and other different media types and to provide separate, custom-branded spaces for books, conference contributions, journal contributions and more.

The Library's senior leadership team has worked closely with national and international leaders to influence national strategy in a significant way. Library staff members have co-chaired National Open Research Forum (NORF) working groups and co-authored policy briefs on several topics, which subsequently became the foundation of Ireland's National Action Plan for Open Research 2022-2030.

The National Action Plan for Open Research serves as a roadmap for implementing open research across Ireland and is structured according to three broad themes: (i) establishing a culture of open research; (ii) achieving 100 per cent open access to research publications; and (iii) enabling FAIR research data and other outputs.

Earlier in 2023, Minister Harris announced funding of €1.725 million through the Higher Education Authority (HEA) to support the uptake and implementation of open research practices in Irish HEIs and the wider Irish research system. With the Library, research centres and individual researchers included as partners in four of the six projects initially funded in 2022, UL is heavily involved in Ireland's transition to an open research environment. Furthermore, a 2023 funding call resulted in the Library, LERO and the Irish World Academy leading on three funded projects: (i) iFrame – National Research Data Management Framework; (ii) Sharing Arts Practice FAIRly: Developing Best Practice Training and Guidance to Support the FAIR Dissemination of Arts Practice Research Outputs; and (iii) Managing Open Source Software in Irish Universities.

## Geography Awareness Week 2023

UL Geography Awareness Week took place the week starting 14 November 2023. In UL and across the world, university geography departments, bodies and organisations celebrated the discipline. The theme in 2023 was 'Power of Place', and UL Geography held a series of events open to staff, students and the public, including a campus scavenger hunt, makerspace event, lunchtime river walk, mapathon, map exhibition and historical geography walking tour of Castletroy.



## Study Abroad practicum for teaching English to Ukrainian refugees

A community-based teaching practicum was established at UL for Study Abroad students. The Study Abroad Practicum involves teaching English as a foreign language to members of the Ukrainian community currently residing in Ireland under EU temporary protection as a result of the ongoing war in Ukraine.

The practicum includes an initial, introductory teacher education course in Teaching English to Speakers of Other Languages (TESOL) and specialised training in trauma-informed teaching. Students from universities in the United States participated in the first Study Abroad Practicum in the 2023 spring semester, which was universally acclaimed as a “rewarding and unforgettable experience”.

## Student-led Sustainability Conversation Series

### Advancing education: A conversation on **SDG 4** with Dr Keelin Leahy

On 25 October 2023, Dr Keelin Leahy led a conversation on SDG 4: Quality Education. Drawing on her extensive experience in technology education, Dr Leahy discussed innovative teaching methods and the importance of creativity in learning. Her insights emphasised the role of education in fostering sustainable development and empowering future generations.

### Giving Voice

As a library, we now approach everything through the lens of sustainability. Ensuring accessibility across our physical and online services is a top priority. By actively engaging with our users, we identify small yet impactful improvements that enhance inclusivity. What needs to be done on a global scale can sometimes feel overwhelming, but it is truly rewarding to see how one local change can actually matter.

**Janis Durack**

Librarian, Glucksman Library



**5** GENDER  
EQUALITY



**Achieve gender  
equality and empower  
all women and girls.**

## The Capt. Dara Fitzpatrick Award: Recognising inspirational women in the Irish emergency services

Gender inequality is prevalent in the emergency services internationally. The organisational culture, role design and norms in these professions are commonly masculinised to the extent that women are often seen as unfit for these roles. In paramedicine, with just 16 per cent of advanced paramedics in Ireland being women, female leadership roles are relatively rare. Women are also in the minority in An Garda Síochána (approximately 30 per cent), and less than 5 per cent of Ireland's firefighters are women. If progress in gender equity is to be made in the Irish emergency services, the important role that women serve in these male-dominated professions should be recognised.

The Capt. Dara Fitzpatrick Award pays tribute to Dara's legacy as an Irish Coast Guard Search and Rescue pilot by celebrating inspirational women who work in the Irish pre-hospital community and emergency services. The award honours the memory of Capt. Fitzpatrick (1971-2017), who flew over 800 missions with the Coast Guard during her trailblazing career as one of the first female Search and Rescue pilots in Ireland. Dara was renowned not only for her bravery but also for her compassionate and collaborative leadership, her teamwork and professionalism.

Celebrating these values, the inaugural Capt. Dara Fitzpatrick Award received over 30 nominations for inspirational female leaders, including community first responders, paramedics, nurses, doctors, life-boat crew members, firefighters, and members of An Garda Síochána and the Defence Forces. The award ceremony was held in UL on 8 March on International Women's Day 2023. The winner was Frances Griffin, a paramedic with the National Ambulance Service. Frances was one of the first responders on the scene at the Creeslough tragedy in 2022. In her acceptance speech, Frances said, "It's such an honour to accept the inaugural Capt. Dara Fitzpatrick Award. Capt. Fitzpatrick was an inspirational female leader in her role with the Irish Coast Guard – she left behind a powerful legacy which has inspired me and my female colleagues in pre-hospital care."

The award generated significant media interest, serving to highlight to the public the important work of women in the emergency services. Additionally, the award gives confidence and recognition to female first responders and fosters collegiality with male allies in the emergency services.

By highlighting female role models, the Capt. Dara Fitzpatrick Award has the potential to empower young girls and women to choose the emergency services as a career. More diversity and better representation can only serve to strengthen the emergency services workforce and ultimately improve patient care in our communities.

Partners and collaborators on the award include the Irish Paramedicine Education & Research Network (IPERN), the Fitzpatrick Family, Dr Niamh Cummins (Associate Professor in Public Health, School of Medicine and IPERN Chair), Gráinne O'Shea (IPERN EDI Lead) and Professor Evelyn Murphy (Head of EDI, School of Medicine and Award Nominations Review Panel member). Funding was provided by the Faculty of Education and Health Sciences.



**Capt. Dara  
Fitzpatrick Award  
presented to  
Frances Griffin**

## UL-hosted event seeks to inspire more women to consider a career in engineering

On 1 December 2023, an event hosted by a consortium that included UL highlighted the career pathways of young professional women working in engineering. Inspire Women in Engineering 2023 was organised by Explore Engineering, a consortium comprising over 50 companies in the mid-west region and supported by key third-level education providers such as UL, Technological University of the Shannon, and Limerick and Clare Education and Training Board.

With the goal of improving the quality and increasing the quantity of engineering talent available in Ireland and the message that engineering is for everyone, the event featured a panel discussion with six young early-career engineers working across different sectors and was attended by 800 students in third-, fourth- and fifth-year classes from local second-level schools. Commenting on the event, Professor Ann Ledwith, Director of the Human Capital Initiative UL@ Work and Chair of the Explore Engineering Steering Committee, said, "Some of today's most exciting jobs are in engineering and technology. Think of

advances in AI, medical technology and sustainability; these are all driven by engineering solutions, yet only 12 per cent of engineers in Ireland are female. Girls are missing out on exciting, well-paid roles by avoiding careers in engineering. The aim of the Explore Engineering INSPIRE event is to address this imbalance by bringing together a panel of six female engineers to talk to second-level students about the opportunities in engineering and their own insights and experiences working in STEM.”

During the event, the speakers shared their inspirations, paths to engineering and reasons why they loved their chosen career. The question-and-answer session that took place immediately after the presentation enabled students to interact with the panel.

### UL researcher receives outstanding service award for promoting gender diversity in STEM

In October 2023, UL research fellow Dr Sinéad O’Keeffe was presented with the inaugural Outstanding Service Award for Promoting Gender Diversity in Science, Technology, Engineering and Mathematics (STEM) by the Institute of Electrical and Electronics Engineers (IEEE) Sensors Council at IEEE SENSORS 2023 in Vienna. One of eight councils within the IEEE – a global organisation with over 427,000 members in 190 countries – the Sensors Council is concerned with the theory, design, fabrication, manufacturing and application of devices for sensing and transducing physical, chemical and biological phenomena.

Dr O’Keeffe leads a research team in the use of optical fibre sensors for cancer treatment in the Department of Electronic and Computer Engineering (ECE). Dr O’Keeffe’s nomination for the award was based on her work in gender diversity both in the IEEE and UL. In nominating her for the award, Professor Anil Roy, Vice President of Technical Operations at the Sensors Council, said that Dr O’Keeffe’s nomination was “in recognition of her strong advocacy, groundbreaking efforts and magnanimous sensitisation for gender diversity within the IEEE Sensors Council and among the wider sensors community.”

On receiving the award, Dr O’Keefe said, “I am delighted to have been recognised with this award for promoting gender diversity in STEM. Through my work within the IEEE and outreach programmes at UL, I hope to increase the visibility of women within engineering. According to Engineers Ireland, female

engineers represent just 12 per cent of the profession, and I would like to encourage more young women in Ireland to consider engineering as a viable career option. Within the IEEE specifically, we wanted to create a roadmap for women to get more involved in activities, to support them and to promote them and their work.”

Since Dr O’Keeffe joined IEEE Sensors Council in 2015, she has spearheaded several initiatives aimed at promoting the role of women within the organisation and in STEM in general. She chaired both the IEEE Women in Sensors and Diversity and Inclusion committees and continues to work on those committees to promote the participation of women and ethnic minority groups within the organisation.

Within UL, Dr O’Keeffe led the Department of ECE’s successful bid for an Athena Swan Bronze Award in 2022. She is also actively involved in outreach programmes that encourage more female participation in engineering, such as robotics and sensors workshops for primary schools; workshops in photonic sensing, specifically aimed at Transition Year girls; and the Royal Society Research Experience for Teachers, a programme that brings primary school teachers into the laboratories at UL to teach them about sensor technology.



Dr Sinéad O’Keeffe

### Seminar on music therapy for perinatal wellbeing: Shared perspectives on developing a specialist programme to support women during pregnancy

A seminar that took place in UL on 11 October 2023 focused on how the Specialist Perinatal Mental Health Team (SPMHT) at University Maternity Hospital Limerick responded to the support needs of women during pregnancy by establishing the first music therapy programme of its kind in maternity care services in Ireland. Developed in partnership with the

Irish World Academy and the Department of Nursing & Midwifery (UL), the programme was commended by the Department of Health (Irish Government) for its innovation in perinatal mental healthcare delivery. Through a range of perspectives from lived experience, music therapy, midwifery and psychiatry, the seminar considered the value and impact of the music therapy programme to support perinatal wellbeing.

Presenters included Dr Triona McCaffrey (Irish World Academy of Music and Dance), Pui Sze Cheung (Irish World Academy doctoral student), Dr Sylvia Murphy Tighe (Department of Nursing & Midwifery) and Dr Mas Mahady Mohamad (University Maternity Hospital Limerick). The seminar was chaired by Dr McCaffrey.

### Silver success as UL is first Irish institution to receive prestigious Athena Swan award

UL is the first institution in Ireland to receive a prestigious Athena Swan Silver Award, thereby being recognised as a leader in embedding gender equality in the Irish higher education sector. In addition, UL's Kemmy Business School received a Silver Faculty Athena Swan Award, the first business school in Ireland to do so, marking ongoing efforts at the University in achieving equality, diversity and inclusion.

With the support of the HEA, the Athena Swan Ireland charter is part of a global framework used to transform gender equality and build capacity within higher education and research for evidence-based equality work across the equality grounds enshrined in legislation. All of Ireland's universities and institutes of technology and several colleges participate in Athena Swan Ireland.

In 2015, UL was one of the first institutions in Ireland to achieve an Athena Swan Bronze Institution Award and established the office of Human Rights, Equality, Diversity and Inclusion (HREDI) in 2021. A crucial priority for UL was to address the acknowledged negative impact on female careers of career interruptions for caring reasons. As part of the Athena Swan process, a Research Grant for Returning Academic Carers was introduced to help academic staff re-establish their independent research careers on returning from extended leave (20 weeks or more).

To date, 73 grants have been availed of at a cost of over €1.5 million (€728,000 since 2018). While the grant is available to all carers, only females have availed of it to date, the impact of which can be seen in better promotion application and success rates for women.

Advance HE, which administers the awards on behalf of the sector, said UL had demonstrated real impact in ensuring more female academics and staff had been able to progress and achieve promotion within the institution. According to Sarah Fink, Advance HE's Head of Athena Swan Ireland, "University of Limerick has shown a deep-rooted commitment to delivering gender equality, and that is shown in the comprehensive review it has conducted into the way it recruits and promotes its staff. As a result, in the last three years, its number of female associate professors has more than doubled while its number of female professors has increased by a third. Together with its appointment in 2021 of Ireland's first female university president, UL has clearly demonstrated to us the transformational impact it is having as a result of its steps to addressing gender inequality."

In reply, Dr Marie Connolly, UL's Director of Human Rights, Equality, Diversity and Inclusion, said, "I am absolutely delighted that UL has once again been recognised as a leader in the field of gender equality. I would like to thank the President for her continued commitment to our HREDI agenda and for her leadership and chairing of our AS/EDI committee, which sends out a very strong message of the commitment of the leadership of our institution."



The full Athena Swan group pictured with UL President Professor Kerstin Mey outside Plassey House

## Aibidil LADTA+/ABCs of LGBTQ+

Reáchtáil Aonad na Gaeilge i gcomhpháirt le ShoutOut ceardlann idirghníomhach i Seomra na Gaeilge, Áras na dTeangacha ar an 14 Márta 2023 do bhaill foirne agus mic léinn. Thug an cheardlann seo blaiseadh de théarmaíocht, féiniúlachtaí agus comhghuallaíocht an phobail LADTA+. Rinneadh áisitheoireacht ar spás sábháilte a thabhairt do dhaoine chun ceisteanna a chur agus tugadh léargas mionsonraithe ar na bealaí éagsúla le meas comhionann a léiriú ar phobal LADTA+.

In partnership with ShoutOut, Aonad na Gaeilge hosted an interactive workshop for staff and students in Seomra na Gaeilge in the UL Languages Building on 14 March 2023. The workshop offered an introduction to LGBTQ+ identity, terminology and allyship. A safe space was facilitated for attendees to raise questions, and a detailed account was given on the various ways of providing equal respect to the LGBTQ+ community.

## UL in drive to get women to study STEM subjects

UL is leading efforts to encourage more women to pursue STEM (Science, Technology, Engineering and Mathematics) careers. Throughout Science Week 2023, UL reached out to schools to address the persistent gender imbalance in these fields. According to the Department of Education, there is a critical need to increase STEM subject uptake, particularly among women, as they remain underrepresented in areas like engineering and technology.

STEM fields open doors to a wide range of careers, but the participation of girls in Leaving Certificate science subjects has dropped. Colleges like UL are working to reverse this trend by improving STEM education and fostering an inclusive environment for female students.

Moya Geoghegan, a second-year Product Design and Technology student at UL, reflects on her own experiences in a male-dominated field. She shares that the broadness of science and engineering drew her in, especially because of its potential to make a positive impact. She encourages young women to pursue STEM careers, emphasising that women are just as capable as their male counterparts. Moya's passion lies in human-centred design, with a focus on improving lives through innovation.

Dr Eoin White, director of UL's Product Design and Technology course, acknowledges the gender imbalance in STEM education, particularly in second-level schools. Some girls' schools still lack access to STEM subjects like Engineering and Design and Communication Graphics. However, Dr White notes progress, with more female students joining the course in recent years. He stresses the importance of diversity and collaboration in STEM, which leads to better problem-solving and innovation.

Dr Reena Cole, a lecturer in Mechanical Engineering at UL, highlights the significant drop in female participation within the Faculty of Science and Engineering, where only 14% of engineering students are women. She points to the lack of access to subjects like Physics in many girls' schools as a key barrier to girls pursuing STEM careers. Role models play a crucial role, as girls with family members in STEM fields are more likely to follow similar paths, while those without such role models face more challenges in entering these fields.

Students like Kate O'Regan and Nicola Martin from Coláiste Iósaef Community College in Kilmallock offer a glimpse into the future. Both girls plan to pursue careers in agriculture and are inspired by their female teachers in Agricultural Science. Hailing from a dairy farming family, Nicola highlights the use of technology in farming, such as robotic milking machines, which blend traditional agriculture with modern technology. Kate, who is studying biology and chemistry, has been inspired by her older sister, a scientist, and hopes to pursue a career in science or engineering.

UL's Science Week initiatives also include interactive displays, such as a periodic table of elements designed to inspire curiosity and interest in chemistry. Dr Peter Davern, a lecturer in Chemical Sciences at UL, explains the importance of engaging students with hands-on learning. He emphasises the global demand for more STEM professionals, particularly in light of challenges like climate change, where scientific solutions are critical.



Dr Reena Cole

A government report on the future of STEM education highlights ongoing challenges, including a shortage of specialist teachers and limited subject offerings, particularly in all-girls' schools. The report calls for targeted interventions to improve gender balance in STEM education from early years through post-primary schooling, noting that systemic change is needed to support more women entering STEM fields.

Overall, UL's efforts aim to create a more inclusive and supportive environment for women in STEM, working to inspire the next generation of female scientists, engineers and innovators.

### **UL student receives AerCap Women in Aviation Scholarship**

Roisin Philbey, an aeronautical engineering student at UL student was the recipient of the 2023 AerCap Women in Aviation Scholarship. Originally from Dublin, Roisin was selected following a thorough application process that focused on the students' passion for aviation as well as their academic achievements.

As part of the AerCap Holdings N.V. scholarship, students receive a bursary of €5,000 a year over the four-year programme and the opportunity to obtain firsthand experience in the aviation leasing industry through an eight-month internship with AerCap.

At the announcement, Denise Mangan-Fahy, Head of Portfolio & Rental Operations at AerCap Engines, said, "AerCap is pleased to continue to support this important initiative with the University of Limerick. Our aim is to build a strong pipeline of diverse talent through programs such as this and to encourage more women to choose an aviation career, particularly in the area of engineering. We look forward to welcoming Roisin to AerCap."

Sarah Hartnett, Director of Development at the UL Foundation, said, "This scholarship programme from AerCap is a testament to the company's commitment to supporting women in aviation. Encouraging, rewarding and mentoring these students allows them to fully reach their potential and become future female leaders in the aviation industry. Our sincere thanks to AerCap for their continued generous support."



**Denise Mangan-Fahy, Head of Portfolio & Rental Operations, AerCap Engines; scholarship recipient and UL student Roisin Philbey; and Sarah Hartnett, Director of Development at the UL Foundation**

## Student-led Sustainability Conversation Series

### Preventing violence against women: A conversation on **SDG 5** with Rabiya Ali

On 1 November 2023, Rabiya Ali discussed SDG 5: Gender Equality, focusing on preventing violence against women. With her extensive experience in advocacy and community work, Rabiya highlighted the importance of creating safe environments and addressing gender-based violence. The session underscored the need for collective efforts to promote gender equality and protect women's rights.

## Student-led Sustainability Panel Discussion

### Breaking down gender issues: Student panel discussion on gender equality

On 1 November 2023, UL Student Sustainability hosted a panel discussion on SDG 5: Gender Equality. Moderated by Emer Fallon, the event featured a discussion by representatives of various student societies on gender inclusivity, LGBTQ+ rights and healthcare disparities. The panel highlighted the importance of intersectionality in understanding gender issues and the need for collaborative efforts to dismantle systemic barriers. The discussion served as a catalyst for promoting gender equality on campus and beyond.

### **Giving Voice**

SDG 5 is about achieving gender equality and empowering all women and girls. We all have a part to play in achieving this if we want to create a healthy society. It is important that we continue to promote gender equality in our daily lives as all women and girls should have equal opportunity to achieve their goals and aspirations. We can do little things from staying informed, being aware of gender stereotypes and acting as female mentors.

#### **Maureen Keogh**

Human Rights, Equality, Diversity and Inclusion Senior Administrator





**6** CLEAN WATER  
AND SANITATION



**Ensure availability  
and sustainable  
management of water  
and sanitation for all.**

## UL researchers play key role in new Co-Centre for Climate + Biodiversity + Water

It is clear that human activity has a profound impact on the environment. Climate change, biodiversity loss and water quality degradation are critical issues on the islands of Ireland and Great Britain. There is a need to halt and reverse these declines to ensure a sustainable future for all. This requires effort by all branches of society, including scientists, educators, policymakers, industry and citizens.

With a launch date of 1 January 2024, the Co-Centre for Climate + Biodiversity + Water will bring together leading scientists and industry partners to form an interdisciplinary team that responds to these multifaceted challenges. Backed by a joint investment of €43.1 million from the Irish and UK governments, the new research centre will mark a significant milestone in addressing the critical issues of climate change on the islands of Ireland and Great Britain. The aim of the research centre will be to enable fair transformations to net zero, reverse biodiversity loss, restore water quality and ensure resilience for communities and a sustainable economy.

Alongside three Northern Irish research institutes and three British institutions, UL is one of the eight Irish universities contributing to this initiative. The research at UL is being coordinated by Professor Ken Byrne from the Department of Biological Sciences and the Bernal Institute. Professor Byrne is a Climate+ principal investigator and will lead the 'Investing in Carbon and Nature' theme. According to Professor

Byrne, "The case for urgent and transformative change grows daily. Change is essential at all levels of society and throughout the economy if we are to address the climate, biodiversity and water crises. We will work with industry partners who wish to support the state-of-the-art research which is necessary to drive this transformation."

The team includes Associate Professor Gerard Dooly of the Department of Electronic and Computer Engineering and Professor John Garvey of the Department of Accounting and Finance. Associate Professor Dooly will use drone technology and machine learning systems to assess habitats and monitor water quality. Professor Garvey will focus on financial institutions and markets, specifically in relation to identifying the enabling conditions required to unlock financial flows towards the protection and restoration of biodiversity.

Bringing together 60 leading scientists from 14 academic partner institutions in Ireland, Northern Ireland and Great Britain, the Co-Centre for Climate + Biodiversity + Water will initially be funded over six years by Science Foundation Ireland; the Northern Ireland Department of Agriculture, Environment and Rural Affairs; and UK Research and Innovation. More than 30 per cent of the centre's co-funding will come from 29 industry partners. The centre's leadership team includes Professor Yvonne Buckley, Trinity College Dublin; Professor Mark Emmerson, Queen's University Belfast; and Professor Ed Hawkins, University of Reading.



Professor Ken Byrne - Climate+ principal investigator

## Student-led Sustainability Conversation Series

### Exploring sustainable water solutions: A conversation on **SDG 6** with Chidi Usanga

On 8 November 2023, Chidi Usanga, a UL PhD candidate, shared his research on the River Shannon and SDG 6: Clean Water and Sanitation. Chidi's project aims to use digital technologies to enhance human-nature interactions for better water management. The session highlighted innovative solutions to water-related challenges and the importance of sustainable water practices.

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### Achieving universal access to clean water and sanitation: A walking debate on **SDG 6**

On 8 November 2023, UL Student Sustainability led a walking debate on SDG 6: Clean Water and Sanitation. Facilitated by Zoha Panezai, the debate engaged participants in discussions about the complexities of achieving universal access to clean water. The event emphasised the importance of discourse and collaboration in addressing sustainability challenges, equipping students with the skills to engage in meaningful conversations and drive positive change.



### Giving Voice

Sustainability, to me, encompasses every facet of my life, from my daily decisions on food, drink, clothing, cleaning and cosmetics to utilities, transport and interactions with others for local, national and global impact awareness. It's about respecting people and the planet and avoiding harm, exploitation and extremes. It means integrating mindful choices into every aspect of living a holistic life. Sustainability is about not wasting and destroying our natural resources and about striving to leave a positive legacy for future generations.

