



OLLSCOIL NA GAILLIMHÉ
UNIVERSITY OF GALWAY

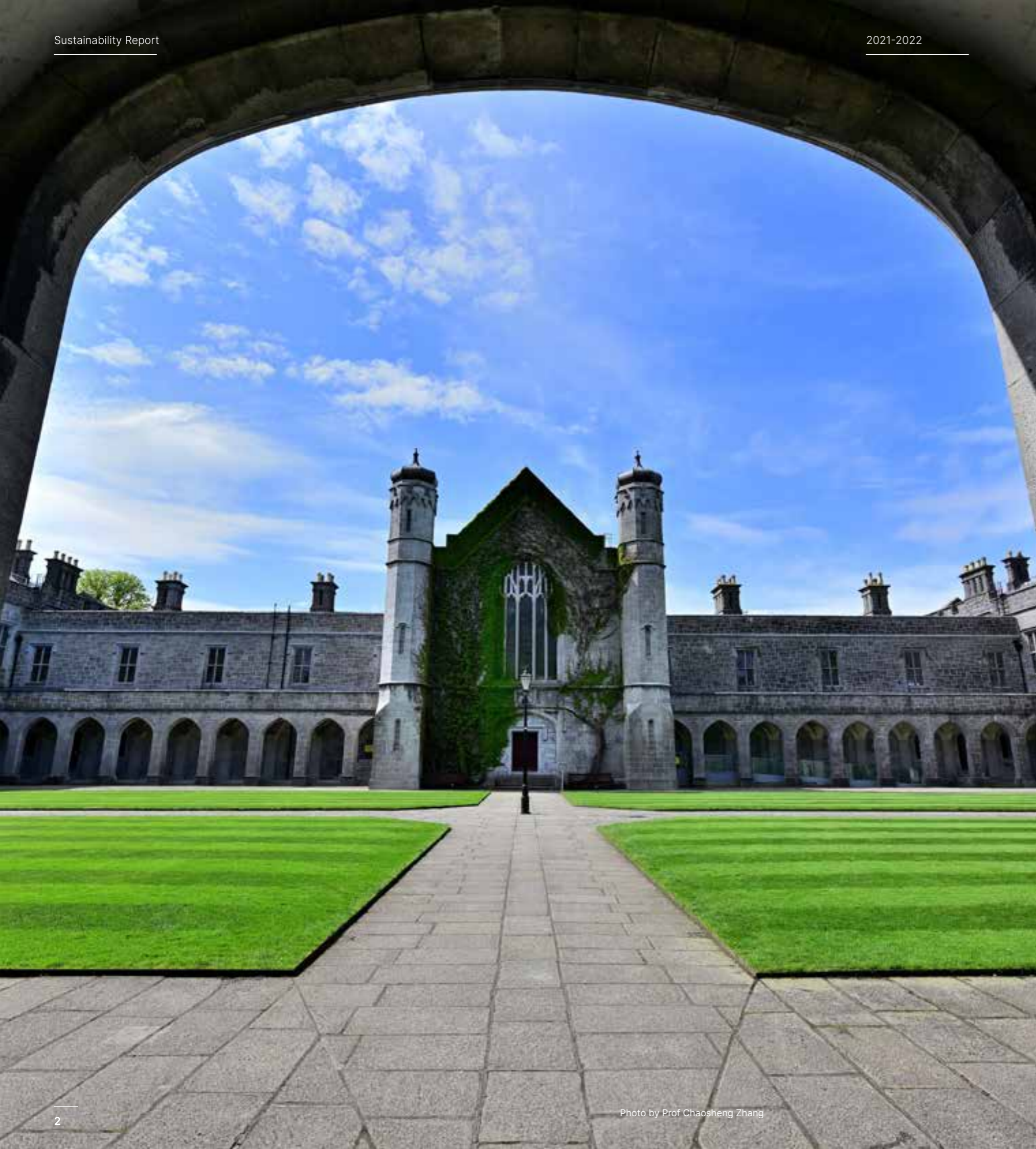
Sustainability Report

Academic Year 2021-2022

Leading the transition
to a sustainable future

 SUSTAINABLE DEVELOPMENT GOALS





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University of Galway Sustainability Highlights