#### **Mary Ferry**

Special Projects Officer, Faculty of Science and Engineering





**7** AFFORDABLE AND  
CLEAN ENERGY



**Ensure access**  
to affordable, reliable,  
sustainable and modern  
energy for all.

## UL research project set to measure and reduce energy usage in Limerick buildings

Initiated in 2023, an energy research project led by UL is offering Limerick people the opportunity to install free smart sensors to monitor and reduce building energy use. Led by principal investigator Professor Stephen Kinsella and funded by the Sustainable Energy Authority of Ireland, the research is part of the SMARTLAB project, which adopts a living lab approach to examining financial and technical barriers to the use of smart technologies in Ireland's buildings. SMARTLAB was launched at the Citizen Innovation Lab, a collaborative space hosted by Limerick City and County Council and UL at the UL City Centre Campus.

The initiative will test new ways to make buildings smart-ready so they can better respond to the needs of occupants, cost less to run, and be ready to interact with a future decarbonised energy grid. Local building owners and occupants who accepted an invitation to join the project will receive free energy monitors and environmental sensors to install in their buildings and free expert analysis on the current health and efficiency of their buildings. Up to 100 building owners and occupants in Limerick city will be installing sensors provided by SMARTLAB to monitor their building's temperature, humidity and carbon dioxide levels.

According to Professor Kinsella, "This is a cutting-edge project that places Limerick at the forefront of collaborative approaches to empowering smart energy citizens. We are looking forward to working with people in Limerick city centre to explore how they can use smart sensor technology in their buildings and be part of the clean energy transition. The knowledge we develop together will be shared widely with policymakers at national and international levels."

According to Kerrie Sheehan, Head of Research and Technology at Sustainable Energy Authority of Ireland (SEAI), "Energy research and innovation are central to accelerating Ireland's sustainable energy transformation. SEAI is committed to paving the way for breakthrough solutions through support for research projects like the SMARTLAB project. We look forward to the learnings and insights that this innovative and engaged research project can bring to drive energy demand reduction."

The project team will support participants to understand far more about how their buildings use energy and how they can lower energy costs. Ruth Kerrigan, Chief Operating Officer for project partner IES R&D Ltd, explained, "SMARTLAB will give people a

chance to see how their buildings can operate more effectively and how they can make quick wins to reduce energy consumption through behaviour and simple measures. IES will develop solutions to help end users quickly and easily reduce energy with a target reduction of 10 per cent on average across all the pilot buildings within the project."



Professor Stephen Kinsella speaking at the UL Smartlab Launch

## UL and ESB commit to working together to support Ireland's energy transition

UL and ESB are to work closely together to support Ireland's energy transition to renewable sources of energy in line with ESB's Net Zero by 2040 strategy and UL's commitment to reach carbon neutrality by 2030. On 27 June 2023, both organisations signed an MOU committing them to collaborating in areas including education, teaching and training; research and development; international co-development, including the EU; and commercialisation relating to the generation, conversion, storage and efficient use of clean and renewable energy.

The collaboration extends to the organisations' joint efforts in the Shannon Estuary Economic Taskforce. The MOU will seek to accelerate research, development, innovation and skills programmes while exploring opportunities in the wider Shannon Estuary. Furthermore, the collaboration seeks to maximise opportunities in Horizon Europe, European Green Deal and other international co-development initiatives. It aligns with +CityxChange, an EU initiative involving ESB, UL, Limerick City and County Council and others to develop projects in climate-friendly and sustainable urban environments.

UL Vice President Research Professor Norelee Kennedy said that signing the agreement “shows UL’s commitment to working closely with our valued partners and particularly with the ESB as Ireland’s premier energy company to develop new and renewable practices that can look to change the future of the industry. Industry partnerships serve as vital catalysts that propel universities into the forefront of cutting-edge research, accelerating the advancement of the knowledge economy. By fostering collaborations with industry leaders such as ESB, UL is embracing the imperative of research for real-world applications, unlocking limitless possibilities for innovation, economic growth and societal progress. This collaboration seeks to maximise opportunities and leverage the respective strengths of both parties to create competitive proposals in international initiatives. It is a very exciting day for both institutions.”

UL Provost and Deputy President Professor Shane Kilcommins said it was a “fantastic, really exciting collaboration. This agreement between UL and ESB builds upon a previous partnership which supported world-leading research for clean energy through ESB PhD scholarships and the donation of an installation featuring an original Francis Turbine runner from ESB’s Ardnacrusha Power Station. The runner continuously generated clean electricity for 66 years and now sits proudly in the courtyard behind our Bernal Institute, which fittingly is a hothouse of impactful climate research.”

Ciaran McManus, Asset Development Manager at ESB, said, “ESB has a long-standing history of working with UL, and this partnership is a further testament to the role that we believe the wider mid-west region will play in delivering renewable energy projects for Ireland. I am looking forward to seeing how this partnership will grow and help strengthen the delivery of our Net Zero by 2040 strategy at ESB.”

An initial portfolio of projects has been identified, which includes opportunities for employee training and development, student education, cooperative education placements and internships. ESB and UL will also work together to explore renewable energy projects across various UL campuses.

Professor Luuk van der Wielen, Director of the Bernal Institute and UL’s representative on the Shannon Region Economic Taskforce, said, “The ESB-UL collaboration aims to accelerate research, development, innovation and skills programmes while exploring opportunities in the wider Shannon Estuary

as a European-scale living lab. The agreement is a logical next step from our joint efforts in the Shannon Region Economic Taskforce, which emphasised integration and investment in innovation, research and education as critical themes for economic development.”



Professor Luuk van der Wielen

### LDPE plastic-derived carbon as sulphur hosts for lithium–sulphur batteries

This project focuses on the need to diversify battery chemistries and source raw materials for electrode components from more sustainable sources. Most carbon is derived from heavy-oil derivatives, petroleum, coal-tar pitch and polyacrylonitrile. While LDPE (low density polyethylene) plastic is a municipal waste that can be recycled, the ‘softer’ variety is more complicated to recycle.

Under UL researchers Rebecca Forde, Dr David McNulty, Dr Hugh Geaney and Professor Kevin Ryan and collaborators Vidit Tiwari and Professor Vivek Ranade and with funding from SFI’s AMBER, this project converts waste LDPE plastic into conductive carbon powders and demonstrates their use as electrode materials for lithium–sulphur (Li–S) batteries.

The conversion of waste LPDE plastic to conductive carbon powder is a straightforward two-step process, consisting of a low-temperature chemical treatment followed by a high-temperature thermal treatment under inert gas conditions. Heating plastic without the presence of oxygen ensures that the carbon is not converted to carbon dioxide. The porosity of the carbons prepared from waste plastic can also be altered via a process known as hydrodynamic cavitation. The study provides an alternative route for plastic waste instead of commonly used approaches such as incineration and landfilling. It adds value to a waste product and contributes towards the challenge of what to do with plastic waste.

The project will have several impacts. It could help conserve resources, thereby reducing the need to process and refine the heavy oil products and even minimising demand. Plastics are derived from limited resources so it would be of benefit to utilise them for a secondary use. The energy required to manufacture goods from recycled material is often greater than the energy required to produce materials from virgin plastics. The approach of the researchers is to add value to a waste product that is currently destined for landfill or, even worse, incineration in air, which would result in significant amounts of CO<sub>2</sub> being released into the atmosphere.

Consequently, the project will contribute to lowering greenhouse gas emissions, which, in turn, will lower the overall carbon footprint associated with extracting, transporting and processing heavy oils. It could give rise to economic benefits as the conductive carbons that can be prepared from waste plastics have many applications, including water purification, gas sensing and energy storage. This will be a key component of the circular economy for plastics use as it ensures that even waste plastics retain their value and can be repurposed for use in a wide array of applications. These conductive carbons prepared from waste plastics are used as electrode materials in Li-S batteries, one of the most promising ‘beyond lithium-ion’ battery chemistries in terms of energy density, capacity, safety and cost. While Li-S batteries are not commercialised on a wide scale to date, the electrochemical performance they can offer compared to Li-ion batteries means they are attractive alternative energy storage systems to power consumer electronics and electric vehicles.

According to team member Rebecca Forde, “This research is important as we are taking a waste product and preparing a material that will benefit battery technology while helping to improve the environmental impact of consumer waste.”

## UL campus accommodates first electric car sharing vehicle

UL and GoCar agreed to provide a parking space and permit in the busy UL campus car park for an electric car sharing vehicle, a Hyundai Kona with a 64 kWh battery. The car park is already equipped with an ESB 22kW Type 2/AC43 dual port electric vehicle charge point, and the shared EV will be available to the public from February 2023 until the end of the project.

eMobility as a Service (eMaaS) is a concept that involves the use of technology to support integration and multi-modal electric vehicle travel. It represents the transition away from depending on personally owned transport to a model based on mobility provided as a service. eMaaS hubs create additional e-mobility types for users with the inclusion of electric bike share and, in some markets, electric scooters. (E-scooters are not currently legislated for in Limerick or Ireland.)



**Chris Fogarty, UL Energy Manager/Quality Team Leader, pictured with Mantas Valasinas, GoCar representative for Limerick, at the handover of ‘GoCar UL 3’**

## Student-led Sustainability Conversation Series

### Sustaining campus life

On 6 March 2023, UL Student Sustainability partnered with UL Campus Life Services in an engaging collaborative session on sustaining campus life through environmentally conscious initiatives. Participants gathered to explore opportunities for integrating sustainability principles into campus operations, facilities management and student services. Through brainstorming activities, attendees identified areas for improvement and proposed innovative solutions to enhance sustainability across campus.

The ideas generated from the session informed the development of strategies and initiatives to promote sustainable practices within campus life, laying the foundation for a more environmentally friendly and socially responsible university environment.

### Giving Voice

We understand the problem: increased levels of carbon in the atmosphere are destabilising the climate. We understand the solutions: climate change won't stop until we reach net zero emissions. Each of us can help realise a solution, no matter where we start from. Any action generates hope and further action. There are 100 solution areas to focus on: something to cater to every skillset and talent. By 2030, a million more humans could be working on climate solutions than are doing so today, laying pathways for more equitable futures. We can do this!

#### **Adrienne Horan**

Education Technologist, Faculty of Education and Health Sciences and member of sustainability groups in UL





**8** DECENT WORK AND  
ECONOMIC GROWTH



**Promote sustained,  
inclusive and sustainable  
economic growth, full and  
productive employment  
and decent work for all.**

## Smart-Edu4.0 introduces sustainability course for future workforce

The Smart-Edu4.0 project addresses the pressing need to bridge skills gaps in the manufacturing sector, particularly as industries transition to smart manufacturing and Industry 4.0 technologies. With the advent of these advancements, there is a growing demand for a workforce equipped with skills that align with the evolving landscape of manufacturing.

The introduction of a sustainability course by the School of Electrical and Computer Engineering, National Technical University of Athens within the Erasmus+ project Smart-Edu4.0 marks a significant step in integrating sustainability into manufacturing education. By embedding principles derived from the UN SDGs into the curriculum, the project aims to cultivate a workforce with a mindset oriented towards environmental and social sustainability.

Led by Queen's University Belfast, the Erasmus+ Smart-Edu4.0 consortium includes South Eastern Technological University, National Technical University of Athens and UL (represented by Dr Sinéad Mellett, Dr Eoin Hinchy and Professor Conor McCarthy). The sustainability course comprises 10 lectures covering various aspects of sustainability, including its relevance in Industry 4.0, indicators and metrics, sustainability in mechatronics and IoT (Internet of Things), and its applications in agriculture and food technologies. Additionally, two presentations summarise the course content.

The Smart-Edu4.0 project's introduction of the sustainability course represents a proactive approach to addressing skills gaps and preparing the manufacturing workforce for the challenges and opportunities of Industry 4.0. By integrating sustainability principles into education, the project not only enhances the capabilities of future professionals but also fosters a culture of environmental and social responsibility within the manufacturing sector.

In addition to aligning with SDG 8, the sustainability course aligns with the following SDGs:

- SDG 4: Quality Education: By integrating sustainability principles into the curriculum, the project contributes to providing inclusive and equitable quality education and fosters lifelong learning opportunities for all.
- SDG 9: Industry, Innovation and Infrastructure: Addressing skills gaps in the manufacturing sector and preparing the workforce for Industry 4.0 technologies directly supports efforts to build resilient infrastructure, promote sustainable industrialisation and foster innovation.
- SDG 12: Responsible Consumption and Production: Equipping future professionals with knowledge and skills in sustainability promotes responsible consumption and production patterns, contributing to sustainable economic growth.
- SDG 17: Partnerships for the Goals: The collaborative nature of the Smart-Edu4.0 project underscores the importance of partnerships in achieving sustainable development objectives.

According to Dr Mellett, "Through the Smart-Edu4.0 project, we're not just shaping the workforce of the future; we're nurturing stewards of sustainability who will drive positive change in the manufacturing sector and beyond."

## Student-led Sustainability Conversation Series

### Decent work and economic growth: A conversation on **SDG 8** with Professor Stephen Kinsella

On 22 November 2023, Professor Stephen Kinsella discussed SDG 8: Decent Work and Economic Growth. Moderated by Sathvika Kommera, the conversation explored strategies for promoting inclusive economic growth and decent employment. Professor Kinsella emphasised the role of education and innovation in driving sustainable economic development.

### **Giving Voice**

Sustainability is achieved through a consistent effort to take small steps and gradually build on them. As students, we have the chance to get involved in a wide range of sustainability movements and activities and to enjoy them; there's so much to learn, collaborate on and improve, all while keeping the benefits of the future in mind. The real challenge is to be compassionate.

#### **Olivia Humphreys**

Year 4, Product Design and Technology



**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**Build resilient  
infrastructure,** promote  
inclusive and sustainable  
industrialization and foster  
innovation.

## Outstanding innovation and commercialisation of research celebrated at UL Innovation Awards

UL celebrated significant milestones in innovation, research and sustainability at the 2023 UL Innovation Awards. Held every two years, this prestigious event acknowledges researchers who have successfully brought their groundbreaking innovations from the lab to the global stage. Twenty-two patents were granted to UL researchers for their cutting-edge inventions, many of which are rooted in sustainability and have had a profound commercial and societal impact.

A particularly notable achievement was the focus on environmentally sustainable technologies, such as innovations in biofuel production and plastic recycling. One of the patented inventions came from a collaboration between UL researchers and an industry partner to develop a more efficient process for producing biofuels, including bioethanol – a renewable transport fuel. This technology enabled the conversion of agricultural and plant waste into clean energy, thereby directly addressing the need for greener transportation solutions and contributing to the reduction of greenhouse gas emissions.

Another sustainability-driven innovation awarded at the ceremony was a groundbreaking method for recycling plastics. Researchers at UL developed a technology that transforms plastics commonly used in clothing and food containers into high-tensile fibres. These fibres, in turn, can be repurposed into value-added products, such as car parts, which are both strong and recyclable. This innovation plays a crucial role in fostering a circular economy by helping to reduce plastic waste and its harmful environmental impact.

Beyond sustainability, the awards also celebrated a wide range of technologies, from medical devices to semi-conductors. As UL's research focus continues to shift towards solutions that promote environmental stewardship and long-term resource management, the underlying theme of sustainability was pervasive at the awards.

Paul Dillon, Director of the Technology Transfer Office at UL, emphasised that the innovation awards underscore the tangible impact of research commercialisation, particularly as many

of the inventions, including those focused on sustainable materials and recycling, address real-world environmental challenges. Paul noted that the commercialisation of research is not only vital for economic growth but also ensures that state investment in research yields positive societal outcomes.

As UL researchers continue to break new ground in sustainable technologies, these awards serve as a reminder of UL's commitment to environmental sustainability, global impact and the commercialisation of research for a greener future.

## UL students create innovative solutions with 'Fixperts' challenge

UL students are putting their skills to use in the 'Fixperts' challenge – an initiative aimed at making life easier for community members facing everyday challenges. Led by third years in Product Design and Technology, the Fixperts challenge aims to showcase students' ability to solve real-life problems through innovation and empathy while making life easier for their community.

The concept involves forming a 'Fix Team' comprised of third-year Product Design and Technology students, who collaborate with members of the community, known as the 'Fix Partner', who struggle with daily tasks. The Fix Team's mission is to craft simple, inventive and cost-effective solutions tailored to the unique needs of the Fix Partners. This year's inventive solutions range from aiding a woman with rheumatoid arthritis with her crocheting to protecting an athlete's hands as they compete in wheelchair basketball games.

Dr Muireann McMahon, a lecturer in Product Design and Technology at the School of Design, Faculty of Science and Engineering, emphasised the significance of creating solutions like these that are tailored to specific individuals. According to Dr McMahon, "A lot of the time, designers create products for much larger user groups, but with Fixperts, the students design, develop and build a solution that works for a real person. There is a real sense of satisfaction and pride when the fix is handed over to the Fix Partner and it succeeds in helping them do tasks others can take for granted."

Students Carlita Bowen and Úna Ní Choileáin undertook the challenge of assisting Karen, who battles joint and muscle pain, by designing a stylish medicine travel case and containers. They discovered that Karen stored her medication in a zip-lock bag, making the process of taking medication difficult due to hand swelling. Their solution was a case containing 14 easy-open containers, carefully designed to cater to Karen's unique needs.

Una and Carlita commented, "This 4-week project has undoubtedly been one of the most fulfilling experiences we've undertaken so far. Witnessing the impact our design had on someone's life is genuinely rewarding. The collaboration with our Fix partner, Karen, was a pleasure. She was amazing to work with, always open to questions, and supportive of user testing."

The Fixperts programme is part of an international initiative, and the standout projects from UL will be included in a global competition. In 2021, UL students Colin Coughlan and Jordan Schmidt were invited to exhibit their project in a permanent Fixperts Exhibition in Paris. Their solution addressed the challenge of tying laces for a Fix Partner with dyspraxia and highlighted the programme's potential to drive impactful change.



Students Carlita Bowen and Úna Ní Choileáin

### Significant funding for UL projects awarded through SFI Research Infrastructure Programme

UL researchers were awarded almost €4.3m of funding in 2023 for projects under the SFI Research Infrastructure Programme. The investments have a strong focus on sustainability with funding to establish a national rechargeable battery fabrication and test facility, sustainable composites, nanopharmaceuticals and electron microscopy. The total €53.3m investment in 33 research infrastructure projects through the Science Foundation Ireland (SFI) Research Infrastructure Fund will contribute to the advancement of high-quality and high-impact research activities.

The following four UL projects are to receive funding:

- National Rechargeable Battery Fabrication and Test Facility
- Observing materials' structure and dynamics at the nmscale in environmental conditions and under external stimuli by In-Situ Transmission Electron Microscopy (ObSTEM)
- Next Generation Nanopharma Process Development Platform (NaPRO)
- Sustainable Composites Processing and Characterisation Suite (SCoPe)

Welcoming the announcement, Vice President Research Professor Norelee Kennedy said, "This is a significant success for the awardees and for UL recognising the cutting-edge research being undertaken at the University to support a sustainable society. The investment supports UL's strengths in materials research hosted at the Bernal Institute that addresses global challenges in energy, environment and health. The funded infrastructure supporting areas of strength in battery research, pharmaceutical processing, sustainable materials and electron microscopy will underpin further advancements in these fields."

Announcing the award, Minister for Further and Higher Education, Research, Innovation and Science Simon Harris TD said, "I am delighted to announce €53.3 million in funding through my department that will support and encourage transformative research which will have both a national and international impact. The research community on our island has consistently proved itself to be world-class, not least during COVID-19, and continues to undertake cutting-edge, innovative research projects. For this community to continue to thrive, it's essential that they have sustained access to modern infrastructure and equipment."

Commenting on the investment, Professor Philip Nolan, Director General, Science Foundation Ireland, said, "Encouraging and supporting excellent, ambitious and innovative research projects is the core objective of Science Foundation Ireland. The SFI Research Infrastructure Programme was developed with this in mind; for researchers to continue to deliver outstanding research and meet evolving and future challenges, we must ensure that they have the tools required for their research. The 33 infrastructure projects awarded funding are at the cutting edge and are truly helping us to achieve our goal of delivering today and preparing for tomorrow."

## Innovating for a sustainable future: How ISE is shaping tomorrow through technology and collaboration

In 2023, the Immersive Software Engineering (ISE) programme, in collaboration with the National Digital Research Centre (NDRC) and RDI (Research Development Innovation) Hub, played a pivotal role in promoting innovation, sustainability and technology-driven projects. Through a series of events and initiatives, ISE fostered creativity and problem-solving among students while contributing to sustainability and the broader tech community.

One of the highlights of the year was the inaugural NDRC Startup Sprint held at UL in November. This one-day hackathon, organised by the RDI Hub and powered by the NDRC, brought together over 60 participants from across Ireland. The event encouraged students to collaborate, develop new startup ideas, and create working prototypes within a limited time. With the guidance of experienced mentors, 14 teams worked on innovative projects and presented them to a panel of esteemed judges. ISE students played a key role in two winning projects: 'Sightline Insights', a tool for behavioural sentiment analysis in retail, and 'Virtown', an augmented reality concept designed to gamify learning mathematics. The event showcased ISE's commitment to nurturing entrepreneurship and aligning with the UNSDGs, particularly Goal 9 (Industry, Innovation and Infrastructure).

Additionally, ISE actively engaged in sustainability-related discussions and debates. Throughout the academic year, sustainability and globalisation debates on the intersections between globalisation, technology and sustainability were held between first- and second-year students. Directly aligning with UN SDGs 4 (Quality Education) and 13 (Climate Action), the debates provided students with a platform to explore critical issues and present their ideas for a more sustainable future.

ISE also took part in the Generative AI for Good competition, hosted by Tangent, Trinity College Dublin. Starting in November 2023, the competition aimed to leverage AI technology to address social and environmental challenges. ISE students excelled, winning top prizes for their innovative AI solutions, thereby further demonstrating the programme's commitment to using technology for good and aligning with UN SDG 11 (Sustainable Cities and Communities).

Through these initiatives, ISE exemplifies a strong commitment to fostering innovation, sustainability and impactful technological solutions and contributing meaningfully to the UN SDGs.

## Student-led Sustainability Conversation Series

### Insights from Limerick Chamber: Navigating economic opportunities

On 3 October 2023, Cohort One of the Global Leadership for Sustainable Development programme visited Limerick Chamber. Hosted by Seán Golden and the Chamber team, students discussed the region's economic landscape, industry trends, and the role of business in sustainability. The visit inspired students to explore opportunities for sustainable economic growth in the region, reinforcing their commitment to contributing to Limerick's economic ecosystem.

## Student-led Sustainability Field Trip

### Students learn sustainability lessons at Cloughjordan Ecovillage

On 14 October 2023, students from the Global Leadership for Sustainable Development programme visited Cloughjordan Ecovillage to learn about sustainable living. Through guided tours and discussions with community members, students explored eco-friendly building methods and sustainability practices. The visit gave participants practical insights into reducing ecological footprints and conserving biodiversity and motivated them to integrate these practices into their lives and communities.

### Giving Voice

Sustainability is coexisting harmoniously with various elements of existence without causing disruption or harm. Therefore, in order to sustain the future while meeting present needs, the means is, to live consciously, to start small, and begin from within. While it establishes a quality of life for all, initiating and maintaining sustainability poses a challenge but can be achieved with appreciation of acknowledging the available resources. Initiatives like the student sustainability body at UL have made disseminating this knowledge and catalysing change within the student community (the future minds) more feasible.