Launch of New **Climate Action and Sustainability Policy**



University of Galway awarded a **Gold (STARS)** rating by (**AASHE**) and named a top performer in the **2022 AASHE Sustainable Campus Index**



SDG related publications have almost **doubled** since 2017



47th in the world in Times Higher Education Societal Impact Ranking 2022 making us the **most sustainable university in Ireland** by this measure



5th in the world in the Times Higher Education Societal Impact Ranking for SDG 12- Responsible Consumption and Production

Sustainable Living
in numbers

51% energy efficiency achieved since baseline year

400kW Solar PV installed

60 new bat boxes

Pollinator friendly pesticide code reduces the amount of herbicides on our sports pitches by **92%**



University of Galway
stands in solidarity with
Ukraine and its people

Photo by Prof Chaosheng Zhang

Introduction

Welcome to the University of Galway Sustainability Report for the Academic Year (AY) 2021 to 2022. First off, we are delighted to announce that we have changed our name; National University of Ireland Galway (NUI Galway) becoming **University of Galway** or **Ollscoil na Gaillimhe**, on the 1st September 2022. The renaming is part of our continued journey to demonstrate our sense of purpose, who we are as an institution and of being of our place; another way to progress our values of respect, excellence, openness and sustainability. In the words of our University President, Professor Ciarán O hÓgartaigh, *City and university have grown and our new name encapsulates that history and is a promise for the future.*

The analysis contained in this report covers the period 1st September 2021 to 31st August 2022. Section One of the report examines progress across our sustainability strategic theme areas of Research & Learning, Energy & Greenhouse Gas Emissions, Nature & Ecosystems, Built Environment, Health & Wellbeing, and Governance & Leadership. Section Two of the report provides examples of how our teaching, research, outreach and engagement activities are progressing each of the 17 United Nations (UN) Sustainable Development Goals (SDGs).

AY 2021-2022 marks our second academic year delivering the University of Galway Sustainability Strategy 2021-2025. Progress has been brisk and impactful. Our University Management Team agreed a new **sustainability governance framework** and an ambitious **Climate Action and Sustainability Policy**. We continue on our journey towards great energy efficiency; the Sustainable Energy Authority Ireland (SEAI) **Annual Report 2021** on Public Sector Energy Efficiency Performance highlights our 54.2% energy savings since the baseline year. Our inaugural **Carbon Footprint Report**, Travel Survey Report 2022 and Waste Characterisation Report 2022, together, provide us with valuable data to actively engage the campus community and determine the action needed to reduce our emissions. In November 2021, the week the world was meeting in Glasgow to agree urgent climate action, University of Galway received the inspiring news that it had joined an elite group of 133 universities across the world by being recognised with a **STARS Gold** rating for its sustainability achievements. The rating was achieved following a review by the Association for the **Advancement of Sustainability in Higher Education (AASHE)** under its STARS rating system. In addition, University of Galway is listed as a top performer in the **AASHE 2022 Sustainable Campus Index**. University of Galway's rank of first place in Ireland and 47th in the World in the Times Higher Education (THE) Impact Ranking 2022 is a further testament of our sustainability progress on the world stage. University of Galway is a signatory to the **SDG Accord** and a number of our sustainability case studies featured in the international **EAUC Annual SDG Accord Report 2022**.

While progress has been brisk, AY 21-22 was a year once again marked by unprecedented disruption and upheaval. At a global level, the Russian invasion of Ukraine on February 24, 2022 created a large-scale humanitarian crisis that is intensifying as the conflict persists. The University of Galway is deeply shocked and outraged by the invasion and condemn this unprovoked violence in the strongest possible terms. We view these actions as an assault on democracy and on the values of freedom, autonomy and respect. Our thoughts are with all those, including members of our campus community, affected by this conflict; our hope is that the dialogue and diplomacy will prevail over conflict and suffering. As underlined by Secretary General António Guterres, in an **address** to the UN the General Assembly in New York, there is a need for Member states of the United Nations to "unite in cooperation and solidarity" to support all those impacted "and to overcome this violation of international law".

Locally, the year was once again marked by continuing uncertainty caused by the COVID-19 pandemic. In addition, an attempted cyber-attack on our Information Technology (IT) systems that required the university to disconnect its computer system from the internet for a number of months, caused significant disruption and upheaval.