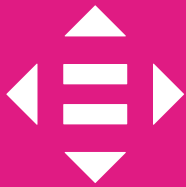
**Akshata B. Mallikarjunappa**

Master of Science in Artificial Intelligence and Machine Learning





**10** REDUCED  
INEQUALITIES



**Reduce inequality**  
within and among  
countries.

## Striking the right note: Irish World Music Café welcomes new migrants to Limerick

The Irish World Music Café is a weekly, music-based social gathering aimed at creating a space of welcome to newcomers in Limerick and where new migrants can meet other people living in Ireland. Since 2023, the café has been held each Thursday morning at 11am in the UL City Campus. It was profiled by Sylvia Thompson, a writer on health, environment and science for The Irish Times, in an article published on 22 September 2023 on the wellbeing potential of community choirs.

The innovative café is hosted by the Irish World Academy of Music and Dance in association with the migrant NGO Doras and the Participatory Health Research Unit in the School of Medicine, UL. The café was created in 2015 in the context of the Irish Refugee Protection Programme in collaboration with musicians, researchers and community-based partners. Since 2019, Professor Helen Phelan, Director of the Irish World Academy, has been working closely in the Participatory Health Research Unit with Professor Anne MacFarlane, Chair of Primary Healthcare at UL, on integrating the music café model into migrant health research, teaching and learning initiatives.

According to Dmytro Cherepakha, who joined the café after moving to Limerick from Ukraine, “In the music café, sharing and connecting through music is a significant aspect of social interaction for me.” Ewa Zak-Dyndal, a PhD Arts Practice student and one of the café coordinators, notes that the café “gives a space for people from different nationalities to come and enjoy multiple cultures, share their own, and most of all, enjoy the collaboration, forgetting for a short moment the troubles and injustices of today’s world.” Sarbik Guha, a PhD student and regular visitor to the café, has spoken of the power of the café to develop “spaces of belonging as well as to provide me with new friends to rely on in a foreign land, which I did not expect to happen so quickly when I took that flight from India to Ireland a year ago.”

The cafés provide opportunities for researching the impact of music on the health and wellbeing of migrants. Doras staff members Ahmed Hassan and Serhii Korobtsov recognise how important music is for people’s wellbeing and social inclusion in a new country. The cafés are a reminder that music is one of the most effective ways for human beings to connect with each other and to celebrate both cultural differences and human similarities.

## Then the Dream Started to Be More: Sing Up Foundation publishes report on the impact of singing for refugee children and unaccompanied minors

Sing Up Foundation (UK) published a report by the Irish World Academy of Music and Dance and Participatory Health Research Unit on the impact that singing has on the health and wellbeing of refugee children.

The research team (Dr Hala Jaber, postdoctoral researcher; Dr Fran Garry, postdoctoral researcher; and Professor Helen Phelan, Irish World Academy Director) evaluated the benefits of singing on the mental health of young refugees and unaccompanied minors, developed recommendations on how to set up and run sessions and projects, and built a repository of research and evaluations for the benefit of organisations looking to develop their practice in this area.

Inspired by the British Council’s World Voice projects on working with young refugees in Greece and Palestine, the UL research was supported by British Council funding received by the Sing Up Foundation to continue the legacy of World Voice.

Celi Barberia, Head of Sing Up Foundation, said, “We have been so inspired by the work we have seen with young refugees and wanted to support the sector with this research to help inform practice and promote the impact that it can have on the lives of these very vulnerable young people. We are passionate about the benefits of singing on health and wellbeing and hope that through this research review we can help support those working with young refugees and unaccompanied minors to use the most effective evidence-based singing strategies to help improve outcomes. We are excited to be working with Dr Jaber, Dr Garry and Professor Phelan, who are experts in the field and excellent advocates for the work.”

## Employment rights of migrants to Ireland

Led by Eddie Keane from the School of Law, this project focused on creating and distributing easily understood information for migrants to Ireland on employment rights and procedures for accessing employment. The project gave rise to two booklets – one in relation to economic migrants and one in relation to persons seeking international protection. The booklets were presented to advisors from Limerick Citizens Information Centre and are being used by the centre to help migrants who seek advice. Under Mr Keane’s supervision, the project involved Year 4 Law Plus students creating the booklets as part of their Advanced Lawyering module.

After it approved the booklets, Limerick Citizens Information Centre agreed to distribute them among migrants coming to Limerick. According to Tracey Reddy, the centre’s manager, “The team was delighted to meet the group and was impressed by their work.”

## Catalysing the rapid development of new tomographic imaging methods through a multidisciplinary approach

Entitled ‘Rich and nonlinear tomography: a multidisciplinary approach’, this programme ran from 4 January to 30 June 2023. The programme focused on the theme of inverse problems and imaging and aimed to stimulate closer engagement between mathematicians and statisticians working on imaging and materials’ characterisation techniques and instrument scientists, engineers, physicists and image users with a view to focusing on the right problems in relation to both the mathematical formulation and end-users’ requirements.

Involving a consortium of institutions in the UK, Finland and Ireland (UL – represented by Dr Romina Gaburro of the Department of Mathematics and Statistics) and funded by the Isaac Newton Institute for Mathematical Sciences, Cambridge, the main objective of the programme was to produce step changes in the capabilities of rich and non-linear tomography through the application of mathematical science to the system design, reconstruction and interpretation of images (from medical imaging to Earth exploration and the non-destructive testing of materials, etc). By identifying rich and non-linear tomographic methods as a large cluster of emerging techniques and by throwing a spotlight on their mathematical similarities, the programme’s main goal was to catalyse the rapid development of new tomographic imaging methods.

The programme brought together end-users and instrument scientists with mathematical scientists working on imaging, thereby breaking down barriers to communicating across disciplines. This has the potential to have a huge impact on the speed of development of new tomographic imaging methods. By exploiting different mathematical and statistical techniques and across diverse application areas (from medical imaging to geophysics, security, defence, materials and non-destructive testing), the programme will also have an impact on future collaborations and the creation of large consortia for applying for funding in the area of imaging.

The programme worked towards creating an open and diverse forum of researchers, including early-career researchers, women in science and, more generally, researchers coming from underrepresented groups. By encouraging software platforms and representative data sets to be shared, the project positively impacted mathematical scientists who did not already directly collaborate with experimental groups.

## Facilitating community-engaged student placements in Limerick south city

Among the challenges community groups from Limerick south city experience are disadvantage and health inequalities. In October 2023, students from UL’s School of Allied Health (Occupational Therapy, Physiotherapy, and Human Nutrition and Dietetics) collaborated professionally and worked in partnership with community groups as part of the practice education component of their programmes. Students delivered health and wellbeing programmes using a strengths-based approach to address health disparities with community groups from Limerick south city. Led by the School of Allied Health and UL’s AccessCampus, this community-based placement model enabled students to engage directly with marginalised and diverse communities by responding to their needs, promoting social inclusion, and supporting access to health and wellbeing services through community immersion.

Community-based placements fulfil a dual purpose by meeting local community needs and providing students with a rich community-engaged learning experience. Both community partners and students gain from the experience. The commitment of community groups to student education contributes to students’ personal and professional development in becoming socially responsible citizens. Education and knowledge exchange are catalysts for social change.

These placements support experiential learning for students in real-life contexts, thereby enabling students to effectively deal with contemporary health and social care challenges. The experience prepares students for future employment in ever-changing health and social care landscapes to become innovative and entrepreneurial leaders of the future. Community partners benefit from this alliance as it widens access to service provision, knowledge, resources and research from UL and from the next generation of healthcare professionals.

The following are two examples of interventions taken by students in response to community needs:

1. St Augustine's School, Sexton Street: In response to challenges observed in the classroom, a wellness room was created and equipment and resources were provided to support the pupils' self-regulation. The intervention adopts a proactive rather than reactive approach in managing classroom disruption. The safe space enables students to self-regulate and to return to the classroom to engage in schoolwork in a calmer state. Unique to this community group, students from the three Allied Health disciplines worked in collaboration with pupils and staff from St Augustine's School during the placement period, thereby demonstrating the value of interprofessional working in relation to improving the quality of service.
2. Parkinson's group: An eight-week programme of exercises for balance and strength was delivered to a group of people with Parkinson's disease. The enjoyable and evidence-based programme included education on fatigue management and on planning and shopping for nutritious meals to conserve energy. Students engaged with the group to address the needs and fears of participants and build their confidence. Participants were encouraged to continue exercising at home by using videos of the exercises made by the students.

In addition, positive and meaningful relationships were cultivated between communities and UL through the UL Community Open Forum. The forum was established in 2023 to strengthen connections between UL and local community partners and to foster a more sustainable model of community engagement by identifying priority needs and giving a voice to underserved community members.

The following groups collaborated with the School of Allied Health in delivering these programmes: UL AccessCampus, St Augustine's School, South Hill After School Club, South Hill Men's Shed, Golden Girls Active Retirement Group and the Parkinson's group.

Feedback on the placements from students and participants alike was extremely positive. The Occupational Therapy students reported feeling more self-assured and confident with decision making after their placement and felt they had gleaned valuable knowledge about working inter-professionally. The Physiotherapy students discussed the importance of a safe space to exercise. The Human Nutrition and Dietetics students enjoyed exchanging tips on diet and exercise and sharing their experiences with others.



**Physiotherapy students Luke Howley and Cormac Woulfe leading an exercise session with a group of people with Parkinson's disease.**

### **Postdoctoral fellowship used to examine the portrayal of ethnic and linguistic diversity on youth radio**

In March 2023, Dr Sarah Josefine Schaefer (School of Modern Languages and Applied Linguistics) was awarded a prestigious Marie Skłodowska-Curie Postdoctoral Fellowship worth more than €215,000 by the EU. Her ethnographic project entitled 'Community, Identity and Diversity in German Youth Radio (CIDoRA)' will provide new insights into the linguistic and semiotic practices of radio content production to explore how journalists try to construct and negotiate a collective urban youth identity with their increasingly diverse audience. CIDoRA will shed light on possible issues that can lead to an unbalanced and negative portrayal of ethnic and linguistic diversity on youth radio and will help promote more meaningful engagement with diversity by journalists.

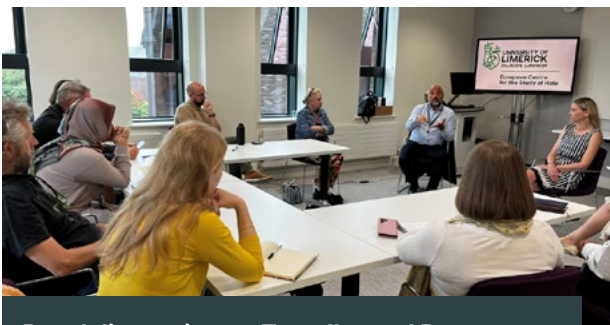


**Dr Sarah Josefine Schaefer**

## European Centre for the Study of Hate hosts Dr Christian Jura, member of the European Commission against Racism and Intolerance

From 4 to 8 September 2023, the UL-based European Centre for the Study of Hate hosted Dr Christian Jura, bureau member of the European Commission against Racism and Intolerance (ECRI) and board member of the National Council for Combatting Discrimination (NCCD) in Romania.

During the visit, Dr Jura co-presented a panel discussion with Dr Sindy Joyce, European Centre for the Study of Hate member, on Traveller and Roma rights and representation. He provided a workshop to PhD students from across the campus working in the fields of human rights and equality. Dr Jura also delivered a seminar on the functions and operation of ECRI and NCCD.



**Panel discussion on Traveller and Roma rights and representation**

## Assessing state progress on protecting national minorities

Members of the Council of Europe Advisory Committee on the Framework Convention for the Protection of National Minorities visited Ireland in September 2023 to assess the progress made by the State in implementing the framework. At the invitation of the Irish Human Rights and Equality Commission, which hosted the event, the Irish Travellers Access to Justice team presented the findings and recommendations of their 2022 report on Travellers' experiences with the Irish criminal justice system.

The meeting will inform the Advisory Committee's forthcoming (2024) report and fifth opinion on the implementation of the Framework Convention in Ireland. The Irish Travellers Access to Justice project is a flagship project of the European Centre for the Study of Hate. Principal investigators Professor Amanda Haynes (Department of Sociology) and Professor Jennifer Schweppe (School of Law) represented the team in Dublin. The other members of the team are Dr Sindy Joyce (first author), Margaret O'Brien, Olive O'Reilly and David Joyce.

## SALAAM project

Led by Dr James Carr (Department of Sociology) and funded by the EU Commission under its Citizens Rights, Equality and Values programme (CERV), the Sustainable Alliances Against Anti-Muslim Hatred (SALAAM) project continued to make strong progress in 2023. The SALAAM team expanded, and a warm welcome to the project and to the Faculty of Arts, Humanities and Social Sciences was extended to educational technologist Patrick Fox and postdoctoral researcher Dr Tiba Bonyad.

Building on the extensive fieldwork undertaken in the first year of the project, involving work with 193 people from within Muslim communities and 69 staff from seven different local authorities, a range of SALAAM initiatives are starting to take shape. These include the development of an anti-racism training programme, which has been piloted with the participating local authorities; the recruitment of trainers from within Muslim communities; and the creation of tools to support people who experience racism to report racist incidents and seek further assistance, if required. To these can be added the development of local community platforms designed to create or strengthen linkages between local authorities and members of the Muslim communities in their area.



**Patrick Fox (UL), Ghizala Avan (Ex Anima), Dr Nasrin Khandoker (UL), Farkhanda Chaudhry (Ex Anima), Tunde Egbesakin (Fingal County Council), Dr James Carr (UL) (viewing left to right)**

## Dr Lydia Bracken appointed to Young Academy of Ireland (YIA)

In April 2023, Dr Lydia Bracken, School of Law, was appointed as one of the inaugural members of the Young Academy of Ireland (YAI). The YAI is an initiative of the Royal Irish Academy, which promotes engagement between early-career researchers and innovators (ECRIs) to tackle important issues and challenges in society and promote meaningful change. The YIA will also support ECRIs in leadership roles; contribute to equality, diversity and inclusion; and develop networks and skills.



Dr Lydia Bracken

## Intergenerational community event

Intergeneration Week took place from 24 to 30 April 2023. As part of the campaign, a community event between retirees from Probus (clubs for retired or semi-retired people from all walks of life) and UL students took place in Bobby Byrnes (Limerick city) on 25 April. Organised in collaboration with the UL Human Rights, Equality, Diversity and Inclusion and Vice President Global and Community Engagement offices, Student Community Engagement Liaison Officer Andrea La Touche planned an intergenerational Narrative 4 story exchange. The event was facilitated by Dr Florence Le Baron-Earle and Dr Maria Rieder (School of Modern Languages and Applied Linguistics), Dr Niamh Lenahan (Faculty Office, AHSS), and PhD candidate Leticia Scheidt (Department of Psychology).



A group of students and staff on the way to an intergenerational community event in Limerick city

## Championing equality and inclusion: UL's path to a fairer future

UL is on a transformative journey through its Human Rights, Equality, Diversity and Inclusion (HREDI) Strategy 2023-2027. The strategy closely aligns with UL's Mission-based Sustainability Framework, which integrates sustainability and inclusivity throughout the institution. The strategy is rooted in five core values: social justice, empowerment, inclusivity, agency, and respect. These values are not just ideals but actionable commitments that contribute to UL's broader goal of becoming a model of sustainability and social responsibility by 2030.

Social justice at UL involves dismantling barriers to education and employment for marginalised groups, reflecting its mission to be a driver of societal change. Empowerment ensures that all voices contribute meaningfully to the University's future. UL is creating platforms for diverse perspectives to shape its evolution, making sure inclusivity goes beyond words. Inclusivity at UL is about designing systems that accommodate the diverse needs of the entire community, aligning with the framework's focus on universal design and belonging.

Agency emphasises equipping individuals with the resources they need to make informed decisions and fostering a collaborative environment where students and staff can lead innovation and sustainability efforts. Respect underpins UL's commitment to a dignified and safe environment for all, reinforced by the Mission-based Sustainability Framework's focus on embedding equality and human rights into the institution's governance and everyday practices.

Alongside the Mission-based Sustainability Framework, the HREDI strategy aims to position UL as a leader in equality, diversity and inclusion by 2027. This combined vision is more than an institutional goal – it is a broader commitment to shaping the landscape of higher education both in Ireland and globally.

## Student-led Sustainability Conversation Series

### Student Sustainability Summit: Empowering voices for change

On 18 October 2023, students gathered for the Student Sustainability Summit, an event designed to empower them to voice and explore the issues affecting their student life. Organised by UL Student Sustainability, the aim of the summit was to provide a platform for students to identify and discuss concerns relevant to their campus experience.

Throughout the summit, attendees engaged in dynamic discussions, sharing their perspectives on various aspects of student life, from sustainability initiatives to campus services. Guided by the goal of fostering a more sustainable and student-friendly environment, participants collaborated to generate ideas and solutions to address these challenges.

The summit served as a testament to the value of working collectively to create positive change within the UL community. By actively participating in the discussions and workshops, attending students demonstrated their commitment to shaping a more sustainable and inclusive campus environment.

UL Student Sustainability looks forward to harnessing the insights and feedback gathered from the summit to inform future initiatives and projects, thereby ensuring that students' voices remain at the forefront of sustainability efforts on campus.

### Giving Voice

The HREDI Strategy 2023-2027 exemplifies our dedication to creating an inclusive and equitable university community. It aligns with our comprehensive vision and draws inspiration from UL's Sustainability Framework, which directs our path until 2030. By incorporating sustainability and social responsibility principles, we strive to harmonise the strategy with our broader sustainability goals. This integrated approach highlights our commitment to advancing diversity and human rights and ensuring these initiatives align with UL's Mission-based Sustainability Framework. Our goal is to achieve a comprehensive and lasting positive impact on campus and beyond as we work towards becoming a truly egalitarian university by 2030.

#### **Dr Marie Connolly**

Director, Human Rights, Equality, Diversity and Inclusion

**11** SUSTAINABLE CITIES  
AND COMMUNITIES



**Make cities and human settlements inclusive, safe, resilient and sustainable.**



## Limerick’s Active Travel team engages UL researchers to explore cycling potential in city

Limerick City and County Council’s Active Travel team is engaging UL researchers to conduct detailed analysis into the potential of cycling across the city. Entitled ‘The Drive for More Cycling in Limerick’, the project will involve the completion of projects aimed at understanding perceptions of cycling infrastructure within Limerick specifically. Bike parking innovations and the feasibility of sustainable logistics facilities in the city will also be explored throughout the duration of the research. Limerick City and County Council is one of just two local authorities in the country to receive approval from the National Transport Authority (NTA) to fund research specific to the local area.

The findings from the research will be shared and discussed with the Active Travel team on a regular basis, which will help to form the basis of proposals to continue to enhance and upgrade Limerick’s cycling infrastructure. According to Ross Higgins, the project’s principal investigator and UL lecturer in civil engineering, “This research project demonstrates the strong collaboration between Limerick City and County Council and UL. The impacts of this work will positively affect many people’s lives, and this research is well-timed given national and international agendas to decarbonise transport. Work on the project has already begun and UL has hired a full-time research assistant as a result of the funding provided through the Active Travel team. We’ll be assessing the barriers

to decarbonising our transport infrastructure in Limerick and how to address that throughout our research. We’ll also be looking at evaluating existing cycle parking around the city as well as how the possibility of ‘micro consolidation hubs’ – effectively neighbourhood-scale storage and distribution hubs for last-mile deliveries – may work in Limerick. We look forward to working hand in hand with the Active Travel team going forward during what’s a really important stage in encouraging a modal shift, as per local and national transport policy.”

Sean McGlynn, Senior Engineer with the Active Travel team at Limerick City and County Council, commented, “We’re very excited about the beginning of this new partnership with our colleagues in UL. As we continue to expand the rollout of high-quality Active Travel schemes across Limerick, we want to ensure we have the most up-to-date data and information to do it as well as we can. Understanding public perceptions of cycling in the city is particularly significant for us, as we want to continue to bring people with us on the journey to upgrade our infrastructure. Having an analysis of local views and trends will be invaluable to our engineers and technicians going forward as they continue to formulate proposals for the city.”

The collaboration with UL follows the beginning of air quality monitoring and the installation of radar traffic counters from the Active Travel team in 2023. The research will take place for a 24-month period, with findings to be collated thereafter.



Pictured at the launch of the collaboration between UL and Limerick City and County Council’s Active Travel Team were (left to right) Muhammad Huzafa, Research Assistant, UL; Sean McGlynn, Senior Engineer, LCCC; Ross Higgins, Project Lead, UL; and Josh Prenderville, LCCC. (Photograph: Don Moloney)

## Clinical skills labs and the circular economy

When simulating a healthcare environment in clinical skills labs, it is important that students be exposed to an environment that replicates the clinical environment as much as possible. Following a recent clinical skills labs refurbishment supported by the Devolved Capital Grant, the Department of Nursing & Midwifery decided to upgrade some equipment to support and renew clinical skills teaching. The department replaced eight outdated hydraulic beds with eight modern, fully electric beds similar to those being used in contemporary healthcare facilities nationally.

Engaging in sustainability following this major lab refurbishment was crucial to cultivating a more responsive department. While the hydraulic beds were outdated, the functionality was not compromised, and so the clinical skills labs team was keen to find a new home for the beds. Put succinctly by Mairéad Hussey, Clinical Skills Coordinator, “These beds are too good to recycle – let’s reuse them!” The department contacted the Mid-West Simon Community and offered to donate the beds.

The Mid-West Simon Community supports individuals and families who are homeless, at risk of homelessness or experiencing housing difficulties. Its mission is “to provide people experiencing homelessness with a sense of identity and to promote meaningful engagement in a non-judgemental way. By providing emergency accommodation, permanent housing, access to food and support services, we build a sense of independence, hope and community.”

After the offer of the beds was accepted, the beds were collected and transported to a regional Simon Community facility. The height-adjustable hydraulic beds are very useful in helping some older and infirmed residents get in and out of bed and affording some clients more autonomy and independence. By providing the beds, the Department of Nursing & Midwifery was delighted to help the Simon Community address emergency accommodation needs in the regional community. For its part, the Simon Community was delighted with the beds, advising the department that they were of great use to older residents and also to Mid-West Simon staff.



**Clinical Skills Coordinator Mairéad Hussey with the team from the Mid-West Simon Community**

## UL researcher receives prestigious ERC Consolidator Grant to investigate social polarisation

Professor Mike Quayle, Department of Psychology and a funded investigator with Lero, the UL-based SFI Research Centre for Software, was awarded almost €2 million through a European Research Council (ERC) Consolidator Grant to investigate social polarisation. The award is one of only seven ERC grants bestowed in Ireland in 2023 and one of just two awarded in the social sciences and humanities domain.

Entitled ‘ID-COMPRESSION’, the project seeks to make a fundamental breakthrough in social identity, social information and social polarisation and will fund an interdisciplinary team of experts in psychology and mathematics over five years. ID-COMPRESSION is an interdisciplinary collaboration between the Department of Psychology and the Mathematics Applications Consortium for Science and Industry (MACSI) at UL.

According to Professor Quayle, “We urgently need to understand social polarisation to tackle pressing issues like climate change and in planning how to respond to future events like pandemics. This is especially important since technological advances like social media and AI seem to be accelerating and amplifying polarisation in ways we do not understand well. This ERC-funded project will explore a natural mechanism that might be the ticking heart of polarisation: social information compression. We start with the fact that society is comprised of individuals, each trying to make sense of a complex world. But where do they find their information? We know that people usually choose people like themselves to trust, and we recognise ‘our people’ by the attitudes they express.”

Professor Quayle explained further, “Since we tend to trust people much like ourselves, we are more likely to be persuaded by people who differ in a few small respects than by people with radically different perspectives. By aligning with people we already feel affinity to and by feeling affinity with those we agree with, we create tribes of like-minded others and collectively create social information that encodes our social identities. How do we build cohesive societies and simultaneously reach consensus on how to deal with contentious issues? If successful, this project will deliver a model of polarisation that will help us tackle this question. For example, urgent action on climate change needs a large majority to be convinced that it is necessary and urgent to take action, but this consensus will be much less useful if it is concentrated on partisan lines. By explaining how polarisation arises and what it achieves, this model will give us new tools for addressing our most pressing social issues.”



**Professor Mike Quayle**

### **CULTURE SHOCKED! exhibition celebrates cultural diversity**

CULTURE SHOCKED!, an exhibition comprising 50 original comic-style illustrations celebrating cultural diversity, was opened in March 2023 at the Bourne Vincent Gallery in the Foundation Building. The artworks depict authentic anecdotes of cultural misunderstandings with humour. The project was part of a series of events taking place around the campus as our institution marked its 50th anniversary. At the launch, Project Leader Dr Florence Le Baron-Earle, School of Modern Languages and Applied Linguistics, explained how the exhibition came together with the collaboration of UL staff, students and the wider community, who shared anecdotes of cross-cultural encounters. Dr Le Baron-Earle expressed her gratitude to those who contributed, including the five illustrators – Julie Alquier, Megan Brophy, Edison Cai, Thomas Cunningham and Lakeisha Lazo; the organising committee; Patricia Moriarty (UL Arts Officer); and Yvonne Davis (curator).

Dr Anca Minescu, Assistant Dean International, Faculty of Education and Health Sciences, congratulated everyone involved in bringing the intercultural project to fruition. She praised the team members for their creative energy, seeing it as a true reflection of UL’s spirit. She highlighted that the illustrations are fun but also have the academic rigour to be used for raising cross-cultural awareness in workshops. The art gallery was visited by members of staff and the public and by local schools as part of an outreach initiative facilitated by the Access Office.

### **UL is first university in Ireland to receive gold Smarter Travel award**

UL was the first university in Ireland to receive a gold award for smarter travel from the National Transport Authority (NTA). The Smarter Travel Mark recognises UL’s commitment to changing attitudes and behaviours regarding walking, cycling, public transport usage and carpooling by implementing measures that facilitate, support and encourage sustainable travel options for staff, students and visitors. Launched by Minister Eamon Ryan early in 2023 and coordinated by the NTA, the relatively new national accreditation award is a three-tier certification that recognises and celebrates organisations that support sustainable travel on the commute and beyond for their workforce and visitors, thereby resulting in a reduction in single-person car usage.

On accepting the award, UL President Professor Mey said, “This is wonderful news and achieving the Smarter Travel Mark demonstrates that University of Limerick prioritises the importance and value of sustainable travel initiatives and the associated environmental benefits.” Anne Graham, NTA CEO, said the Smarter Travel Mark recognises UL as “an organisation that prioritises the importance and value of sustainable travel initiatives and the associated environmental benefits.”

The Smarter Travel team in UL’s Buildings and Estates Department worked for some time towards achieving the rigorous NTA Smarter Travel Mark accreditation award. From e-scooter and electric bike pilot schemes to partnering with Limerick City and County Council to roll out a Dockless Bike Scheme linking the campus to Castletroy and the city centre, the UL team sought to make a difference by prioritising sustainable travel in a variety of ways.

Launched in May 2023, UL's Climate Action Roadmap charts a list of ambitious actions and projects to guide progress towards becoming carbon neutral by 2030. The Roadmap includes plans to increase the number of active transport options on campus.



**Celebrating the UL Gold Smarter Travel Award are (left to right) Kara Moore, B&E; Seán Collins, B&E; Chris Fogarty, B&E; Siobhán Hamilton, NTA; Professor Kerstin Mey, UL President; Kieran Tuite, B&E; Pat McMahon, B&E; John O'Sullivan, B&E; and Dara Dever, B&E.**

## Building better to address housing and climate crises

Six schools of architecture in Ireland are working together to transform the training of architects with sustainability in mind. According to Associate Professor Peter Carroll, Head of Architecture UL, schools are transforming their curriculums to equip architects of the future to respond to the climate and housing crises.

The three-year Building Change initiative commenced in April 2022 and is funded by the HEA's Human Capital initiative. The project seeks to embed the 17 SDGs and the Royal Institute of Architects of Ireland (RIAI) 2030 Climate Challenge into all modules in architecture courses at University College Dublin (UCD), Technological University of Dublin (TU Dublin), UL, South East Technological University, Atlantic Technological University (ATU) and Cork Centre for Architectural Education.

According to Peter Carroll, one of the main challenges in architecture education is giving agency to students so that they can deal with homelessness and extreme weather events when designing new buildings. He believes students need to be taught to look beyond current regulations (such as maximum heights allowed

for timber frame construction) in their designs so that they can be empowered to shape future policy.

Project coordinators at the participating institutions acknowledge that the upskilling of staff has been central to the Building Change project; training on topics such as life-cycle design (where use, reuse and recycling of materials reduces end-of-life waste) have been held for lecturers in all six schools of architecture.

Peter Carroll contends that Ireland has one of the strongest architectural cultures in the world – with Irish architects winning internationally recognised awards for their work – and that the Building Change adds to the strength of that culture. “The most important thing is designing a resilient future for architectural education, and we believe that by bringing all schools of architecture together to do this, it's the first initiative of its kind in the world,” he says.

## UL awarded €1.3 million in recognition of impact of Greentown project

In September 2023, UL was one of five recipients of HEA Performance Funding for its outstanding contribution to national strategic priorities and policies – the institution was awarded €1.3 million in recognition of the impact of the Greentown project. The funding awards were based on an evaluation of impact assessment case studies submitted by HEIs to the HEA. HEIs were invited to showcase a significant contribution they made towards national strategic priorities and policies. The submissions were assessed by an independent panel of expert assessors.

Run by the Research Evidence into Policy, Programmes and Practice (REPPP) project at UL, the Greentown Project works in partnership with the Department of Justice, community-based organisations and statutory agencies to reduce the influence of crime networks on children and their families.

At the awards ceremony in the South East Technological University, Carlow, Minister for Further and Higher Education, Research, Innovation and Science Simon Harris TD stated that “It is clear that our higher education institutions are having an impact across society. The Greentown project in University of Limerick has been transformational in helping children and their families in their communities. I would like to congratulate each of the successful institutions and look forward to seeing the impact of the work you are doing on education and society.”



**Dr Catherine Naughton, Dr Jane Mulcahy, Dr Eoin O'Meara Daly and Dr Seán Redmond of University of Limerick's Greentown project, which has been awarded significant Performance Funding**

In response, Dr Seán Redmond, principal investigator of the REPPP project and Adjunct Professor of Youth Justice in UL's School of Law, said, "We were delighted and humbled in the first instance for the Greentown programme to be selected as the impact case study for the whole university. This for us was recognition enough of the work we are so committed to. Winning the HEA performance award blew us away a bit really. It is a massive vote of confidence for the work but also for the way UL orientates itself as serving local communities as well as contributing to the global body of knowledge.

Dr Redmond added, "However, as researchers we are just part actors in achieving better outcomes for very vulnerable young citizens caught up in crime networks. Our performance as scientists and advisors has been so elevated by the energetic support of our funders, the statutory and voluntary agencies which have enabled the transfer of theory into practice in our two trial site locations and, ultimately, a small group of the most amazing professionals who are devoted to the young people who are so compromised by their circumstances."

## Student-led Sustainability Conversation Series

### A visit to AccessCampus inspires students to drive positive change

On 17 October 2023, students from the Global Leadership for Sustainable Development programme visited UL's AccessCampus and immersed themselves in the facility's rich history of community outreach. Led by coordinator Dónal O'Leary, AccessCampus offered invaluable insights to students on the transformative impact of education on social and economic empowerment.

During the visit, Dónal O'Leary presented an overview of AccessCampus's founding mission, highlighting its unique partnership with Limerick Enterprise Development Partnership (LEDP) to address educational disadvantage in the local community. Students learned how AccessCampus has evolved over the past two decades, catering to diverse learners ranging from primary school children to university students. Dónal shared stories of collaboration and engagement, emphasising the importance of education in breaking down barriers and unlocking potential. The visit provided students with firsthand experiences of AccessCampus's community-based initiatives, showcasing the breadth and strength of educational opportunities available to local residents.

The visit to AccessCampus served as a powerful reminder of the pivotal role of education in sustainable development. By engaging with community-based initiatives like AccessCampus, students gained a deeper understanding of the interconnectedness between education, society and sustainability. Inspired by their experiences, the students are now motivated to advocate for equitable access to education and drive positive change in their communities.

### Giving Voice

As Head of Architecture at UL, I am steering 'Building Change', a national collaborative project between all six schools of architecture in the Republic of Ireland, to radically transform the professional curricula in architecture. Funded by the Higher Education Authority, the project is underpinned by the SDGs and Ireland's Housing for All and Climate Action plans to empower future graduates to meet the ongoing challenges of the housing and climate crises. Carbon neutral construction, embodied energy, the circular economy, design for disassembly, adaptive governance, climate resilience, urban design and spatial and ecological justice are being prioritised in the transformation of our curriculum here at University of Limerick.

#### **Peter Carroll**

Associate Professor and Head of Architecture UL, School of Architecture and Product Design



**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**Ensure sustainable  
consumption  
and production  
patterns.**

## UL collaborates on sustainable aviation fuel research project

UL is to collaborate with Trinity College Dublin and Aircraft Leasing Ireland (ALI) on an exciting research project that focuses on the production of sustainable aviation fuel. ALI, the Ibec group representing the aircraft leasing industry, announced funding for the new research project during the sector's second Global Aviation Sustainability Day Conference at the Convention Centre Dublin on 20 November 2023.

A collaboration between UL (through the Bernal Institute) and Trinity College and set to start in 2024, the four-year research project will examine realistic avenues for manufacturing sustainable aviation fuel (SAF) in Ireland. The primary focus of the study will be to identify how Ireland can establish a sustainable and viable supply chain for SAF raw materials while also proposing scenarios in which a substantial quantity of SAF can be produced efficiently on the island. The project will be led by Associate Professor Stephen Dooley and Assistant Professor Mohammad Reza Ghanni of Trinity College Dublin alongside Professor Luuk Van der Wielen and Professor Vivek Ranade of the Bernal Institute.

The project builds on engineering and energy systems' work under the direction of Professor Van der Wielen on the development of SAF manufacturing in various jurisdictions with leading SAF developers. Professor Van der Wielen explained, "We believe that Ireland has significant potential to develop a competitive SAF supply chain, especially when it embraces the Atlantic Offshore Renewable (Wind) Energy Plan and a proactive Circular Bioeconomy Agenda as set out by the Shannon Estuary Economic Taskforce in its July 2023 report. This study will aim to help realise this potential by analysing realistic SAF production scenarios on the island of Ireland."

Marie-Louise Kelly, Chairperson of ALI, added, "Increasing SAF supply is a critical global challenge that is key to unlocking a sustainable future for the aviation sector. Our members are determined to help position Ireland as a leader in the sector by investing in research initiatives that will identify what's needed for the scale-up of SAF. The research will give Ireland the opportunity to establish this leadership position in SAF production by mapping out the key data needed to establish effective supply chains."

Elizabeth Bowen, newly appointed Director of ALI, added, "Ireland is well positioned to become a global centre of excellence for the production of

SAF given our sophisticated agriculture industry and plans to harness large amounts of renewable offshore wind electricity. Not only will this be vital from a sustainability perspective but will also create significant economic opportunities for Ireland across the regions. The question is whether the details add up in the right way to make SAF production in Ireland both sustainable and profitable."

Associate Professor Stephen Dooley of Trinity College Dublin added, "Sustainable aviation fuel is critical to delivering the industry's ambitious net-zero targets for 2050. If we are to meet the EU-mandated targets, we are facing a race to find locations and processes that can produce SAF – something that this research is committed to unlocking."

## SeaFEED: Replacing zinc oxide with an alternative pig feed ingredient

SeaFEED is a cross-boarder (Northern Ireland and the Republic of Ireland) study that aims to develop an alternative pig feed ingredient that can replace zinc oxide, which has been banned in high doses in the EU since 2022; the maximum permitted dose of dietary zinc is now 150ppm (parts per million). The use of higher levels of zinc oxide is no longer acceptable in pig feed diets. The study will investigate the use of Irish seaweed ingredients (phlorotannin extractions) as an alternative to zinc oxide, which was previously used as a therapeutic additive in piglet diets to prevent diarrhoea, reduce the use of antibiotics and reduce animal disease.

In Ireland, the pig industry is the third largest livestock sector after beef and dairy. The study takes an interdisciplinary approach that looks at the entire value chain from harvesting and collecting seaweed biomass to downstream processing of seaweed biomass and the green separation technologies used to produce seaweed feed ingredients with antimicrobial properties. It also investigates the overall environmental impact of using seaweeds in the animal feed industry and the green credentials of the drying and separation processes. It is envisaged that this research will lead to the development of a more sustainable all-island circular economy and improve agricultural discharges and water quality.

This a four-year, €1.2, project funded by the Department of Agriculture, Food and the Marine under its Instruments Programme to enable researchers (PhDs and postdocs) to explore topics to improve the sustainability of the critical all-island agri-food sector.



This collaborative study is led by UL's Professor Gavin Walker (Chemical Sciences, Bernal Institute) with academic collaborators from the Atlantic Technological University Sligo, Queen's University Belfast and DEFRA (Northern Ireland). The project also has partnerships with Irish SME seaweed harvesters and processors primarily based along the western seaboard.

As part of the project, UL PhD candidate Negin Ammari's research "will focus on developing greener methods to dry seaweed extracts and the isolation of seaweed bioactives with antimicrobial activity". UL PhD candidate Ahmad Habeeb Allah's contribution to the project will be to "conduct an environmental/cost analysis for the novel process that is being developed".

### Design@UL50: Innovative student projects showcased at UL exhibition

The Design@UL50 exhibition showcases works from 79 of the School of Design's most talented and innovative final-year Architecture and Product Design and Technology students.

The wide range of projects on display combines creative problem-solving with sustainable practices and includes initiatives that aim to maximise quality time between parents and their kids, reduce food waste in restaurants, develop sustainable camping solutions, encourage reusable product packaging, and reduce fast fashion.

At the launch of the exhibition, Professor Seán Arkins, Executive Dean of the Faculty of Science and Engineering, said, "This exhibition is a showcase for University of Limerick and our students' continued commitment to creating a brighter, more sustainable future. Through Design@UL50, we hope to spark a conversation about how technology and innovation can positively impact our world." Professor Merritt Bucholz, Head of the School of Design, added, "In Design@UL50, architecture and product design students come together to tackle the challenges our society faces head-on. Together, these disciplines have the power to shape environments and futures that embrace diversity, sustainability and resilience. Whether it's revitalising neighbourhoods, reimagining public spaces or creating innovative products, the exhibited projects inspire creativity and drive us towards a more inclusive and harmonious society."



**Product Design and Technology student James Moran pictured with his project Smart Buoy at the Design@UL50 exhibition.**

Three other projects are illustrated on the following page.

### Creating a plastic-free campus: Glucksman Library leads the change

The Glucksman Library is strongly committed to contributing to UL's efforts to become a sustainable university. In 2019, the Library launched the Green Library campaign, which aims to eliminate single-use plastics from the library. Since then, the Library has discouraged the use of single-use containers, installed four water fountains and took steps to ensure catering providers use only reusable or recycled crockery, cutlery and containers at events where catering is offered.

To support this behavioural shift, reusable cups and water bottles can be purchased on campus from the Library information desk, the Visitor Shop, and some of the campus cafés – many of which offer a discount on hot beverages if you supply your own (clean) reusable cup. In addition to further reducing single-use plastics, there are four water fountains in the Library where you can fill up your water bottle for free. A count taken in August 2024 showed that Library users had refilled 2,293,070 bottles since the installation of the fountains, and there is an ongoing campaign to raise this figure to three million refills.

The Library's success in sustainability relies heavily on community participation. Louise O'Shea, Library Spaces Manager and campaign leader, notes, "The library is one of the busiest buildings on campus, and small actions from students and staff can collectively make a big impact". Through a determined effort, the Glucksman Library is working to manifest a greener, more sustainable world, and it invites everyone to be part of that journey.

## Design@UL50 Projects

**PRODUCT DESIGN & TECHNOLOGY**

**ESPER** Dry and press coffee grounds into functional briquettes.



**WHAT?**  
ESPER is a coffee ground preservation system, allowing for the re-utilisation of used grounds to be transformed into briquettes, for a variety of uses, from a body scrub to an alternative fuel for fires.

**WHY?**  
Used coffee grounds are often an afterthought in coffee brewing. They are usually left for waste, so why not utilise them in a new product made from what is often thrown away? ESPER is a coffee ground preservation system, allowing for the re-utilisation of used grounds to be transformed into briquettes, for a variety of uses, from a body scrub to an alternative fuel for fires.

**ESPER** [CINONASH@GMAIL.COM](mailto:CINONASH@GMAIL.COM)

The coffee industry has a lot of problems. With more rising issues in the years to come, I wanted to use this project to try and discover more sustainable practices or circular systems that could be explored and applied to the industry. Used coffee grounds are often an afterthought in coffee brewing. They are usually left for waste, so why not utilise them in a new product made from what is often thrown away? ESPER is a coffee ground preservation system, allowing for the re-utilisation of used grounds to be transformed into briquettes, for a variety of uses, from a body scrub to an alternative fuel for fires.

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**PRODUCT DESIGN & TECHNOLOGY**

**Alter Eco** Elevate Your Wardrobe, Minimise Your Impact.



**Alter Eco** is a kit of 5 clothing modification products. It allows for temporary adjustments to clothing, transforming them to your personal style. With Alter Eco, you can reduce fashion waste, keep up with trends affordably, and even swap clothes with friends.

**Alter Eco** [CIARA.MOYNIHAN@ME.COM](mailto:CIARA.MOYNIHAN@ME.COM)

Fast fashion is growing rapidly and repairing garments is a dying skill. The adjustment of damaged or ill-fitting clothing for re-wear is uncommon amongst people in today's world when fast fashion is a cheaper and easier option. Quality and durability of clothing has seen a steady decline and fall. Today it is no longer cheaper to make your own clothes as it used to be. It requires immense skill to do so. My product, Alter Eco, is a kit of 5 clothing modification products. It allows for temporary adjustments to clothing, transforming them to your personal style. With Alter Eco, you can reduce fashion waste, keep up with trends affordably, and even swap clothes with friends.

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**PRODUCT DESIGN & TECHNOLOGY**

**oasis** Reduce visual distractions in working and learning environments.




**OASIS** [JOEL.OLYMPIO16@GMAIL.COM](mailto:JOEL.OLYMPIO16@GMAIL.COM)

People with ADHD or anyone who finds themselves easily distracted in certain busy environments can struggle to focus, both due to auditory and visual noise. My concept aims to visually adjust the environment to the user in a wearable form factor. It is particularly designed for open and collaborative spaces such as offices and classrooms. The idea is to give the user a sense of a closed space anywhere, anytime. The main feature is adjustable dimming using electrochromic film, which will allow the user to switch from a clear transparent state to varying levels of 'Vignette' state, which is dimmed peripheral vision.

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## Student-led Sustainability Conversation Series

### Scaling sustainably: A conversation on **SDG 12** with Chris Kelly

On 11 April 2023, Chris Kelly, CEO of Tracworx, led a discussion on SDG 12: Responsible Consumption and Production. Chris shared his journey in sustainable innovation and the importance of integrating environmental and economic considerations in business practices. The session inspired attendees to embrace sustainable solutions in their professional and personal lives.

## Student-led Sustainability Workshops

### Basket weaving workshop: Exploring traditional crafts

On 20 March 2023, a basket weaving workshop offered students hands-on experience in traditional crafting techniques. The session highlighted the cultural heritage of basket weaving and its role in sustainable living.

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### Textile repair workshop: promoting sustainable practices

On 17 April 2023, a textile repair workshop taught participants key repair techniques to extend the lifespan of their clothing. The session promoted sustainability and resourcefulness by reducing waste and encouraging garment repair.

### Giving Voice

Sustainability is pivotal in shaping our future. Individually, we are adopting more sustainable habits, such as clothing swaps, and as a community, we're embracing innovative, collaborative approaches to address sustainability challenges. The role of software is a valuable tool for the sustainable path forward. By integrating advanced software solutions, we can enhance efficiency and drive significant environmental improvements across various sectors. However, a major challenge is ensuring these technologies are accessible to all, making sustainability a shared responsibility and inclusive for everyone.

#### **Karl Gilmartin**

Year 2, BSc Immersive Software Engineering

**13** CLIMATE  
ACTION



**Take urgent action  
to combat climate  
change and  
its impacts.**

## UL's Climate Action Roadmap: A bold vision for 2030

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In alignment with the Public Sector Climate Action Mandate 2023, approved by the Government in May 2023, UL is committed to playing its part in Ireland's climate leadership. The mandate requires public sector bodies to demonstrate responsibility in climate action, prompting UL to develop and implement a detailed Climate Action Roadmap for 2030.

Co-created by the UL Centre for Sustainable Futures & Innovation (CSFI) and UL's Buildings & Estates Division, the roadmap outlines the University's journey towards carbon neutrality by 2030. Reaching carbon neutrality by 2030 is an ambitious goal, and UL acknowledges that it will require systemic changes and sustained effort. In line with the Public Sector Climate Action mandate, our strategy focuses on reducing direct and indirect emissions through practical and carefully planned interventions, including:

1. **Energy efficiency:** By gradually upgrading our campus infrastructure with energy-efficient technologies, such as LED lighting, improved insulation and advanced heating systems. These upgrades, while challenging, are essential to reduce our overall energy consumption and meet the Government's targets for public sector bodies.
2. **Transition to renewable energy:** By transitioning to renewable energy sources. We are committed to steadily increasing our use of renewable energy, both through on-campus installations and by sourcing green energy externally, in accordance with national climate goals.
3. **Sustainable transport:** By promoting sustainable transport options. UL aims to encourage walking, cycling and the use of public transport while recognising the need for ongoing efforts to support these changes within our community, as required by the Government's mandate for reducing transport-related emissions.
4. **Waste reduction:** By focusing on reducing waste, increasing reuse and enhancing recycling efforts. This requires participation from everyone on campus and aligns with the public sector's commitment to reducing environmental impact.

In addition to reducing emissions, we are taking steps to increase carbon sequestration on campus, although we acknowledge the complexities involved. This includes enhancing green spaces through tree planting and rewilding initiatives. These efforts contribute to carbon absorption, biodiversity and the overall health of our environment in line with the Government's wider climate action objectives.

Fostering a culture of sustainability will require ongoing education, awareness and engagement initiatives. By involving students, staff and stakeholders, we aim to create a movement towards sustainability, knowing that this will be an evolving process with its own set of challenges. Andrea Deverell, Director of the Centre for Sustainable Futures and Innovation at UL, recognises that "the success of our Climate Action Roadmap hinges on the collective efforts of our entire community". This cultural shift is essential for meeting the targets set out in the Public Sector Climate Action mandate.