Despite these challenges, our university community continued to rally together, going above-and-beyond, seeking new, impactful and meaningful ways to engage, collaborate and work together. Our resilience, professionalism and dedication to excellence recognised, with the naming of University of Galway as the **University of the Year 2022** in the new edition of The Sunday Times Good University Guide. This prestigious award demonstrates our ability to not only recover our sense of normality from the effects of COVID-19, but also our resilience in coping with the disruption caused by the cyber-attack. The Sunday Times highlighted University of Galway's community-focused ethos and research response to COVID-19, including a commitment to supporting people through the emotional and physical impacts of the pandemic, as well as its role in preparing the world for future pandemics.

As we look to the year ahead, on the COVID front, the news is hopeful; we are slowly transitioning to a new normal as countries across Europe continue on the pathway to endemic COVID-19. For a year that began with the ongoing uncertainty of COVID-19 and the upheaval of a cyber-attack, the year is ending in hope, with the lifting of all restrictions, the success of the vaccine rollout programme across society and a greater understanding of the ways we can tackle the climate crisis. As AY 21-22 draws to a close, we are looking forward to shaping a new normal in September 2022; and playing our part in leading the transition to a sustainable future.

Our Journey Towards Sustainability



Photo by Prof Chaosheng Zhang

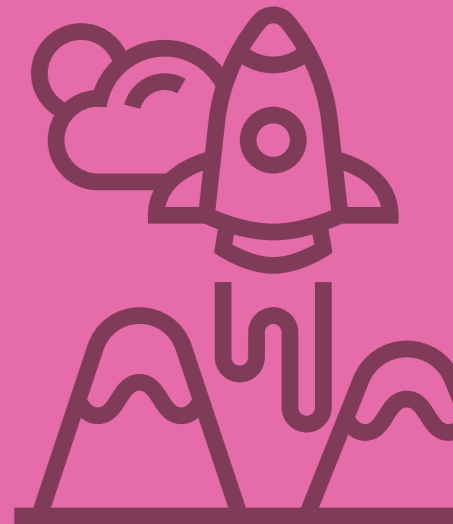
Vision

University of Galway will be a leader in the transition to a sustainable future. We will embed sustainability in our culture, operational policies and governance structures. As a bilingual university, we recognise that supporting linguistic and cultural diversity is essential to achieving the Sustainable Development Goals (SDGs). We will empower our communities to be champions of sustainability.



Mission: Learn-Live-Lead

Building on the work of CUSP, we will learn, live and lead sustainability across the university mission. The focus of learn is to continue to embed sustainability literacy into all aspects of University learning and research, the focus of live is to implement the principles of sustainability throughout campus operations and engagement activities; from a lead perspective the aim is to play a central and transformational role in attaining the SDGs by 2030. Our mission is organised around six themes: Research and Learning, Energy and Greenhouse Gas Emissions, Nature and Ecosystems, Health and Wellbeing, Built Environment, and Leadership and Governance.



Values

This Strategy is underpinned by the University's four core values:

- Respect – Respect for people, our purpose, our place and our planet.
- Excellence – We serve our region, our students and our society best through our high standards in research, teaching, support and engagement.
- Openness – We are open to the world, to cultural and to linguistic diversity. We also go out seeking new and deeper research co-operation, new ideas, new partnerships and new ways of engaging.
- Sustainability – We cherish our role as a university sustaining our communities and the next generation of citizens and of knowledge for our students and for our society.

Moreover, the work of this Strategy will be engaging, holistic and inclusive; students and staff will be at the heart of the sustainability journey.