As UL works towards its 2030 goal, UL strategies will need to be continually monitored, adjusted and improved. According to Andrea, "The road to carbon neutrality is not straightforward, and we must be prepared to learn and adapt as we go. Our Climate Action Roadmap is a living document, intended to evolve as new challenges and opportunities arise, in line with the ongoing requirements of the Public Sector Climate Action mandate."

UL is dedicated to doing its part in the fight against climate change, and we invite our community to join us on this journey. Together, we can make steady progress towards a more sustainable future for our campus, our region and beyond, even as we acknowledge the difficulties that lie ahead.

## Towards Shannon Scheme 2.0: Where circular bioeconomy meets offshore and onshore renewables

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During 2022/23, the Shannon Estuary Economic Taskforce developed an integral plan and recommendations for the sustainable economic development of the Irish Atlantic coast. The plan essentially aims to harness potential offshore wind and onshore renewable energy, creating value-added routes to market for sustainable energy and e-fuels industries, a carbon-neutral agri-food sector, circular materials, and the energy-intensive data storage and processing industries.

The Taskforce's plan builds upon the Strategy 2041 Review (Masterplan) of the Shannon Foynes Port Company, outlining a phased 30 GW floating offshore wind energy development towards 2050 with onshore industrial and residential integration. The plan was launched in the early phase of the Taskforce's work. Along with colleagues from UL, Professor Luuk van der Wielen, then Director of the Bernal Institute, significantly contributed to the Masterplan development and was a member of the Taskforce. Professor van der Wielen played an important role in quantifying sustainable economic growth potential and developing research, development and innovation opportunities. The analysis and concrete recommendations were included in the final report, which was launched by An Taoiseach Leo Varadkar and several cabinet ministers on 8 July 2023 at ESB's Hydrodam in Ardnacrusha. The Taskforce's plan was referred to as Shannon Scheme 2.0 in recognition of the daring Shannon Scheme of the 1920s, which transformed the Irish economy through electrification.

The commercial development of Shannon Scheme 2.0 is evidently a project of European-scale dimensions. With a projected investment of €150 billion, the creation of an estimated 30,000 to 50,000 jobs, and the anticipated significant impact on the Shannon Estuary and coastal ecosystems, industries and communities will occur gradually as technology, planning permissions, labour force, risk management and investor confidence develop further. For a regional academic player like UL, the plan offers unparalleled opportunities, particularly where the Irish circular bioeconomy intersects with the development of offshore and onshore renewable energy.

Professor van der Wielen, who will finish his term as Director of Bernal in January 2024, is one of several UL staff members devoting significant time to building a project portfolio that supports offshore floating wind energy development. These projects include the Dutch-Irish €13 million programme HybridLabs and a number of route-to-market technology development projects in the field of circular bioeconomy, such as process development for biogenic feedstocks from agricultural and forestry residues (BioValue); sustainable aviation fuels manufacturing with Professor Vivek Ranade and colleagues from Trinity College Dublin; alternative protein foods; and materials circularity.

## Limerick City and County Council and UL Journalism collaborate on climate change project

Along with the Journalism department at UL's School of English, Irish, and Communication and a multidisciplinary team of partners, Limerick City and County Council won €249,000 from the government-backed Creative Climate Action Fund for a new project on climate change. In collaboration with the Department of Environment, Climate and Communications and the Department of the Taoiseach, the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media launched the Creative Climate Action Fund II in 2023. The initiative supports creative, cultural and artistic projects that build awareness around climate change and empower citizens to make meaningful behavioural changes.

Entitled 'Sólta Glasa', the Limerick project aims to empower collaborations between community groups and creative partners to examine and tell stories about decarbonisation efforts in their communities. Sólta Glasa builds on the successful implementation of the Creative Climate Action collaborative project Decarbonising Together, which was delivered in Limerick in 2022.

The importance of sharing and amplifying the community creative stories to inspire other communities and enable local behaviour change is a critical aspect of the project. Led by Dr Fergal Quinn, the Journalism department will incorporate a storytelling and data visualisation pillar into the project to create a holistic narrative of the collaborations in partnership with the community and creative industry/creative arts practitioners. This resource will collate collaboration stories and create content that can be used to amplify the project locally, nationally and internationally.

Dr Quinn, who leads the recently launched Professional Diploma in Data Communications in UL, said, "Our aim is to pull together data storytellers and journalism teachers to help empower community representatives to better tell the story of what they are doing in a way that can inspire others to help achieve climate change goals. This project is a great means to encourage community journalism to combat climate change in a very real and relatable sense."

It is anticipated that there will be seven outputs from the collaborations in a range of creative mediums and skills. The collaborations will support learning and doing together and will use, as appropriate, Limerick's Citizen Innovation Lab as a collaboration platform to create impact through empowering communities to decarbonise Limerick by 2050.

A scientific evidence-based approach to creative practice in climate projects is an important aspect of Síolta Glasa, and all collaborations will be supported by a Science Advisory Group convened by the Mary Immaculate College Geography Department. The Science Advisory Group will provide advice and links to scientific expertise and knowledge within their organisations, which will underpin the decarbonisation journey of the collaborations based in science and ensure there is sound data and evidence to inform the projects.

### **'In Search of Hy-Brasil': SAUL staff co-curate Ireland @ Venice Architecture Biennale 2023**

The current world order of endless expansion, extraction and exploitation has passed. All the evidence confirms that this approach does not accord with our everyday human needs or with the life of the planet. To transform redundant ways of living, we must decolonise our minds and reconfigure new ways of inhabiting the world.

Geographically remote and mainly peripheral to contemporary discourse, our islands are by necessity robust, resilient and inventive places. They have long been a significant crucible for language, music and song bound up with lived experience, and they support a rich and unique biodiversity. Their small communities, existing on the margins of viability, have embedded in their social order and cultural memory a deep knowledge and understanding of the ocean, land and resource management and the practice of maintaining sustainable environments. They have long thrived successfully and creatively with less while building and nurturing a rich and complex ecology.

We are an island nation facing an uncertain future. The challenges of climate change, renewable energy, ethical food production and biodiversity must be met quickly and with purpose, renewing the lost equilibrium between ourselves and the natural world. In making this adjustment, our islands' inventiveness in the face of adversity and creativity in response to having less provides us with the necessary tools and narratives to inspire more sustainable ways of living.

In Ireland, myth, language and landscape remain intrinsically linked. The Irish language preserves the deep resonances that exist between humankind and the natural world. Hy-Brasil, a mythical Atlantic island in the cultural memory, embodies the possibility of reimagining the island of Ireland and its ocean territory.

In response to the theme of the Venice Architecture Biennale 2023 – The Laboratory of the Future – Associate Professor Peter Carroll and Professor Elizabeth Hatz of the School of Architecture at UL curated an exhibition entitled 'In Search of Hy-Brasil'. Presenting fieldwork from Ireland's remote islands, the exhibition investigated the islands' diverse cultures, communities and experiences. Deriving from an intense engagement with the islands of Ireland, the installation is a direct provocation to all of us to reimagine the vast combined territory of land and ocean we call our home.

The curators studied the island landscapes of Inis Meáin (Inishmaan), UNESCO World Heritage site Sceilig Mhicíl (Skellig Michael) and Cliara (Clare Island) through drawing, survey, film, sound, model, mapping and story. The installation offered visitors an immersive experience that shifted between the local and the territorial, the micro and the macro, to make explicit the implicit intelligence of these most remarkable places.

### **Panel discussion of literary portrayals of climate change and sustainability**

How exactly do contemporary authors relate to the experience of a planet in crisis? What different or differing approaches can be found? What characters, perspectives and voices? What distinctions are noticeable across borders, languages, cultures? What role can university-level language teaching play in raising awareness for these matters in a constructive and critical way?

To start a conversation on these questions, an event on 20 April 2023 aimed to bring together scholars who are passionate about the many expressions of environmental topics in contemporary fiction. Chaired by Dr Laura Linares (the Spanish Section of the School of English, Irish, and Communication), panelists Professor Joachim Fischer, Anne Nospickel and Clarisa Novello led a series of short presentations on ongoing research projects, which was followed by a general discussion and Q&A session. While the topics ranged from dystopian visions of the near future (Kim Stanley Robinson's *The Ministry for the Future*)

to gendered power relations (Karen Duve's *Macht*) and displaced family narratives (Andreas Wagner's *Jahresringe*), it was not just the sheer diversity of environmental material that proved to be highly instructive to the audience but also the variety and adaptability of the described approaches.

### Sustainability reporting at German universities by Philipp Nußbaum

Measuring the climate impact of various societal and economic agents and comparing these findings within a common framework has always been challenging to climate policymakers. While the establishment of the SDGs has proven to be a first step, the implementation of the goals arguably continues to be hampered by an incongruity of different assessment practices.

To help tackle these issues at university level, Philipp Nußbaum, research and project manager at the Institute for Higher Education Development in Hannover, has been involved in several projects focused on analysing the practices of sustainability reporting at German universities. Philipp reported on the results of the projects on 15 February 2023 at UL in a session chaired by Andrea Deverell, Director of the Centre for Sustainable Futures and Innovation. Philipp particularly stressed the necessity for cross-country dialogue and action in his online presentation.

The talk gave rise to a subsequent publication entitled *Ein irisch-deutscher Ansatz zur Diskussion von Nachhaltigkeit und Nachhaltigkeitsberichten im Hochschulkontext* by Gisela Holfter, Andrea Deverell and Philipp Nußbaum, published in *HIS-HE:Magazin*. (The English language version was published as *An Irish-German Approach to Discussing Sustainability Reporting in Higher Education*, 5 May 2023.)



**Philipp Nußbaum**  
of the Institute for  
Higher Education  
Development,  
Hannover

### John Gormley's personal journey into environmentalism

Former Minister for the Environment, Heritage and Local Government and former Leader of the Green Party John Gormley was the guest lecturer at a special event chaired by UL President Professor Kerstin Mey on 21 March 2023. In his presentation entitled 'A Personal Journey into Environmentalism', John showed how his journey is intimately linked to the Limerick landscape he grew up in and how it was shaped by his experiences in 1980s' industrial Germany (as a worker and later as a student in Freiburg University).

Looking back on a lifetime in Irish green politics, John Gormley is a prime example of the intertwining of personal history, an awareness of place, and a green policy rooted in both. Spanning more than a half a century, John's recollections covered a timeline that saw major changes all over Europe. Throughout his talk and the subsequent discussion, he highlighted the role his time in Germany played on shaping his own perception of environmental matters and the links that exist between the German and Irish green parties.



**Maurice Carr, John Gormley and Noel McCarthy** at Mr Gormley's guest lecture at UL in March 2023

### CycUL: The affordable student bike rental scheme

The CycUL student bike rental scheme aims to make travel affordable to students during a cost-of-living crisis while, at the same time, reducing carbon footprint by minimising the need for students to drive to college. Furthermore, it is hoped that cycling to college will help students meet national recommended weekly levels of physical activity.



Launched in October 2023, CycUL had a great response from students. With requests for bike rentals from over 250 students, the fleet of 78 bikes, at a cost of €30 per semester, was fully availed of. The scheme aligns with UL's Climate Action Roadmap (launched in May 2023), the goal of which is for the University to become carbon neutral by 2030. Congestion and the carbon footprint on campus have already started to reduce.

A Healthy UL initiative, CycUL is the result of a successful Devolved Grant Submission and is supported by our colleagues in ISCycle, Buildings and Estates, Envirocom, and the Centre of Future and Foresights. A whole-campus approach has been taken, and Healthy UL is very grateful for this ongoing support.

To support cycling on campus, UL runs free maintenance classes for students each semester, and a bike mechanic operates on Tuesdays in the Student Life Courtyard as part of the weekly Farmers' Market. This initiative aligns with the Healthy UL Framework and National Healthy Campus Charter and Framework, which seek to embed health and wellbeing within the culture and community of UL.

According to one student who participated in the bike rental scheme, "CycUL is a great programme, the bikes are easy to use and the staff running the programme are easy to reach. As an international student who doesn't have access to a vehicle, CycUL makes getting around cheap and reliable! I would encourage anyone to use this programme!"

Healthy UL Manager Sarah Kennedy said, "Sustainability is a key focus for UL, and this project shows our dedication to creating a healthy campus for people and planet alike. The Healthy UL team is striving to make the healthier choice the easier choice and as affordable as possible, and we are excited about the benefits that the CycUL scheme will offer, not only for active travel but also in cutting congestion and the carbon footprint of the UL community."



CycUL student bike rental scheme

## Sustainability activities of the Centre for Irish-German Studies

A red thread running through the 2023 programme for the Centre for Irish-German Studies (CIGS) was, in fact, green. The first of four events relating to sustainability welcomed David Donoghue, former Irish ambassador to Germany and member of the CIGS Advisory Board, to UL on 7 February 2023 as guest presenter at an event entitled 'The Story Behind the UN Sustainable Development Goals'. David was one of the co-facilitators (with Kenya) for the UN negotiations during his time as Permanent Representative of Ireland to the United Nations from 2013 to 2017 in New York, and his work led to the adoption of the 2030 Agenda for Sustainable Development in 2015.

In his talk at the event, David shared with his audience a detailed and entertaining account of the drafting of the SDGs, the object of which was to shed light on joint climate policy as something of global dimension.



David Donoghue presents at a CIGS event on the SDGs on 7 February 2023 at UL

## UL campus to be first study site for ISCycle project

An innovative new research project on e-bikes for staff was launched at UL by President Professor Kerstin Mey on 20 January 2023. Entitled 'ISCycle' (Inclusive Sustainable Cycling), the project focuses on how e-bikes can change transport behaviours to improve health and protect the environment. Funded by the Sustainable Energy Authority of Ireland (SEAI) and the Department of Transport as part of the SEAI National Energy Research, Development and Demonstration Funding Programme, ISCycle is led by Dr James Green, School of Allied Health and Physical Activity for Health Research Centre, Health Research Institute, UL.

Over 100 staff members began participating in the project in 2023. Different types of e-bike were lent out, including cargo e-bikes, which enable people to bring kids to school; folding e-bikes, which enable others to take their bike onto different transport modes, such as buses and trains; and commuter e-bikes, which enable individuals to cycle to work over a range of distances. The study will inform the researchers whether or not people use e-bikes for transport when they are made available. At the same time, participants in the project get to experience a new way of moving around more sustainably.

Working across physical activity, health psychology, sustainable engineering and economics, the research team will examine how an e-bike loan could impact the overwhelming dominance of the private car, which, according to the 2019 CSO National Travel Survey, accounts for nearly three quarters of all journeys made in Ireland.

Designed as an inclusive cycling intervention, ISCycle will be rolled out in phases across workplace settings in Limerick city, beginning with UL as the first study site. The study will continue throughout 2023 and 2024, with preliminary findings available early in 2025. Participants in the research study will be lent an e-bike for 4 to 12 weeks while their use of different transport modes is measured. As well as receiving cycling skills training, participants will be offered cycling accessories such as raingear, child seats and bike trailers.

“Participants will be expected to cycle more and drive less than people who are not loaned an e-bike, and we will be trying to understand the environmental implications of growing e-bike ownership in Ireland,” explained Dr Green. “Scientists, engineers and economists on the team will study the impact on electrical waste recycling systems and long-term consequences for a circular economy. E-bikes can reduce congestion, reduce CO2 emissions and increase physical activity. They have advantages over other forms of electric micro mobility, such as scooters, due to their ability to carry cargo and people and contribute to physical activity targets. Compared to electric cars, e-bikes are cheaper, more resource efficient, and do not contribute to congestion. People who try it are often surprised at how easy it is to bike, especially with an e-bike, and how much more range and flexibility they have,” Dr Green added.

By driving less and cycling more, we can become more physically active, which is good for our health. Assistance from the electric motor on an e-bike can provide more opportunities for active travel among people who need to cover longer distances, carry passengers or heavy cargo, or cycle through hilly areas.



**Milford National School pupils Stella Green, Carrie Green and Eleanor Foley with Dr James Green at the launch of the ISCycle project**

## Environment Week spotlight: Limerick City and County Council's environmental initiatives

Environment Week holds a special significance within the Global Leadership for Sustainable Development programme, emphasising the critical role of environmental stewardship in sustainable development. On 10 October 2023, students had the privilege of hosting Sinead McDonnell, Environment Awareness Officer for Limerick City and County Council. Sinead's talk focused on the Council's environmental initiatives and associated challenges.

As students gathered for Environment Week, the spotlight turned to Limerick City and County Council's efforts in environmental conservation and awareness. With her wealth of experience as Environment Awareness Officer, Sinead shed light on the Council's multifaceted approach to environmental sustainability. She discussed the Council's ongoing initiatives, ranging from waste management and biodiversity conservation to climate change mitigation. She highlighted the importance of community engagement in driving environmental action, emphasising the need for collective efforts to address pressing environmental challenges.

During the session, Sinead candidly addressed the challenges faced by the Council in promoting environmental awareness and implementing sustainable practices. From resource constraints to public apathy, she spoke about the complexities of environmental advocacy at the local level. The session served as a call to action for students to prioritise environmental awareness and activism in their journey towards sustainability leadership.

Environment Week highlights the interconnectedness between environmental sustainability and broader societal goals. By engaging with local stakeholders like Limerick City and County Council, students gain a deeper understanding of the environmental issues facing their communities and are empowered to advocate for environmental stewardship and drive positive change.

### Discovering sustainability: Exploring UL's green initiatives

Sustainability is more than just a concept – it's a way of life at UL. Guided by UL's sustainability expert Professor JJ Leahy, students from the Global Leadership for Sustainable Development programme embarked on an immersive tour of the University's green initiatives on 26 September 2023. The tour offered students a firsthand glimpse into UL's commitment to environmental stewardship, showcasing a diverse range of projects aimed at promoting sustainability on campus and highlighting the complexities of sustainability implementation and the importance of community engagement.

From the student bike scheme to the bat house, students had the opportunity to explore a variety of sustainability initiatives across campus. JJ provided expert commentary on the challenges of implementing and maintaining such projects and emphasised the need for innovation and collaboration in sustainability efforts.

With visits to the creeks and aquatic life, apple orchard, riverbank walk, beehives and pollinator field, the tour also highlighted UL's efforts to promote biodiversity. Students learned about the interconnectedness between biodiversity conservation and sustainability.

By underscoring the transformative power of experiential learning in shaping sustainable mindsets and behaviours, the sustainability tour with JJ Leahy inspired students to become champions of environmental stewardship in their communities. Armed with insights from the tour, students pledged to advocate for sustainability initiatives and drive positive change in their spheres of influence.

### AHSS embraces sustainability in 2023 strategic plan launch

In 2023, UL's Faculty of Arts, Humanities and Social Sciences (AHSS) launched its Strategic Plan 2023-2027, which included a clear focus on sustainability and global responsibility. Central to the plan is the concept of 'green internationalisation', which seeks to reduce the faculty's carbon footprint while maintaining its commitment to global engagement. Key initiatives include virtual exchange programmes, the expansion of Erasmus mobility and the development of sustainable research collaborations. These efforts aim to provide students and staff with international opportunities that align with sustainable practices.

The plan also emphasises the importance of aligning research with the SDGs to address global challenges such as climate action, quality education and reduced inequalities. AHSS prioritises interdisciplinary research that contributes to academic knowledge and provides practical solutions to societal and environmental issues.

At the regional level, AHSS is committed to fostering societal and economic development through cultural and educational partnerships. Key elements of this vision include engaging with local communities and providing lifelong learning opportunities with a view to promoting sustainability through inclusive, accessible education for all.

Through these initiatives, AHSS aims to not only contribute to global sustainability but also enhance its role as a leader in shaping a more inclusive and environmentally responsible future.

## Student-led Sustainability Conversation Series

### Navigating eco-anxiety: Mapping climate concerns

On 8 March 2023, UL Student Sustainability member Matthew Murray led a workshop entitled 'Mapping Your Eco-Anxiety'. The session provided students with tools to understand and manage anxieties related to climate change. Through activities and discussions, participants explored their emotional responses and developed strategies for resilience. The workshop fostered a supportive community, empowering students to engage in climate action and sustainability efforts.

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### Green Campus Week panel discussions: Fostering collaboration among UL student societies

During Green Campus Week 2023, UL Student Sustainability hosted two panel discussions to promote sustainability collaboration among student societies. On 7 March, representatives from various societies shared their sustainability initiatives, inspiring ideas for joint projects. On 9 March, a second panel focused on collective action for sustainability, emphasising the interconnectedness of social justice, business innovation and healthcare. Both discussions energised participants to work together towards a more sustainable future.

## Student-led Sustainability Workshops

### Sustainable Travel workshop: Navigating responsible travel

On 9 March 2023, Enola Bouvenot led a workshop on sustainable travel, providing practical tips for reducing the environmental impact of travel. Participants learned how to make conscious travel choices that support sustainability.

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### Harmony of mind and nature: Biodiversity and meditation workshop at UL

On 27 April 2023, UL students explored the connection between biodiversity and meditation in a workshop co-hosted by UL Student Sustainability and UL Student Life. The event blended mindfulness with environmental awareness, encouraging participants to reconnect with nature while managing study stress. A brief talk on biodiversity was followed by a meditation session, thereby creating a tranquil space for students to reflect and recharge. The objective of this unique experience was to deepen the participants' respect for the natural world and inspire a commitment to sustainability.

### Giving Voice

I have spent my career working for the internationalisation of higher education in the belief that by fostering an inclusive multinational learning environment, universities can better prepare their students to become socially responsible global citizens. As our understanding of the SDGs has become more firmly embedded, I have realised that internationalisation also has negative side-effects – notably, the carbon footprint created by international student mobility and the structural global inequalities perpetuated by international brain drain. For these reasons, we have been working hard to reimagine our internationalisation strategy to make it more sustainable and more focused on promoting mutually beneficial North-South collaboration.

**Professor Nigel Healey**

Vice President Global and Community Engagement

### Giving Voice

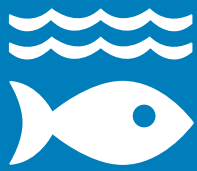
In August 2023, the town of Lahaina, on my home island of Maui, Hawaii, was completely wiped off the map by a catastrophic wildfire. Issues such as climate change, ecological degradation, poor management of water resources and unsustainable development were all contributing factors to the disaster. While I have always been concerned about sustainability, the loss of a vibrant community that I knew so well has shown me the urgency of doing everything we can to change course, wherever we are in the world.

**Leianna Padgett**

Sustainability Funding Officer, Centre for Sustainable Futures and Innovation



14 LIFE  
BELOW WATER



**Conserve and  
sustainably use**  
the oceans, seas and  
marine resources  
for sustainable  
development.

## **Giving voice to the Shannon: Using interactive technologies to support restoration practices in the river**

UL's Faculty of Science and Engineering initiated a new environmental sustainability project to help revitalise the River Shannon. The four-year research and design project, which is being implemented in the Department of Computer Science and Information Systems (CSIS) by Chidi Usanga, aims to digitally enable and support communication, interaction and understanding between humans and the natural entities in and around the River Shannon for more effective and sustainable interventions against the loss of biodiversity and climate change. The project is supervised by HRI member Dr Cristiano Storni of CSIS and Professor Ken Byrne of the Department of Biological Sciences.

Chidi Usanga had worked for two decades on monitoring the environment and promoting corporate responsibility among multinational energy corporations, industry regulators and other stakeholders in Nigeria's oil and gas sector and has had experience of using digital technologies to clean up and remediate polluted waterways and fishing grounds.