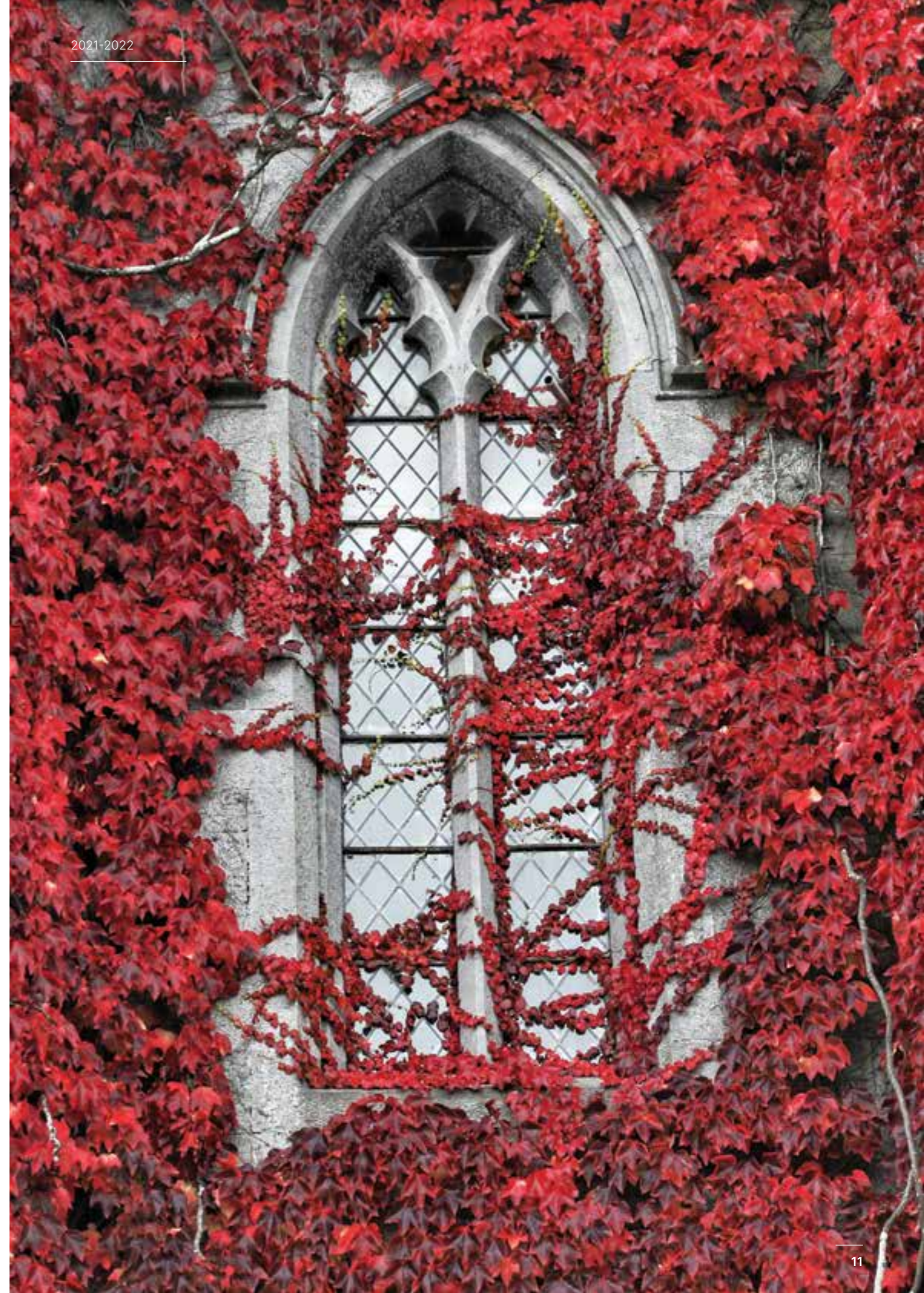
Governance & Approach

The University of Galway Sustainability Strategy 2021-2025 was developed following extensive engagement with the campus community through the Community and University Sustainability Partnership (CUSP). CUSP was established in 2015 under the direction of the Deputy President and Registrar to showcase how a university can become a role model for the transition to a more sustainable future. CUSP operates via a multidisciplinary board of over 30 students and staff - the CUSP General Board. The CUSP General Board meets 5 times per year and reports progress to the Deputy President and Registrar. All CUSP General Board members are members of at least one Sustainability Working Group. There are six Sustainability Working Groups organised around the six key themes of the **Learn-Live-Lead** Model. Each working group has a working group leader and a set of targets and objectives to achieve by 2025. The working group leader reports progress to the CUSP General Board on a quarterly basis. The Community and University Sustainability Officer (CUSO) reports to the Deputy President and Registrar and working with the CUSP General Board and Executive Board plays a lead role in the implementation of the University of Galway Sustainability Strategy. The University Sustainability Advisory Board provides strategic oversight of University of Galway's commitment to sustainability as detailed in the Strategic Plan, Sustainability Strategy and SDG Accord. The CUSP Executive Board is a sub-committee of the CUSP General Board and represents the CUSP General Board on the University Sustainability Advisory Board.

In May 2022, a revised **Sustainability Terms of Reference** was agreed by the University Management Team (UMT) and Údarás na hOllscoile. The revised governance structure centres on the establishment of a Sustainability Office led by a Director of Sustainability and supported by a CUSO, Climate Officer and Sustainability Data Analyst. The Sustainability Office works alongside the three multidisciplinary boards (CUSP General Board, CUSP Executive Board, and the University Advisory Board) to ensure milestone targets are achieved. The Director of Sustainability reports to the Deputy President and Registrar, who has overall responsibility for sustainability at University of Galway. The Director of Sustainability provides updates on Sustainability Strategy progress to the Standing and Strategic Planning Committee for the attention of Údarás na hOllscoile. The revised governance structure of CUSP is documented in the updated Sustainability Terms of Reference, May 2022.

3rd

The 2022 Sustainable Campus Index ranks University of Galway at **3rd** in the World for Coordination and Planning. 'This section covers sustainability planning, coordination and participatory governance' **(2022 Sustainable Campus Index)**



Research & Learning

Section 1:

Progress on the University of
Galway Sustainability Strategy

Highlights

- An updated review mechanism to determine sustainability content of modules introduced in AY 21-22 was developed. Learning outcomes are categorised as sustainability 'focused' or sustainability 'supportive'. Sustainability-focused learning outcomes are student learning outcomes that explicitly address the concept of sustainability and where there is an explicit focus on the interdependence of ecological systems and social/economic systems. Sustainability-supportive learning outcomes are student learning outcomes that include specific intellectual and practical skills (and/or attitudes and values) that are critical for addressing sustainability challenges, but do not explicitly address the concept of sustainability (e.g., systems and holistic thinking, change agent skills, interdisciplinary capacities, social and ethical responsibility). Findings from our 2022 analysis of module indicates that of our total number of modules with learning outcomes, 44% had sustainability 'supportive' hits and 14% had sustainability 'focused' hits.
- Our new **Introduction to Sustainability** module was available to students in 37 courses across 2 colleges in AY 21-22. The module is delivered with input from 13 staff members with different areas of expertise in sustainability from across the university. The overall aim is to develop the module as a university-wide module available to students in all four Colleges.
- Ongoing delivery of the Green Lab Principles and Practice graduate module continued in AY 21-22. A new summer school in **Ecology** is available. **Ecology: Living Landscapes in the West of Ireland**, aims to developing students' skills in evaluating the sustainable use and conservation of Ireland's ecological resources.
- Further analysis was undertaken to determine research alignment to the SDGs. For example, progress has been made in updating the University of Galway grant management system alignment to the SDGs, so that Principle Investigators will be required to select the SDGs that their

funded projects align with. We carry out an **analysis of research papers in the Scopus database** to determine alignment with the SDGs. Research staff are asked to complete the **My Research and the UN SDGs form**. **SDG impact case studies** demonstrate research projects alignment to the SDGs.

- Our focus and commitment to the SDGs can be seen by the increase in number of publications related to SDGs over the 5-year period 2017-2021; SDG related publications have almost doubled since 2017, with 80% of that growth occurring in the past 2 years. The SDGs that saw the most growth were SDG 3, SDG 9, SDG 13, SDG 6, SDG 12 and SDG 4. In 2021, 41% of all research papers in the Scopus database, authored by University of Galway affiliated researchers, are attributed to the UN SDGs. Read more in our report - **Analysis of University of Galway's SDG Research Output 2017-2021**
- Over the last 5 years, our highest impact publications are in SDG 3, SDG 5, SDG 11 and SDG 16. The field weighted citation index (FWCI) under each of these SDGs is above 2. This means that the total citations received by University of Galway researcher's publications is over twice the average number of citations received by all other similar publications worldwide related to SDG3, SDG5, SDG11 and SDG16.
- Continued use of Sulitest, a UN backed international sustainability literacy assessment method, with end of Semester tests delivered to cohorts including students undertaking BSS2013 and BSS2104 modules, as well as those on the MSc Environmental Leadership programme. University of Galway is part of an Expert Working Group to develop a Sulitest module bespoke to Ireland. University of Galway is featured in the 2022 Report from the Sulitest Movement, **Raising and Mapping Awareness of the Global Goals**.
- Sustainability has been introduced as part of the new Staff Induction Programme at University of Galway.