The River Shannon is home to a wide range of wildlife and other natural entities. The river and the life within it (fish, seaweed, etc.) cannot talk. They cannot express themselves, so we have little or no clue as to their health status at any given time and are often at a loss in terms of what we can do to improve their conditions or how we can get feedback from them on our interventions. Any available scientific knowledge or data that can point towards such facts are usually outside our reach or may appear meaningless to us. While the tendency of humans is to deny that such natural entities are suffering, we know they are the frontline victims of climate change; if we experience it, they would have experienced it first. Therefore, enabling humans to interact more responsibly and respectfully with the River Shannon is a crucial part of our collective efforts at sustainability.

This project explores the roles that new and emerging interactive technologies (e.g., sensor technologies, embedded systems, mobile/physical computing, virtual and augmented/mixed reality (VR/AR/XR), data visualisation and sonification) could play in understanding the health conditions of the Shannon

and its ecosystem. It seeks to identify methods, techniques and tools that could help us digitally 'give voice' to the River Shannon by extracting the 'feelings' of the aquatic entities (e.g., in the form of distress signals they could emit when endangered), amplifying or augmenting these 'feelings' into humanly understandable needs and designing actionable digital interfaces to enable us respond to those needs.

The project involves multiple stakeholders, from fishermen, rowers, kayakers, etc., who use the River Shannon every day, to conservationists, researchers and the general public. Involving both human and non-human stakeholders, the project is also multidisciplinary, connecting computer science, social science (e.g., psychology), natural sciences (e.g., biology/ecology) and product design. It will therefore employ a participatory design approach that enables relevant stakeholders to contribute to the design process and implementation and will employ citizen science to involve the lay stakeholders in ongoing data-gathering from the River Shannon.

Ultimately, the project aims to contribute to SDG 14: Life Under Water, SDG 13: Climate Action, SDG 6: Clean Water and Sanitation, SDG 12: Responsible Consumption and Production, SDG 11: Sustainable Cities and Communities and SDG 3: Good Health and Well-Being. Specifically, it will contribute to improving our place-based knowledge of the biodiversity in the River Shannon, which, in turn, will contribute to achieving UL's target of becoming a resilient bioregion by 2023 and to Ireland's goal of achieving the EU's Green Deal 2030 targets on biodiversity and zero-pollution.



**Chidi Usanga observing some wildlife at the River Shannon near UL**

## OCEANS 2023 Limerick: Pioneering a sustainable future for our oceans

OCEANS 2023 Limerick, the first OCEANS conference ever held in Ireland, marked a significant milestone in marine science and technology. Hosted by the Centre for Robotics and Intelligent Systems at UL from 5 to 8 June, this global event brought together 700 delegates from around the world, all united under the theme Blue Ocean Planet Earth. The conference was the first entirely in-person OCEANS event since the COVID-19 pandemic and was endorsed by the UN Decade of Ocean Science for Sustainable Development, underscoring its importance in the global discourse on ocean sustainability.

The conference highlighted three crucial sub-themes: Offshore Wind and Carbon Neutral Energy by 2050, Sustainable Commercial Use of Seas and Oceans, and Ocean Health and Resilience. These themes framed the discussions and presentations throughout the event, focusing on the major challenges facing our global oceans. Key topics included the transition to renewable marine energy, the protection and rejuvenation of marine ecosystems, and the sustainable use of ocean resources.

One of the significant aspects of OCEANS 2023 Limerick was its emphasis on local relevance. The conference showcased topics of particular importance to Ireland, such as offshore wind energy, ship decarbonisation, and the use of drones in marine applications. These discussions were not only timely but also aligned with the global push towards sustainable development, reflecting Ireland's commitment to leading in marine innovation.

The event featured a series of plenary and keynote talks from leading experts in the field. UL President Professor Kerstin Mey opened the conference by emphasising UL's role in advancing sustainability: "UL is a research-led institution that has launched both its Climate Action Roadmap and a Sustainability Framework that is the first for any Irish university. The rapid pace of societal growth has caused us to exceed many of Earth's planetary boundaries. We are now living in a deficit – consuming resources at a rate at which they cannot be replenished. The defining challenge of the 21st century will be to balance social progress and environmental boundaries."

Paul Connolly, CEO of the Marine Institute, echoed these sentiments by highlighting the crucial role of technology and innovation: "We need technology and innovation to build the new ocean data and knowledge that will inform and inspire the sustainable development of our vast ocean space. This new marine science community has an enormous part to play in meeting the challenges and opportunities of our shared ocean space for the benefit of people, policy and planet."

Professor Daniel Toal, General Chair of the conference and Co-Director of the Centre of Robotics and Intelligent Systems at UL, underscored the significance of the gathering: "Oceans 2023 is a hugely significant global conference. The gathered delegates are the key players in the community who must get to grips with delivering the Blue Ocean future, delivering the offshore wind transition to carbon-free energy production within circular economies while protecting a resilient ocean."

As OCEANS 2023 Limerick concluded on 8 June, coinciding with World Oceans Day, it left a lasting impact, setting the stage for future advancements in marine technology and policy. The conference not only reinforced the importance of sustainability in marine practices but also fostered new partnerships and alliances that will be essential in navigating the complex challenges facing our oceans in the years to come.

## BluePoint: Blue circular economy of marine plastics

The world's oceans accumulate over 140 million tons of waste. According to the McArthur Foundation, the current annual increase of 12.5 million tons is expected to rise to nearly 30 million tons by 2030. Over 80% of this waste is plastic, with projections indicating that by 2050, the ocean could contain more plastic than fish. The Plastic Pollution Problem does not bypass the Atlantic Area (Portugal, Spain, France and Ireland).

In an effort to address the escalating crisis of plastic pollution in the oceans, 13 partners from Atlantic regions including Gipuzkoa, Cantabria, Asturias, Portugal, France and Ireland came together in a collaborative mission to retrieve and repurpose marine plastics found in the Atlantic Ocean. The three-year BluePoint project seeks solutions to the issue of plastic waste by developing innovative strategies to recover and reuse marine plastic and transform it into



raw material for a new value chain. The project will drive a shift towards a resource-efficient blue circular economy by focusing on the identification, collection and recycling of plastic and creating new business opportunities in the marine plastic sector.

BluePoint aims to create a collaborative network involving various partners to drive innovation, entrepreneurship and international cooperation. The main goal is to turn the challenge of marine plastic waste into new business opportunities by establishing a circular economy in the Atlantic region. This approach not only aims to reduce the environmental impact of marine plastic but also to create new business prospects, including the acceleration of over 25 companies. By focusing on market-driven solutions, BluePoint will develop and commercialise products derived from marine plastic, boosting entrepreneurial activity and creating a new value chain centred on marine plastic recycling.

The project will concentrate on developing technology to address key stages of the marine plastic value chain – such as finding, recovering, sorting and processing plastic – ultimately leading to innovative products made from recycled marine plastic.

As a partner in the project, UL's Centre for Robotics and Intelligent Systems (CRIS) will focus on using drones to identify marine plastic, develop the necessary technology and process images. The CRIS is creating an AI system that will automatically detect plastic in various marine environments, including the ocean, beaches and riverbanks. This will be done using different types of sensor, such as RGB (red, green, blue), multispectral, thermal and LiDAR imaging cameras. The AI algorithms will be trained on data specific to the Atlantic Area and will be continually refined with new data. The system will produce lists of GPS coordinates along with information on the types and sizes of detected plastics. These lists will then be used by partners, local councils or citizen science initiatives to efficiently collect and manage marine plastics.

The next step for the CRIS team is to develop a geocaching-inspired software app that will allow users to easily locate plastic waste on the coastal areas and organise its recollection.

## TRIDENT: Technology-based impact assessment tool for deep-sea mining exploration and exploitation

The primary objective of the TRIDENT project is to develop a reliable, sustainable and transparent system for the continuous assessment of the environmental impact of deep-sea mining. With €16 million in funding – nearly €12 million of which is provided by the EC's Horizon Europe programme – the project unites 26 institutions from 10 countries, including three Irish stakeholders: UL (Centre for Robotics and Intelligent Systems), UCC and the Marine Institute.

TRIDENT aims to develop and integrate innovative technology and solutions that can operate autonomously in remote areas under extreme conditions, providing real-time data to supervising authorities. Before any mining activities can start, it is crucial to fully understand potential environmental impacts and mitigation strategies. The project will establish an effective monitoring and inspection system that complies with international and national legal standards.

TRIDENT will collect all known relevant physical, chemical, geological and biological parameters measured at the sea surface, mid-water and seabed. The tool will identify gaps in existing data sets and develop solutions to address them. It will design and test a system that includes both stationary and mobile monitoring platforms equipped with sensors and samplers. These will measure environmental conditions in mining areas and surrounding regions.

To support rapid responses in preventing environmental damage, the system will incorporate high-capacity data-handling pipelines capable of collecting, transmitting, processing and displaying monitoring data in near real-time. Additionally, TRIDENT will provide technological and systemic solutions for forecasting potential environmental impacts using the developed monitoring and mitigation methods.

To date, deep-sea exploration activities have not been continually monitored. Previous studies have primarily focused on ecosystem vulnerability and disturbance levels resulting from exploitation activities. TRIDENT, however, takes a holistic approach by considering the wide range of phenomena simultaneously triggered by exploitation, such as sediment plumes, noise, light and dissolved chemical species.

The project will identify the common disturbances associated with mining each of the three major seafloor mineral deposit types: polymetallic nodules, ferromanganese crusts and polymetallic sulphides. It will develop and test the necessary technologies, methodologies and systems to monitor these disturbances in situ within a deep-sea environment.

Experts will identify key environmental parameters to measure impacts already recognised by international and national regulations as well as key proxies

for impacts that can be reliably measured across various time and spatial scales. The outcome will be a blueprint for future monitoring systems that can predict and inform operators and regulators about the environmental impacts of deep-sea exploration and mining activities, allowing them to adjust operations to minimise harm. The UL CRIS team will focus on providing deep-sea robotic solutions for close-quarter monitoring of the plumes generated by mining machines.




### Giving Voice

Sustainability entails letting what we thrive on thrive so that we can continue thriving. For our resilience from the climate crisis, we need to not only allow but actively support the resilience of the entire ecosystem, including the minutest species. Exploiting nature for technological advancement is genius. But such innovations can also help us know the limit beyond which we're reversing the gains. If we digitally give nature a voice, we'll know when not to hurt it.

#### **Chidi Usanga**

PhD candidate, Faculty of Science and Engineering

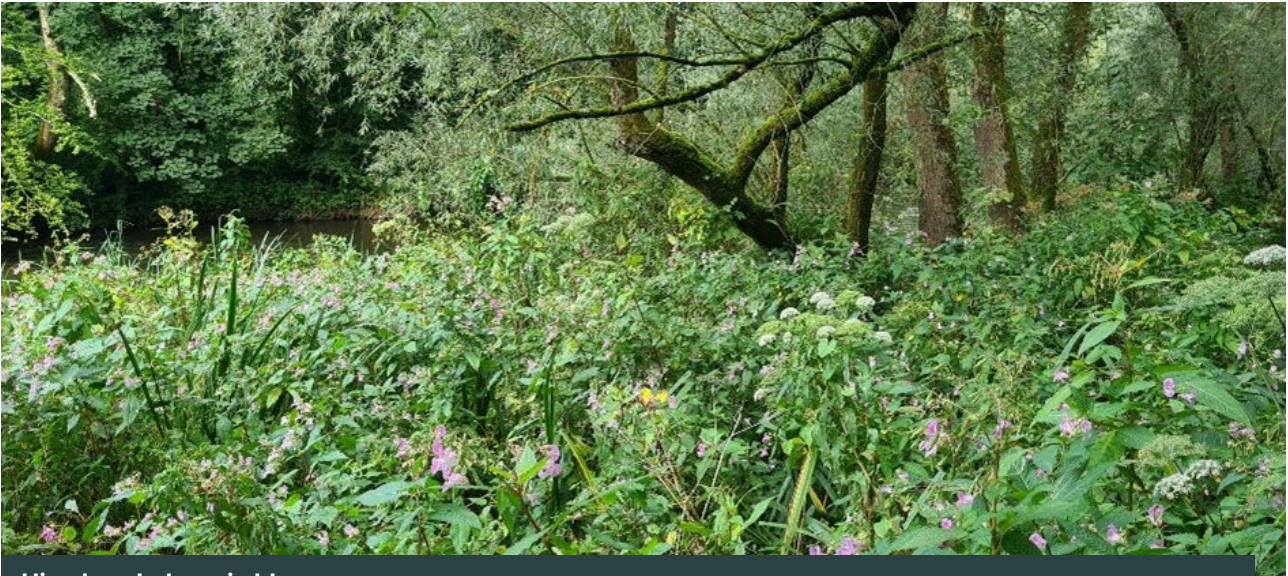




**15** LIFE ON LAND



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



**Himalyan balsam in bloom**

### **Himalayan balsam bash: An invasive alien species control pilot at UL**

Invasive alien species pose a significant threat to native biodiversity, especially along riverbanks and pathways. Himalayan balsam *Impatiens glandulifera* is one example of such a species found on the UL campus. Himalayan balsam out-competes native plants by its rapid and dense growth in spring and summer. It takes over an area by growing very tall (two to three metres), blocking out sunlight to shorter and slower-growing native plants and dramatically reducing biodiversity where it is present. Himalayan balsam has an annual lifecycle and reproduces very successfully by producing vast numbers of seeds each year. Its shallow root structure does not bind soil particles together as effectively as native plants would, causing riverbank erosion during flooding with consequent soil loss and water quality issues.

The best response to all invasive alien species is to act quickly to remove the species and halt its establishment across the wider environment. Therefore, in June 2023, volunteer members of the UL Environmental Committee, led by UL Geography and Environmental Science staff, identified an area infested by Himalayan balsam and started removing the plant by pulling it out of the ground, a technique referred to as ‘balsam bashing’. Due to the extent of the infestation, the balsam bash area was restricted to 400 square metres.

Aligning with UL sustainability ambitions for a resilient bioregion and with several UL sustainability missions, the objectives of the balsam bash were to (i) encourage native plants to re-establish; (ii) assist in returning the bank to good biodiversity status by encouraging natural regeneration; (iii) improve the hydromorphological status of the UL riverbank; (iv) stop the spread of the plant further downstream to Limerick city and the Shannon Estuary; and (v) involve as many volunteers and future leaders as possible to identify and address other concerns in the catchment area.

Getting Himalayan balsam under control will require a long-term, multiannual eradication commitment from staff and volunteers. Currently, UL Geography and Environmental Science staff are monitoring the 2023 cleared area and preparing for another balsam bash in 2024.



**Volunteer balsam bashers Liz Gabbett, Ellen Fitzmaurice, Mercedes Alonso, Muireann McMahon and Yvonne Ryan**

## Co-creating a sustainable market: UL-led living labs bring recycling-derived fertiliser market to life

The EU imports over six million tonnes of nitrogen, phosphorus and potassium fertiliser annually. At the same time, essential nutrients in North-West Europe are lost in the form of non-recycled organic resources from waste sectors and nutrient surplus regions (e.g., Flanders, North Rhine Westphalia, Netherlands) due to a predominating linear economic model. Although innovative nutrient recovery enterprises have been established, recycling-derived fertilisers (RDFs) are still not supplied to nutrient-deficit regions (e.g., Luxemburg, Ireland, Saarland).

ReNu2Cycle – an Interreg North-West Europe project – aims to reduce North-West Europe’s dependence on fossil-fuel-based fertiliser imports via transregional valorisation of fertiliser derived from recycled nutrients. A living lab methodology is being used to bring the new technology from development to marketisation, to engage with stakeholders across the supply chain and to encourage long-term co-innovation. The Living Lab operates as an intermediary among different stakeholders (e.g., farmers, citizens, research organisations, business, and government bodies/agencies). Operating at project and regional levels, the project is multi-scale and multi-level. The Living Lab approach animates a ReNu2Cycle innovation ecosystem through five localised living labs.

Through ReNu2Cycle, significant strides have been made in promoting the use of RDFs in North-West Europe. This has been achieved through extensive research, practical demonstrations, actively engaging with stakeholders and forging connections with policymakers. Currently, the project has entered a crucial phase wherein stakeholders are being engaged in envisioning the future market for RDFs, encompassing both demand and supply chain actors. UL is playing a pivotal role at this juncture, enhancing the project’s impact by leading the development of the Living Lab methodology, which forms the cornerstone of ReNu2Cycle. UL’s leadership in this area involves creating a robust framework that guides all project partners, empowering them to effectively collaborate with diverse stakeholders across various test sites and jurisdictions.

Moving forward, the ReNu2Cycle project is poised to generate substantial future impact. By leveraging UL’s leadership in the Living Lab methodology, the project aims to catalyse even stronger collaboration among partners and stakeholders. This collaborative approach will not only facilitate the co-creation of innovative solutions but also enhance the project’s capacity to address the complexities of RDF market development. Furthermore, the establishment of a solid framework for stakeholder engagement will contribute to the project’s sustainability and scalability, ensuring that its impacts extend far beyond the duration of the project. Ultimately, ReNu2Cycle aspires to foster a thriving market for RDFs in North-West Europe, driving sustainable agricultural practices and contributing to the region’s environmental goals.

Within UL, the Living Lab component is led by Dr Annmarie Ryan (Kemmy Business School) and her growing team. The work is being conducted under the leadership of Dr Achim Schmalenberger (Department of Biological Sciences), who is the work package lead. Further project partners include Teagasc, Munster Technological University, South East Technical University (Irish partners) and IZES gGmbH (Lead, Germany), District Administration of Heidekreis (Germany), District Administration of Rotenburg (Wümme, Germany), Eco:novis (Luxembourg), IMPACT npo (Belgium), and Nutrient Management Institute (Netherlands).

According to Dr Ryan, “As the Living Lab lead within ReNu2Cycle, I firmly believe that our approach holds the key to unlocking sustainable market innovation. By fostering collaborative partnerships and empowering stakeholders to co-create solutions, we are not only shaping the future of recycling-derived fertilisers but also driving transformative change towards a more sustainable and resilient agricultural sector in North-West Europe.”

## A sustainable agricultural project in Uganda wins UL Sustainability Challenge

A ground-breaking project focusing on sustainable agriculture practices and knowledge-sharing in Western Uganda won the 2023 UL Sustainability Challenge. Kemmy Business School PhD candidate Rebecca Tumwebaze used a bottom-up approach involving local matooke (green bananas) farmers, larger commercial farmers, agriculture specials and government officials to develop specific frameworks to encourage sustainable agriculture practices in the Rubaya region of Uganda.

Rebecca's project was one of five selected after UL President Professor Kerstin Mey set a challenge to the campus student community in November 2022 to come up with novel ways to tackle the climate crisis. The five nominated teams each received up to €10,000 to develop their projects and to stimulate sustainable solutions that were to be tested on the UL campus or in the wider region. The projects demonstrated the depth of research within the UL community and covered areas such as plastic recycling, thermal energy monitoring, improving sustainable agricultural practices in Uganda, biodiversity in the Shannon Estuary, and improving efficiency and reducing cost in hydrogen manufacturing.

The projects were evaluated on the basis of targets, feasibility plan and societal impact. Rebecca was announced as the overall winner following a Dragon's-Den-style event as part of UL's Research Week in April 2023, during which the five teams had to pitch their projects to a panel of experts.

Congratulating the winners, President Mey said, "The rapid pace of societal growth has caused us to exceed many of the Earth's planetary boundaries, and the defining challenge of the 21st century will be to balance social progress with these environmental boundaries. It is therefore encouraging to see the level of innovation and ingenuity that UL students have brought to this challenge. At UL we are determined to provide the space and mentorship for our students to develop into citizens who act as stewards of sustainability, both in their personal and professional lives."

Speaking after being announced as the winner, a delighted Rebecca said, "This shows that UL is interested in tackling climate challenges not just on a local and regional basis but on a global basis. I was doing work in a rural community in Uganda, and it's such a pleasure to see my work gaining the recognition here today. My work in Uganda can be adapted and used in other parts of the world. Parts of Asia and Sub-Saharan Africa are some regions where the results and conclusions from Uganda can be adapted and can contribute to sustainable agriculture elsewhere in the world, so it brings a new aspect of how knowledge should be created within communities, not the current or traditional top-down approach but we now have to be all-inclusive and involve local communities in developing their own practices as sustainability in general must be looked at as context-specific."

At the awards ceremony, UL Vice President Research Professor Norelee Kennedy said, "The UL Sustainability Challenge is an excellent example of the interdisciplinary approach needed to underpin research focused on global challenges – working together towards a sustainable society is a key challenge of our time. These awards showcase the best ideas from our student body in ensuring sustainability is at the heart of our research."

The UL Sustainability Challenge emerged from a partnership between the Bernal Institute, Kemmy Business School, Buildings and Estates Department and Office of the Vice President Research to encourage students to contribute to sustainable development.



Science communicator and broadcaster Kathriona Devereux and 2023 UL Sustainability Challenge winner Rebecca Tumwebaze

## Exploring humanity and sustainability at the Limerick Festival of Science 2023

The UL-hosted Limerick Festival of Science (LFoS) 2023 took place from 8 to 17 November as part of Science Week. Themed 'Human?', the festival encouraged participants to reflect on what it means to be human in today's world and how the decisions we make now impact the future. The festival brought together institutions such as Mary Immaculate College, Technological University of the Shannon and Science Foundation Ireland and offered a full programme of activities focused on science, sustainability and human life.

The festival asked and explored key questions such as "What is happening to our bees?" and "What impact do smartphones have on the environment?". Events ranged from sensory and optical illusions built around DNA to interactive demonstrations on viruses and how they infiltrate the human body. The interactive Animal Magic show enabled visitors to learn more about habitat protection and the secret lives of animals.

A notable highlight occurred on 12 November when Professor John Breen led a 'Life of Bees' demonstration, showcasing the vital role of bees as pollinators and offering a tour of UL's apiary. Throughout the event, festivalgoers had opportunities to interact with live demonstrations of snakes, owls, bugs and other wildlife.

The LFoS 2023 aimed to inspire curiosity and foster engagement in science, technology, engineering, arts and mathematics (STEAM) for people of all ages. According to a UL spokesperson, "The purpose of the festival was to spark curiosity, inspire imaginations, and unleash potential that can help shape our future." The festival aligned with several of the SDGs, particularly SDG 4 (Quality Education) by promoting scientific knowledge and learning, SDG 15 (Life on Land) through its emphasis on biodiversity and habitat protection, and SDG 13 (Climate Action) by addressing environmental sustainability and raising awareness about our impact on the planet.



Exploring humanity and sustainability at the Limerick Festival of Science 2023

## UL researchers receive funding for agri-food and circular bioeconomy projects

Several projects involving UL researchers are to receive funding from the Department of Agriculture, Food and the Marine. That department's 2023 Thematic Research Call will support research across the agri-food, forest and bioeconomy sectors. Three projects coordinated by or involving UL researchers Professor Sean Fair, Professor Achim Schmalenberger and Professor Luuk van der Wielen will cover important areas such as food safety, animal reproduction and circular bioeconomy development.

Commenting on the announcement, Minister McConalogue said, "I am delighted to announce funding of over €24 million for 20 research projects arising from the 2023 Thematic Research Call. The work funded under our research calls is essential to equip farmers, foresters and the wider agri-food sector with the tools needed to improve their economic, environmental and social sustainability in the years ahead. It is also pivotal to developing the next generation of cutting-edge technologies and innovations that will ensure we are globally attractive and competitive as a food island."