- A number of student-led and student-focused events hosted throughout the year including, Energy Awareness Week (21st to 25th Feb), Galway Environmental Festival (7th April), and Transition Year Summer Camp on the topic of Sustainability and Circular Economy (7th to 10th-June). An **articulate module in Energy Efficiency** and an **e-booklet providing an introduction to the SDGs** for students were developed by our student sustainability interns as part of the Student Sustainability Leadership programme.
- In AY 21-22, University of Galway again operated a **Laptop for Loan Scheme** to support disadvantaged students, in accessing computer devices. Building on the success of AY 20-21's Laptop Loan Scheme, **260 new laptops were made available to students**, with an additional 450 laptops being ordered for students in AY 22-23. Examples of target groups prioritised under the scheme included students disadvantaged by socio-economic barriers, students with disabilities, lone parents and students who are members of ethnic minorities.
- The SU continued to host a second-hand online bookstore throughout the year, where students can buy or sell textbooks covering every subject taught in the university. All books are on sale at a price that is lower than the original cost, offering students a low-cost and sustainable way to buy college materials.
- University of Galway is a **University of Sanctuary**, a movement aimed at promoting the inclusion of International Protection Applicants, refugees and Irish Travellers within the community in meaningful ways. As part of the University of Sanctuary initiative, University of Galway operates a specific University of Sanctuary Scholarship Programme. The University of Sanctuary Scholarship Programme is designed to increase participation at University of Galway for International Protection Applicants, refugees, vulnerable immigrant groups, and Irish Travellers. For AY 21-22, 12 University of Sanctuary scholarships were filled, including 6 at undergraduate level and 6 at postgraduate level.

- University of Galway UMT have approved the signing of a memorandum of agreement with the **Ukrainian Global University**. This partnership is symbolic of our desire to support students and scholars during this time of unrest.
- Work is ongoing on the **Designing Futures** initiative, which aims to support students to design their own possible futures through a personalised skills development pathway. Several transdisciplinary modules have been developed for and integrated into this initiative, including the **Introduction to Sustainability Module**. This widens the availability of the module and allowing more students to explore the concept of sustainability across disciplines. This initiative also includes Vertically Integrated Projects, which bring together students from different subject areas with diverse backgrounds and skills to address a variety of issues, including sustainability-focussed projects.
- The University is in the process of becoming a **Leave No Trace Ireland** member and implementing the **Leave No Trace Principles** on its campus. It is further working on becoming an accredited training centre, in collaboration with Leave No Trace Ireland, to provide quality tuition in Leave No Trace Principles.



University of Galway students learning about the inner working and design of a tidal turbine blade. Photo credit: Prof Jamie Goggins

Strategic Aim

Through our teaching and research activities, using the UN SDGs as a framework, we will develop the next generation of students, researchers and innovators for tackling society's evolving sustainable development challenges. We will embed sustainability across our learning, research and the student experience so that individuals across our entire campus community gain the necessary knowledge and skills to become sustainability role models and leaders.



Energy and Greenhouse Gas Emissions



Photo by Prof Chaosheng Zhang

Highlights

- University of Galway **exceeded the Public Sector Energy Efficiency** target of 33% energy efficiency by 2020, reaching our 40% target. The **Sustainable Energy Authority Ireland (SEAI) Annual Report 2021 on Public Sector Energy Efficiency Performance**, published in November 2021 highlights our 54.2% energy savings since baseline year. For 2022, we reached a figure of 51% savings as reported through the Sustainable Energy Authority Ireland (SEAI) Monitoring & Reporting (M&R) system. While COVID-19 continued to have some impact on energy use across the campus, COVID-19 related energy savings are not included in this figure.
- In AY 21/22, we invested €2.2 million in infrastructural energy projects including energy saving equipment and technologies. For example:
 - The expansion of our Solar Photovoltaic (PV) Installation to achieve 400Kw of Solar PV including; completion of the Áras de Brún solar project and installation of 120 kW Solar PV panel on Áras na Macléin.
 - Expansion of our LED lighting programme to reach an installation figure of over 6,000 LED light fittings across campus since the project commenced in 2015.
 - The installation of additional electric car charging points with 22 points now installed.
 - An improvement in control strategies across older building stock and a programme to replace equipment that is no longer energy efficient, for example, boilers, pumps, air-handling units, fume cupboard fans, light fittings and electric motors.
 - A total of 4 combined heat and power units have been introduced across the campus.
 - Installation of new energy efficient cooling to the main university data centre, having a calculated reduction of 20% of the primary energy use.
- Our use of heating oil continues to be phased-out. Heating oil consumption on campus has been reduced to approximately 25,000 litres and is confined to diesel generators and housing units on Distillery Road. Housing units will be retrofitted with heat pumps in 2023.