Also at the announcement, Minister of State Heydon commented, "When I launched the 2023 Thematic Research Call earlier this year, my objectives were to build research capacity, expertise and reputation in critical areas of importance, address research gaps and provide opportunities for early-stage researchers, encouraging collaboration across institutions and across scientific disciplines."

The three supported projects involving UL researchers are described below.

### Developing semen technology to improve the sustainability of the national herd

Despite rigorous assessments of sperm quality by animal breeding centres before semen is released for sale, significant variation in field fertility still exists among bulls used in artificial insemination. There is anecdotal evidence internationally that mixing semen from more than one bull in the same semen straw (heterospermic semen) can protect against this variation and increase pregnancy rates, possibly due to sperm competition and/or allowing flexibility in timing of insemination relative to ovulation.

Led by UL's Professor Sean Fair, the artificial insemination 'HeteroBull' project drives genetic progress in the dairy industry by facilitating the intensive use of elite sires in terms of economic and environmentally relevant traits. The HeteroBull project is a collaboration between researchers at UL, UCD, Teagasc and the Irish Cattle Breeding Federation as well as industry partners.

Professor Fair explained, "The project aims to provide sound scientific evidence on the degree to which both conventional and sex-sorted heterospermic semen can influence fertility in lactating dairy cows and will establish the biological and molecular mechanisms underpinning this so that stakeholders can make informed decisions around its use."

#### **Detection and control of listeria monocytogenes in food production**

As part of this project, UL's Professor Achim Schmalenberger is leading the work package 'Growth behaviour of *L. monocytogenes* in RTE foods' and is contributing to the work package 'Novel control mechanisms to reduce the prevalence of *L. monocytogenes*: Biocontrol agents'. The project is coordinated by Dr Kaye Burgess of Teagasc.

#### **Optimising the current and prospective value of the bioeconomy in Ireland**

Coordinated by Cathal O'Donoghue of University of Galway, this project seeks to understand scale, structure, value generation and carbon emissions across the whole sector to identify opportunities for change and scaling. Professor Luuk van der Wielen of UL's Bernal Institute will contribute to data and modelling strategies to include non-traditional sectors such as zero-emission foods, mandated energy carriers such as sustainable aviation fuels, and the circularity of biobased materials.

### **Buzzing Towards Sustainability: UL's Beekeeping Course Supported Life on Land**

In a vibrant initiative to support SDG 15: Life on Land, UL proudly launched its 2023 Beginners Beekeeping Course on 15 February. Hosted by the UL Apiary, the UL Environmental Committee and the Burren Beekeeping Association, this eight-week course equipped participants with the skills to protect and nurture local ecosystems through beekeeping.

Held weekly on Wednesdays from 6.30pm to 8.30pm, the course welcomed UL staff, students and visiting scholars. Whether they were curious beginners or seasoned apiarists, participants benefited from hands-on training and insights from esteemed experts in the field. The programme not only offered practical knowledge but also fostered connections with fellow beekeepers across Limerick, Clare and beyond.

By joining the course, participants contributed to the conservation of biodiversity and supported the health of our planet's vital pollinators. They seized the opportunity to make a tangible difference and cultivate their passion for beekeeping. The course successfully highlighted UL's commitment to sustainability and the essential movement towards a greener future.



## Student-led Sustainability Conversation Series

### Nurturing environmental consciousness

On 28 February 2023, UL Student Sustainability collaborated with the Environmental Society in a one-hour brainstorming session focused on nurturing environmental consciousness within the UL community. During the session, participants explored strategies for promoting environmental awareness and fostering sustainable behaviours among students and staff. Through group discussions and interactive activities, attendees shared insights and best practices for reducing ecological footprint and promoting biodiversity on campus.

The session provided a platform for stakeholders to unite around a shared vision of sustainability, generating actionable ideas to embed environmental stewardship into the fabric of campus life.



### Giving Voice

UL's research is about the discovery of new knowledge for a better world. By linking our research to the UN SDGs, we are putting the sustainable development goals front and centre when it comes to the excellent fundamental research UL is carrying out. We are encouraging our researchers to look beyond their research and see the impact it could have on communities regionally, nationally and internationally.

#### Denis Tierney

Research Communications Officer, Office of the Vice President Research





**16** PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



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

## Celebrating victory in the Heneghan Supreme Court case

Congratulations to AHSS alumnus Tomás Heneghan and to UL School of Law's Dr Laura Cahillane, who acted as expert witness in the case where it was argued that the current situation that denies UL graduates the right to vote in Seanad elections was unconstitutional. The Constitution currently gives the right to vote to NUI and TCD graduates only as those two colleges were the only such institutions in existence at the time of the Constitution's enactment. An amendment passed in 1979 would have allowed for this to be extended but it was not acted upon.

The Supreme Court agreed that this state of affairs was unconstitutional. According to Dr Cahillane, "Every year, teaching constitutional law in UL, I explain this to my students, and they are perplexed as to why they do not get a vote simply due to happenstance in terms of which university they decided to attend and due to inaction on the part of the Government to change this. Tomás Heneghan felt very strongly about the inequality of this situation and so he took a case, initially as a lay litigant but then with the Free Legal Advice Centres coming on board as legal representation. Today Tomás has won his case in the Supreme Court, which has found that the 1979 amendment must be implemented to allow Seanad votes for all third-level institutions. I was delighted to act as an expert witness for the Court, giving evidence on the history of the Seanad provisions and on the context around the amendment in 1979."

On 1 November 2023, the UL community came together to mark this significant victory. The event began with Mr Justice John Edwards giving some background and context to the case. Dr Cahillane spoke about the legal significance of the case. "With ramifications for the future interpretation of the Constitution, the judgments are hugely significant, but on a practical level, the Government now faces a lot of work to put in place a fair voting system as soon as possible. The case can be regarded as a victory for democracy and a lesson about the importance of the voice of the people." Tomás Heneghan then brought attendees through his personal journey in bringing the challenge to the Supreme Court. He spoke about how his time in UL had been a huge influence on his decision to bring legal proceedings. Eilís Barry, CEO of the Free Legal Advice Centre, spoke about the centre's role in representing Tomás and the importance of access to justice.

This case will go down in Irish constitutional history as a major landmark that has significance far beyond the issue of the franchise.

## School of Law criminal process conference on adversarialism, voice and participation

On 22 and 23 June 2023, the School of Law hosted a major international conference entitled 'Adversarialism, Voice and Participation in the Criminal Process'. Organised by Dr Alan Cusack, the event formed part of 'Mapping the Changing Face of Cross Examination', a cross-institutional Nottingham Trent University and University of Nottingham research project funded by the Nuffield Foundation and hosted by the School of Law. The conference provided a unique forum for academics and practitioners to share their understandings and experiences of witness participation and 'voice' within the context of an adversarial criminal justice system.

Keynote speakers at the event included Lord Beckett (Supreme Court, Scotland), Justice Úna Ní Raifeartaigh (Court of Appeal, Ireland), Justice Paul McDermott (High Court, Ireland), HHJ Sarah Whitehouse KC (Circuit Judge, England), Professor John Jackson (University of Nottingham), Professor Jonathan Doak (Nottingham Trent University), Dr Samantha Fairclough (University of Birmingham) and Dr Alan Cusack (University of Limerick). Dr Cusack's paper was entitled *Whither Adversarialism? Tracing Shifts in the Procedural Standing of Vulnerable Victims of Crime in Ireland*.

## Professor Jennifer Schweppe attends third meeting of Council of Europe Committee of Experts on Hate Crime

Professor Jennifer Schweppe (School of Law) participated in the third meeting of the Council of Europe Committee of Experts on Hate Crime in Strasbourg on 30 and 31 March 2023, where she was tasked by the committee with preparing the draft Recommendation and Explanatory Memorandum for review and deliberation. The Committee of Experts on Hate Crime is a subordinate committee to the European Committee on Crime Problems and to the Steering Committee on Anti-Discrimination, Diversity and Inclusion.

The Committee of Experts on Hate Crime comprises national experts nominated by their respective governments as well as four independent experts and representatives from international organisations and civil society, of which Professor Schweppe is one.

## Limerick Prison student visit: Interactive experiential learning event

On 29 November 2023, UL students of the LLM/MA in Human Rights in Criminal Justice programmes benefitted from experiential learning through an interactive visit to Limerick Prison. The visit provided students with a unique opportunity to enhance their knowledge and gain an understanding of some of the practicalities associated with the criminal justice and sentencing processes. By being both informative and transformative, the event brought students' classroom learning to life in a real-world criminal justice environment.

The prison visit typically debunks myths and stereotypes of prison life and offenders. This is important in terms of providing postgraduate students with a unique opportunity for affective learning and to interrogate their (perceived) personal ambivalence towards offenders, criminal justice policies and practice. Prior to the visit to the prison, students' attitudes towards offenders and the criminal justice process might typically have been shaped by stereotypes and media images, which this event helped to debunk.

Experiential learning opportunities for Human Rights in Criminal Justice postgraduate students are greatly beneficial for stimulating critical thinking, engagement and active learning that academic seminars cannot accomplish to the same extent. Students gained firsthand experience of the prison environment and learned about how a fully operational prison works.



## School of Law's Dr Ger Coffey presents research on intelligence-led policing

On 11 July 2023, Dr Ger Coffey, School of Law, presented a research paper entitled *Proactive Intelligence-Led Policing Examined through the Lens of Covert Surveillance Operations in Ireland* at the Athens Institute for Education and Research (ATINER) 20th International Conference on Law, Athens, Greece.

The paper examined the extensive powers and functions conferred by the Criminal Justice (Surveillance) Act 2009, as amended, to bolster the resources of appropriate criminal justice agencies (including An Garda Síochána, Defence Forces and Revenue Commissioners) to detect, investigate and apprehend suspects, the management and use of covert intelligence operations (including the placement of audio-recording devices), and (in) compatibility with constitutional and human rights substantive and procedural safeguards.

## IRC funding success for Dr Laura Cahillane

In December 2023, Dr Laura Cahillane, Associate Professor in the School of Law, was awarded a New Foundations Grant by the Irish Research Council for a project on Judicial Selection procedures.

The project's charity partners are Trust for Civil Liberties, Human Rights and Fundamental Freedoms and the Irish Council for Civil Liberties. The project will examine international best practice on judicial appointment structures with a view to making recommendations on the processes that will need to be put in place with the passage of the Judicial Appointments Commission Bill.



## Conference paper focuses on links between empowerment and peace in relation to SDG 16

Dr Nita Mishra of the Department of Politics and Public Administration delivered a paper at the 18th Sakyadhita International Conference on Buddhist Women in June 2023 in Seoul, Korea. The theme of the conference was 'Living in a Precarious World: Impermanence, Resilience, Awakening'; and Dr Mishra's paper, for which she was awarded €2,000 by the AHSS Faculty Research Committee to present at the conference, was entitled *Understanding the Links between Empowerment and Peace: The Soka Gakkai Women of Ireland*.

Dr Mishra’s presentation focused on the missing dimensions of SDG 16: Peace, Justice and Strong Institutions, beginning with a critique of the 2018 UNESCO peace document *Long Walk of Peace*, where she pointed out the glaring omission of spiritual worldviews in understanding and achieving peace. Her presentation raised many questions, particularly on the type of leadership needed today across the globe.

Among other points, Dr Mishra contended that we are not only missing the tools for the spiritual pathway in SDG 16 but that “our peace-building processes lack leaders who are spiritually awakened to values of compassion, empathy, humanism, wisdom, inner transformation and also lack the courage to have dialogues with people from all walks of life.” Dr Mishra asserted that for this happen, we must look towards ordinary people or communities practising peace on a daily basis, who are therefore equipped to teach others.

Dr Mishra is Vice President (Education & Next Generation) and Irish representative of the European Association of Development Research and Training Institutes (EADI). The EADI is the leading international organisation working in research, training and education on sustainable development. Dr Mishra is also the convenor of two international gender studies working groups (EADI and Development Studies Association of Ireland), which facilitate conversations on SDG 5: Gender Equality.

### UL research finds hate crime to be a serious and growing problem

A major research study carried out across the island of Ireland sought the public’s views on hate crime. Entitled ‘Public Understandings of Hate Crime: Ireland, North and South’, the study was undertaken by researchers at UL and Queen’s University Belfast. The research was carried out by Professor Amanda Haynes and Professor Jennifer Schweppe of UL’s European Centre for the Study of Hate, Professor Ross MacMillan of UL’s Department of Sociology and Dr Kevin J. Brown of Queen’s University Belfast School of Law.

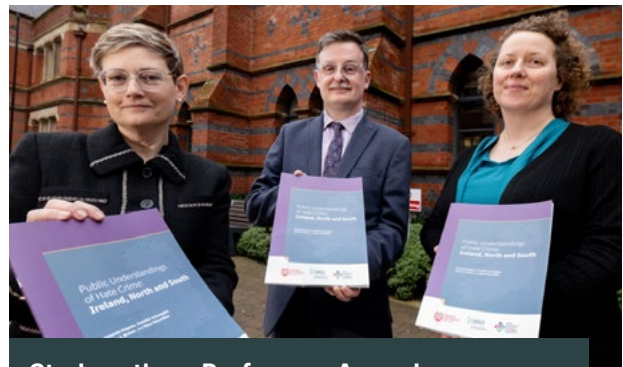
The researchers found that the majority of people in the Republic of Ireland and Northern Ireland believe hate crime on the island of Ireland to be a serious problem and to be on the increase. The findings are based on a survey of 2,000 respondents distributed simultaneously in both jurisdictions in February 2023.

In addition, the study found that (i) the general public understood the direct and indirect harms of hate crime; (ii) the majority appreciated the fact that hate crimes are more likely to have a psychological effect on their victims and that such crimes spread fear and isolation among minority communities; and (iii) a clear majority perceived current responses to tackling hate crime to be ineffective. Only 18 per cent of the public surveyed in Northern Ireland thought that the PSNI (Policy Service of Northern Ireland) respond effectively to hate crime while only 20 per cent believed that the courts respond effectively. In the Republic of Ireland, 30 per cent of respondents agreed or strongly agreed that An Garda Síochána respond to hate crime effectively while 22 per cent agreed that the courts respond effectively. The survey results indicate a high level of public support in Northern Ireland and the Republic of Ireland for the protection of a broad range of characteristics under hate crime legislation.

The study also found that there are gaps in the public’s understanding of current hate crime legislation, with the majority of the public in Northern Ireland incorrectly believing that a hate crime will be recorded as such on an individual’s criminal record.

The report is the first output of the project and establishes the public’s perception of the prevalence of hate crime on the island of Ireland, the physical and emotional harms of hate crime, the impact on minority communities, reporting mechanisms, and the role of legislation in addressing hate crime.

The research also measures levels of prejudice against individuals due to their racialised identity, ethnicity, religion, sexuality, gender identity, disability, community background (in Northern Ireland) and other commonly targeted identities.



**Study authors Professors Amanda Haynes and Jennifer Schweppe of UL’s European Centre for the Study of Hate with Dr Kevin J. Brown of Queen’s School of Law**

## Student-led Sustainability Conversation Series

### Exploring peace and justice: A conversation on **SDG 16** with Colonel Colm Doyle

On 18 April 2023, Colonel Colm Doyle discussed SDG 16: Peace, Justice and Strong Institutions. With decades of experience in peacekeeping, Colonel Doyle shared insights into conflict resolution and the importance of strong institutions in promoting peace. His experiences highlighted the critical role of governance and accountability in achieving sustainable development.



#### **Giving Voice**

What I appreciate about the SDGs is that they remind us that sustainability is not just about protecting the environment but equally about social equity and economic viability. This is necessary so environmental sustainability is not just the preserve of the more well-off sections of society. Most governing policies and business strategies written in the past three years mention the SDGs, but taking genuine actions and investing resources to implement SDGs in daily life and business decisions are the real hurdles to overcome. The fact that all 191 UN member states have agreed to try to achieve the 17 goals with 169 targets by 2030 is a sign of hope. However, we now need more than hope. We need immediate actions from all generations of our society.

**Elizabeth Gabbett**

Geography Teaching Assistant and UL Environmental Committee volunteer





**17** PARTNERSHIPS  
FOR THE GOALS



**Strengthen the means  
of implementation**  
and revitalize the Global  
Partnership for Sustainable  
Development.

## 'Building Back Better': New models of architecture and urbanism

Across the globe, conflicts are causing significant damage to homes and neighbourhoods, leaving millions without a place to call home. Moving forward towards a better future entails collaborative efforts and collective action. Within this context, the reconstruction of Ukraine presents a chance to define new models of architecture and urbanism that will have a significant impact, not only in Ukraine but also in other communities facing the challenges of rebuilding and worsening climate change.

The ongoing conflict in Ukraine has exacerbated Ukraine's pre-existing shortage of urban professionals. There is a pressing need to train future urban thinkers to aid recovery; devise intelligent solutions and forward-thinking reconstruction techniques; promote innovative and holistic approaches that integrate environmental consciousness, new materials and construction methodology and that reuse resources; and help educational institutions to prepare the next generation of urban leaders.

The work on this project from October to December 2023 will culminate in a cohort of 100 professionals, students and teachers from Ukraine, Poland, Sweden, Denmark, Ireland, Norway and the UK converging in Warsaw (Poland) and Lviv (Ukraine) in January 2024 with the collective mission of creating sustainable solutions to address Ukraine's urgent need for a sustainable recovery. The proposals range from the scale of a single housing unit to entire micro-districts to the scale of the Dnipro River. UL will be represented at the conference by School of Architecture and Product Design (SAPD) staff members Professor Merritt Bucholz, Associate Professor Peter Carroll, Ger Carty and Andrew Griffin and SAUL Adjunct Professor Robert Mull.

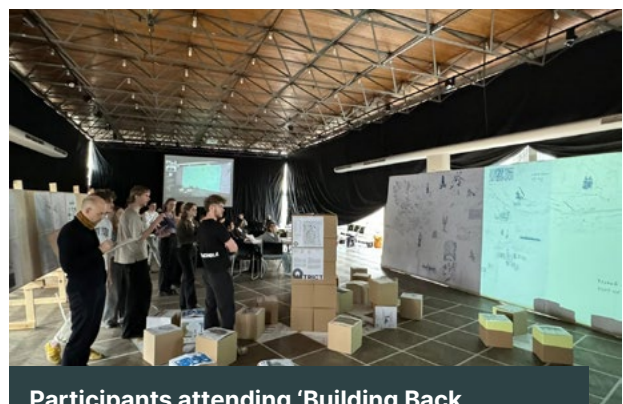
Entitled 'Building Back Better', the project's outcomes will be captured in an exhibition, which will go on a journey across Europe. Wherever it travels, the exhibition will inspire and generate support. The solutions it generates will enable the Kharkiv School of Architecture in Ukraine to launch a master's course that will impart the skills needed to help Ukraine recover sustainably and ambitiously. The new MSc in Urban Design and Climate Resiliency will be offered by SADP at UL and by the Kharkiv School of Architecture.

With a focus on urbanism and how that relates to climate change through design, the programme will teach students how to better plan for our world through resilient design on a social, economic and spatial level.

The new programme at UL will potentially have a positive impact on Limerick city and its wider hinterland. As part of the Government's Project Ireland 2040, Limerick is targeted for radical growth over the next 20 years. The city is set to double in population, which creates many opportunities for the city but also brings urban and social challenges.

The basin of the River Shannon takes up approximately 25 per cent of the Island of Ireland. Limerick experiences serious, recurring flooding due to rising sea levels and increased cloud bursts. It is a donut model city that has, until now, been classified as a shrinking city. Furthermore, the city is situated in a wider rural geography of towns and villages that face environmental and biodiversity issues. Its core has suffered for many years with decline and vacancy. Limerick has had social problems in the past and has begun the long journey of regenerating those affected areas. Under the National Development Plan's Urban and Rural Regeneration Funds, Limerick will receive extensive funding to develop the city to double in size and become an attractive city to stem Dublin from further overheating.

UL MSc in Urban Design and Climate Resiliency students will have opportunities to work on and resolve real-world issues that affect local government. The programme will serve to strengthen SAPD's already sound relationship with Limerick City and County Council.



Participants attending 'Building Back Better' Exhibition at the Institute of Architects in Warsaw



## Stepping Stones and the Feeney Way

On 2 March 2023, Irish World Academy Stepping Stones Scholarship recipients performed at the unveiling ceremony of the Feeney Way in the Glucksman Library. Contributors to the event included UL President Kerstin Mey; Mayor of Limerick Cllr Francis Foley and elected representatives; Chuck Feeney's son Patrick and Conor O'Clery, Chuck's biographer; members of Governing Authority; Founding President Dr Ed Walsh; and Harry Feehily, Chair of UL Foundation. Professor Helen Phelan, Director of the Irish World Academy, spoke about the importance of the scholarships and the historical support of Chuck Feeney and The Atlantic Philanthropies.

For the last 15 years, students from around the world have been supported by the Stepping Stones Scholarships to pursue postgraduate study at the Irish World Academy, and over 100 students from 40 countries across every continent have benefitted from the scholarship. The students who performed were Núria Vizcaino Estrada from the MA Classical Strings programme, Rima Baransi from the MA Contemporary Dance programme and Sarbik Guha from the MA Songwriting programme.



Students Núria Vizcaino Estrada and Rima Baransi

## UL-led European research into financing of biodiversity initiatives awarded almost €5 million

A pan-European research project led by UL received €4.98 million in funding from the EU's Horizon 2020 research and innovation programme. Associate Professor John Garvey of the Department of Accounting and Finance in the Kemmy Business School will lead the BIOFIN consortium, which comprises 14 partners across 10 EU countries.

The three-year BIOFIN (Biodiversity Restoration Using Large-Scale Finance) project will use a systems approach to identify barriers to mobilising mainstream finance to protect and restore biodiversity. BIOFIN will create a unifying framework and technology that improves conditions for nature-positive investments and will develop new tools and knowledge to help redirect financial resources from destructive economic activity (such as the continued use of fossil fuels) to nature-positive investments.

The current financial system values certainty of rules and regulations coupled with efficiency for outcome transparency and low monitoring costs. However, activities that protect and restore biodiversity, such as nature-based solutions, are frequently unique. They generally involve multiple actors working on a small or local scale and result in positive but complex outcomes.

The research from BIOFIN will look at changing the system to establishing a categorisation of nature-based solutions alongside a menu of good governance structures and a library of stakeholder engagement. This will draw on expertise and best practice in natural capital and economics to streamline decision-making and accelerate transaction completion by standardising the investment process and creating the enabling conditions for large-scale finance.

To accelerate nature-positive business models, a data analytics and underwriting engine will be established to advance conventional project appraisal and risk assessment and account for and model expected outcomes.

## Empowering entrepreneurs for sustainability

On 15 February 2023, UL Student Sustainability initiated a brainstorming session with the UL Consulting and Entrepreneurship Society. Bringing together innovative minds, the session aimed to explore avenues for integrating sustainability into entrepreneurial ventures.

During the one-hour session, participants engaged in lively discussions and exchanged ideas on how businesses could align with environmental and social sustainability goals. Through group discussions and collaborative problem-solving, attendees identified opportunities to incorporate sustainable practices into their entrepreneurial endeavours.

A core part of UL Student Sustainability is the co-creation of priorities, ideas and initiatives by and for students. Brainstorming sessions provide an open forum for students to discuss and ideate on new possibilities. This session highlighted the importance of fostering a culture of sustainability within the entrepreneurial community at UL, and insights gleaned from it were used to shape an upcoming programme of events.

## The Wild Atlantic Alliance

The inaugural research and teaching symposium of the Wild Atlantic Alliance (WAA) was held on 29 March 2023 on board L'Armorique, a Brittany Ferries' ship that connects Roscoff and Cork. The WAA is a newly formed network of seven coastal Irish and Breton universities that seeks to exploit the common Celtic heritage that Ireland and France share within the EU.

The formal opening of the symposium was attended by the French Ambassador to Ireland, the Irish Ambassador to France, the presidents of the WAA partner universities, civic representatives of the home cities and other dignitaries and academics from the seven universities. The WAA focuses on collaboration in teaching and research in the following broad areas of common interest: Celtic and Irish studies; ports, sea and water; digital transformation; and environment and sustainability.

In his opening remarks at the symposium launch, Dr Nigel Healey, Vice President for Global and Community Engagement at UL, wished the 160 academics in attendance well. "Today we bring our teams together to meet physically, to befriend each other, to explore the potential for a common future of research and teaching. In order to lay the foundations for a future European Union that will be a foundation for projects of all kinds, we hope that by this evening we will be able to agree on the next concrete steps to be taken to deepen our alliance, be it through shared cultural events, joint research projects or new partnerships in teaching."

## Unity in diversity: A festival of global harmony at UL

The UL campus buzzed with excitement as the Spring Global Festival commenced on 7 March 2023. Held in collaboration with Mary Immaculate College and Technological University Shannon, this three-day celebration was a testament to the power of partnerships and the beauty of cultural diversity. The festival kicked off with the UL50 Global Tree Dedication Ceremony, where 50 trees were planted to honour UL's 50 years and its global community. As the trees took root, so did the spirit of unity and sustainability, echoing the essence of SDG 17.

The Irish World Academy of Music and Dance hosted a mesmerising recital, blending Irish traditional music with international melodies. The audience – a vibrant mix of students and faculty from around the world – swayed to the harmonious tunes while celebrating the universal language of music. On the second day, the International Women's Day Conference highlighted the importance of gender equality and collaboration. Later, the Holi Colour Run transformed the campus into a kaleidoscope of colours, symbolising the joy and vibrancy of cultural exchange.

The festival concluded with a scavenger hunt across Limerick city and an international film screening of Son Rise, a documentary addressing gender injustice. These events not only entertained but also educated, fostering a sense of global citizenship among participants.

As the festival drew to a close, the message was clear: through partnerships and shared experiences, we can build a more inclusive and sustainable world. The Spring Global Festival at UL was more than just an event; it was a celebration of unity in diversity, a step towards achieving the global goals together.

## UL to lead next phase of student volunteering platform

An online student volunteering platform boasting 20,000 students among its ranks is taking a major step forward with plans to expand its service. UL will lead StudentVolunteer.ie (SV.ie) into its next phase, scaling the service offering to all higher education institutions across Ireland and attracting new strategic partnerships.

UL was selected following a competitive process to lead the platform, the management of which is transferring from the Irish Universities Association (IUA) to the Limerick institution and several partners from across the sector. UL will work in partnership with UCD, UCC, Technological University of Dublin and University of Galway to fund the platform and maximise the impact of student volunteering in Ireland, which has seen an average of 18,000 students engaged in volunteering with an economic value of close to €30 million per year. There are already 20,000 students registered on SV.ie, which was launched in 2016 as an online portal to match student volunteers with community action projects and to work in partnership with local and global non-profit organisations. Alongside the registered students are 945 community-based organisation staff actively posting, and 298,569 volunteer hours have been logged by students across Irish rural and urban community settings.



**Pictured at UL's annual President's Volunteer Award (PVA) ceremony were Rhona McCormack, Director Student Affairs; Dr Lorraine Tansey, Project Manager Studentvolunteer.ie; Linda Fitzgerald, Student Volunteering and PVA Manager; Ben Kiely, Student Gold PVA recipient; Professor Kerstin Mey, President; and Nichola Keegan, Senior Administrator, Student Volunteering Office.**

The announcement coincided with International Volunteer Day on 5 December, the same day on which UL's annual President's Volunteer Award (PVA) ceremony was held and at which an impressive 530 UL students received awards. Year on year, these awards showcase meaningful engagement by UL students with their local and international communities and represent experiences that go to the heart of what it means to be a UL student.

Speaking about the new leadership role for SV.ie, UL President Professor Kerstin Mey said, "We are very ambitious about the next phase of this valuable service. UL has always put community engagement at the heart of its mission. Our Irish and international student volunteers act as role models for our at-risk children and young people and are essential to running community programmes and delivering local community-based services."

This next phase of SV.ie will increase the level and intensity of engagement with students, community-based organisations, government and corporate sponsors across the regions and will better link the StudentVolunteer.ie service and portal with national and global volunteering infrastructures. This phase will be led by a prominent expert in student volunteering, Dr Lorraine Tansey. Dr Tansey launched and scaled the hugely successful ALIVE Programme in University of Galway, which has been running for 19 years. ALIVE is recognised globally as a champion for pushing student volunteering practice and impact to new summits. Dr Tansey is also currently a member of Ireland's National Volunteer Strategy Implementation Group and will be taking up a post in UL as part of the expansion.

Speaking at the UL PVA ceremony, Dr Tansey said, "I am driven by the student appetite for hands-on opportunities to make an impact and change within communities. I know from an abundance of evidence that student volunteering has profound and lasting positive effects on students during their college experience."

Kate Morris, IUA Head of Campus Engage, said, "Evidence from the 2022 Student Engagement indicates we are greatly underserving a demand for volunteering opportunities from universities, technological universities and institutes of technology students, at all levels. The time is right to move from proof-of-concept to full-scale implementation of StudentVolunteer.ie across every campus and community in Ireland. To do this the system needs, and deserves, dedicated expert leadership, and greater involvement of students working at the frontline and on campus."

## Twenty years of community outreach benefits thousands of families at UL AccessCampus

On 25 October 2023, UL AccessCampus celebrated 20 years of community outreach, which has benefited thousands of Limerick families. Opened in November 2003 by Mr Pat Cox, President of the European Parliament, AccessCampus marked this milestone with a special event.

In a unique partnership with the Limerick Enterprise Development Partnership (LEDP), AccessCampus aimed to challenge educational disadvantage in areas of social and economic deprivation in Limerick city and its environs. The idea for AccessCampus originally came from LEDP, which sought to re-establish the former Krups site at Roxboro into a meaningful, impactful and relevant presence in the local communities. Catering to a diverse range of learners – from primary school children to mature learners and university students – the mini-campus helped people to realise their potential through the provision of outreach educational opportunities.

Since its establishment, AccessCampus saw over 1,500 young people join the Study Club from 15 different local second-level schools and collaborated with numerous local community and educational organisations to offer a range of informal and formal learning opportunities. The work at AccessCampus was supported by almost 1,000 UL student volunteers, thereby providing valuable learning experiences for undergraduate students on Co-op placements.

Additionally, AccessCampus facilitated community-based practicum and practice education placements for Physiotherapy undergraduate students and for postgraduate students from disciplines such as public health, occupational therapy and music therapy.

AccessCampus operated 12 hours a day from Monday to Friday and also opened for two local church groups on weekends. The diversity of user groups and collaborations displayed the breadth and strength of interest in education across all generations and strata of the local communities.

At the celebratory event, Niall O’Callaghan, CEO of LEDP, remarked, “Over the past 20 years, AccessCampus has become more than just a link between education and the community. It has become a place where people can find hope and unlock their true potential. We’re keenly aware of the barriers to further education, so we look forward to continuing this unique partnership initiative with UL and furthering the educational opportunities for all students in our community.”

A new Memorandum of Understanding was signed by Professor Kerstin Mey, UL President, and Niall O’Callaghan, CEO of LEDP, to formalise the ongoing collaboration between the two organisations for the operation of AccessCampus over the next five years.



UL AccessCampus student Mykyta Lachtok (top) from Ukraine with UL Phd students Oum Charrak (left) and Sarah Messous from Algeria

## Student-led Sustainability Conversation Series

### Enacting change through Enactus

On 22 February 2023, the Enactus UL society joined forces with UL Student Sustainability to conduct a dynamic brainstorming session on sustainability challenges within local communities. Enthusiastic participants gathered to explore innovative approaches to addressing such challenges.

Throughout the hour-long session, attendees delved into topics ranging from social entrepreneurship to environmental stewardship. Collaborative discussions sparked creative ideas and actionable strategies for enacting positive change through sustainable initiatives.

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### Feminist perspectives on sustainability

On 23 February 2023, UL Student Sustainability engaged in a thought-provoking brainstorming session with the UL Feminist Society. Recognising the interconnectedness of social justice and environmental sustainability, participants explored the intersectional dimensions of sustainability issues.

Through introspective discussions and shared experiences, attendees examined how gender equality, diversity and inclusion intersect with broader sustainability goals. The session helped attendees to better understand the complexities inherent in addressing sustainability challenges through a feminist lens.

The insights gleaned from the session underscored the importance of adopting inclusive and equitable approaches to sustainability and empowering individuals from all backgrounds to participate in creating a more sustainable future.

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### Exploring sustainability: UL student-led idea generation workshop

On 12 October 2023, UL Student Sustainability hosted a workshop to generate ideas. Led by Student Sustainability member Matthew Murray, the workshop served as a platform for participants to explore social and ecological concerns within their communities.

During the session, attendees engaged in a journey of exploration, mapping their ideas and emotions surrounding these issues while identifying the assets available within UL. Utilising various tools, participants interrogated their perceptions, delved into root causes, and explored emotional responses to the challenges faced by their communities.

Building on this momentum, the Iceberg Model was employed to systematically analyse the underlying causes of ecological and social issues. By navigating through the different levels of the iceberg, participants gained a deeper understanding of the challenges at hand.

The overarching goal of the workshop was to inspire participants to ideate and pitch project proposals aimed at driving social change aligned with the 17 SDGs. It was heartening to witness individuals coming together and leveraging their creativity and passion to contribute meaningfully to a better future.

A special thanks to the UL Consulting and Entrepreneurship Society and Enactus UL for their participation and support.

## Student-led Sustainability Conversation Series

### Student Sustainability Summit: Fostering dialogue on the SDGs

One of the workshops at the Student Sustainability Summit on 18 October 2023 aimed to address the issues affecting student life and explore solutions through the lens of the SDGs. Led by Josh O'Dwyer, a student member of UL Student Sustainability, the session began with a brief introduction to UL Student Sustainability and an overview of the SDGs for those unfamiliar with the concept. Attendees were then invited to participate in a voting exercise to rank the five SDGs they deemed most relevant to their lives and experiences at UL.

After the initial vote, participants formed groups based on the top-ranked SDGs, each focusing on a specific goal for discussion. Led by facilitators, the group discussions delved into the challenges and obstacles relating to the selected SDGs by drawing from personal experiences within and beyond the UL environment. Attendees shared their insights and proposed potential solutions to address the identified issues.

Recognising the sensitivity of some topics, Josh emphasised the importance of open and honest dialogue and encouraged participants to voice their thoughts and experiences without fear of judgement. To facilitate this, attendees were given the option of submitting feedback anonymously, thereby ensuring that all perspectives were considered in the discussion.

Following the group discussions, attendees had the opportunity to engage with participants at other tables and vote on the issues they deemed to be most important. By moving between tables and placing stickers on the topics they prioritised, participants contributed to identifying key areas for action and advocacy within the student community.

The workshop concluded with a renewed sense of awareness and commitment to addressing the challenges highlighted by the SDGs. Through collaborative efforts and ongoing dialogue, students pledged to work towards creating a more sustainable and inclusive campus environment that reflects the values of the SDGs.

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### Upskilling workshop: Empowering students to tackle sustainability challenges

On 25 October 2023, UL Student Sustainability Coordinator Jack O'Connor spearheaded a dynamic workshop aimed at equipping students with the essential skills needed to address complex sustainability challenges. Collaborating with Campus Life Services, the session focused on enhancing students' understanding of sustainability issues and fostering their ability to devise innovative solutions.

The workshop underscored the significance of upskilling students to effectively collaborate in teams and develop solutions to multifaceted sustainability challenges. By providing participants with the necessary knowledge and tools, the session empowered the participants to tackle real-world issues with confidence and competence.

Through interactive discussions, case studies and practical exercises, students gained insights into the interconnected nature of sustainability issues and the importance of adopting a holistic approach to problem-solving. They were encouraged to think critically, creatively and collaboratively and to leverage their diverse perspectives and skill sets to generate impactful solutions.

## Student-led Sustainability Conversation Series

Moreover, the workshop fostered a sense of ownership and agency among students, empowering them to take proactive steps towards driving positive change within their campus community and beyond. By nurturing their capacity to identify challenges, explore opportunities and implement actionable initiatives, the session laid the foundation for students to become effective agents of change and sustainability advocates.

As sustainability continues to emerge as a pressing global priority, the need for skilled and knowledgeable individuals capable of navigating complex sustainability landscapes becomes increasingly evident. Through initiatives like this upskilling workshop, universities play a crucial role in cultivating a new generation of leaders equipped with the expertise and mindset needed to address the sustainability challenges of today and tomorrow.

### Giving Voice

It is always wondrous to see how small, individual actions can create ripples that cascade into further successes. Sustainability is no different. While positive strides are being seen, there is still a long way to go, intricate challenges to conquer – through collaboration, commitment and genuine care we can achieve a lot. UL Student Sustainability made me see the importance of leading by example and both individual and collective responsibility in sustainability efforts.

**Sai Sajan Yerra**

MSc Business Analytics



# Impact Rankings



# UL Sustainability Rankings

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## Commitment to UN SDGs propels UL into world's top 100

UL has been ranked in the top 100 institutions worldwide for its work on the UN SDGs. The Times Higher Education (THE) Impact Rankings 2023 placed UL at number 86 out of 1,591 institutions globally in measuring the positive societal impact the University is having in implementing the UN SDGs. The ranking examines a university's performance against the SDGs across teaching, research, equality, internal culture and the impact the university has in the wider society. UL's ranking of 86 in 2023 is an improvement on the 2022 results, which placed UL in the 101–200 range out of a total of 1,400 institutions.

UL was ranked:

- 17th for **SDG 12**: Responsible Consumption and Production, which focuses on the efficient use of resources and minimising waste while limiting the consumption of non-renewable resources
- 25th for **SDG 10**: Reduced Inequalities, as evidenced by UL's research on social inequalities, policies on discrimination and commitment to recruiting staff and students from underrepresented groups
- 31st for **SDG 8**: Decent Work and Economic Growth, which evaluates an institution's economic research, the proportion of students taking work placements, and good employment practices

UL also ranked in the Top 100 for:

- **SDG 17**: Partnerships for the Goals – 45th place
- **SDG 11**: Sustainable Cities and Communities – 58th place
- **SDG 5**: Gender Equality – 94th place
- **SDG 3**: Good Health and Well-Being – 98th place

Commenting on the rankings, Vice President Research Professor Norelee Kennedy said, “The rankings highlight and promote UL's commitment to the UN SDGs across the University – from its innovative research to its teaching and our interaction with the wider community on a local, regional, national and international level. They show that UL is a leader when it comes to tackling the global challenges we all face.”

## UL among top 2 per cent of universities worldwide on UI GreenMetric University Rankings

**UL was ranked in the top 2 per cent of universities worldwide in the 2023 UI GreenMetric University Rankings, which rank institutions on green campus and environmental sustainability.**

UL was placed 22nd out of the 1,183 universities in the world for its environmental commitment and initiatives to support sustainable development and help improve the quality of life both on and off campus.

Initiated by Universitas Indonesia in 2010, UI GreenMetric ranks universities across 39 indicators in the six criteria of Setting and Infrastructure, Energy and Climate Change, Waste, Water, Transportation, and Education. UL saw improvements in its 2023 score across Energy and Climate Change, Waste, and Education.



UL is building on several initiatives, such as the Glucksman Library's ban on disposable cups, to embed the goals of sustainable development into our everyday lives, from education and research to travel and beyond. Another example of this is ISCycle, an innovative research project examining how e-bikes can change transport behaviours to improve health and protect the environment – this builds on UL's achievement of a gold Smarter Travel award from the National Transport Authority. UL became the first university in Ireland to receive the gold award in recognition of its commitment to changing attitudes and behaviours that facilitate, support and encourage sustainable travel options for staff, students and visitors.

Comprising staff and students from across the campus, UL's Green Campus Committee, Environmental Committee and Environmental Society have led the way on many of these changes, which collectively can make a big difference.

## UL jumps to 175 in latest QS World University Rankings for Sustainability

**UL made a significant move to 175th in the World University Rankings for Sustainability, which is run by global higher education analysts Quacquarelli Symonds (QS).**

UL climbed from 301–320 in last year's rankings in this category to 175 in the 2024 rankings (which apply to 2023). Furthermore, UL is now ranked 77th in Europe and has also moved up in the national rankings by securing 5th position this year compared to 6th in Ireland last year.

The Sustainability ranking is designed to assess sustainability across three key performance categories: Environmental Impact, Social Impact, and Governance. Universities are evaluated separately in each of these categories as well as in an overall ranking. UL's performance in these categories was impressive, being ranked 55th in the world for Environmental Sustainability, 51st for Equality and 38th for Governance. Each performance category comprises distinct indicators, which are then aggregated to establish a weight for each category.

This achievement is a testament to UL's unwavering commitment to sustainability, an ethos which is deeply embedded in the fabric of our institution. According to UL President Professor Kerstin Mey, "University of Limerick stands aligned with global efforts to integrate sustainability not just into our academic programmes but into the very essence of our research, innovation and campus practices." President Mey asserted that the achievement "reflects our dedication to fostering a culture of sustainability that extends from our classrooms to our laboratories, from our research initiatives to our community outreach. Our focus on sustainability goes beyond being a buzzword; it's a guiding principle shaping the future we envision and contribute to. Our commitment to sustainability is evident in the eco-friendly initiatives on our campus, the research endeavours addressing global challenges, and the educational programmes preparing students to be stewards of a sustainable future."

President Mey concluded by stating that the achievement "wouldn't be possible without the collective dedication of our faculty, students, staff and the broader community. It is a shared success, a testament to what we can accomplish when we align our values with our actions."

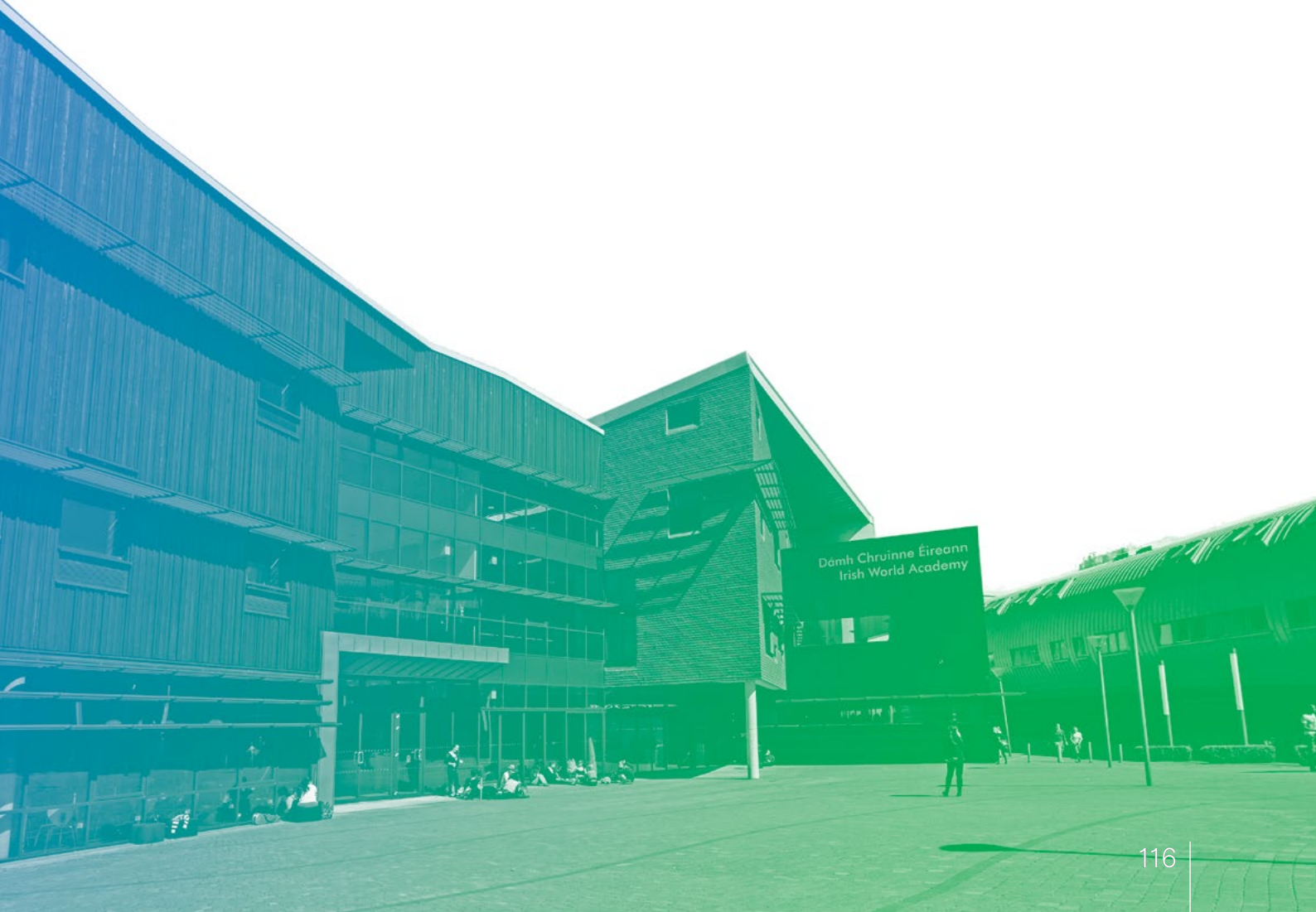


## Giving Voice

UL's long-standing and meaningful commitment to sustainability spans our research, our education programmes and our campus activities. Having achieved Green Campus accreditation in 2015, UL's ranking of 86th in the world in the THE Impact Rankings 2023 and 22nd in the world in the UI GreenMetric rankings reflect the significant progress UL has made in sustainability practices in recent years. The University's external partnerships and collaborations with leading local, national and international organisations and its ongoing engagement from staff, students and stakeholders across campus are enabling UL to make significant contributions towards addressing the world's sustainability goals.

### **Eileen O'Connor**

Research Metrics and Reporting Officer



# University Impact Rankings 2023

## Times Higher Education (THE) – SDG Ranking Breakdown

| SDG   | UL        |
|---|-----------|
| <b>OVERALL - THE IMPACT RANKINGS 2023 RESULT</b>      | <b>86</b> |
| SDG 1: <b>No Poverty</b>                              | 101–200   |
| SDG 3: <b>Good Health and Wellbeing</b>               | 98        |
| SDG 5: <b>Gender Equality</b>                         | 94        |
| SDG 7: <b>Affordable and Clean Energy</b>             | 101-200   |
| SDG 8: <b>Decent Work and Economic Growth</b>         | 31        |
| SDG 10: <b>Reduced Inequalities</b>                   | 25        |
| SDG 11: <b>Sustainable Cities and Communities</b>     | 58        |
| SDG 12: <b>Responsible Consumption and Production</b> | 17        |
| SDG 16: <b>Peace, Justice and Strong Institutions</b> | 201-300   |
| SDG 17: <b>Partnerships for the Goals</b>             | 45        |



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