- University of Galway is a leader in the Energy Efficiency and Decarbonisation Pathfinder Programme (EEDPP) for the Higher Education sector. Pathfinder 1 is an energy and carbon-efficient upgrade of Áras De Brún with a vision of achieving a Nearly Zero Energy Building (NZEB). The project is fully completed and featured as a case study in the [2022 SDG Accord Report](#). A deep retrofit of the Insight building in the Dangan campus will be carried out as part of Pathfinder 2.
- Recognising that reducing energy consumption and improving energy efficiency are at the forefront of the global climate change agenda, we received re-certification to [ISO 50001:2018](#). This is an international energy management standard aligned to SDGs and recognises our efforts to use energy more efficiently and to achieve continuous improvement in energy performance.
- In AY 21-22 researchers from the College of Science and Engineering, working in conjunction with Buildings and Estates and the Office of the Deputy President and Registrar, led the development of an inaugural baseline [carbon footprint for University of Galway](#). This baseline is feeding into the creation of a climate action plan and a roadmap to net-zero greenhouse emissions for the University.
- Drawing on the findings from the University of Galway Travel Survey 2022, University of Galway business travel related emissions were collated and reported to the SEAI M&R system for the first time. Business travel is a significant contributor to our Scope 3 emissions and work has commenced on the development of a new travel policy for the university to cut emissions from this category.



University of Galway leading the way with Solar PV projects. Photo Credit: Michael Curran



Guided tour of our energy facilities as part of the student led Energy Awareness Week 2022. Photo credit: University of Galway Energy Society.

- We continue to demonstrate excellence in our research into energy saving technologies. For example, the Sustainable & Resilient Structures Research Group in the MaREI Centre, Ryan Institute & School of Engineering at University of Galway was selected as a finalist in the Energy Research and Innovation category in the SEAI Energy Awards 2021. The core expertise of the group is in developing sustainable and resilient structures for buildings and energy infrastructure. University of Galway was shortlisted as a finalist in the Energy Manager/ Energy Team of the year category of the SEAI Awards for the fourth consecutive year. The Energy Team were shortlisted in 2022 for their 2030 Zero Carbon Action Plan along with other energy and carbon reduction projects.

- Researchers from the College of Science and Engineering working in conjunction with Building and Estates are developing a pilot innovative/intelligent ground source heat pump infrastructure to decarbonise heating infrastructure for University of Galway, targeting An Sport Ionad as the net thermal energy beneficiary. This is part of the [H2020 EU GEOFIT](#) project that will provide innovative teaching/ research infrastructure in ground sourced renewable energy systems and innovative artificial intelligence (AI) based software optimisation system. The project will be fully complete by December 2022.
- Widespread staff and student energy campaigns and promotions were hosted throughout the year. For example, 12 Days of Energy Christmas campaign focused on seasonal tips and advice to switch off and

- save and the [#SummerEnergySwitchOff](#) campaign encouraging students and staff to switch off and unplug electrical appliances before taking summer leave. [Energy Awareness Week](#) took place on the week beginning 21st February 2022, organised by Galway Energy Society in conjunction with the CUSP team. Aimed at increasing energy awareness among students and staff, many engaging events took place throughout the week including a tour of campus energy facilities, a group cycle, a plant-based potluck, and an electronics collection.
- University of Galway is part of a [Decarbonisation Zone for Galway City](#), working in conjunction with Galway City Council seeking to decarbonise the Westside area of the city.

Strategic Aim

Building on past progress, we will continue to exceed targets set out in the Public sector Energy Efficiency programmes and act as a leader in the sector through project demonstration, community engagement and collaboration with energy users across our campuses. We will embrace proven new technologies to increase our buildings' energy efficiency and Building Energy Rating by integrating sustainability in all Buildings and Estates planning and development under the auspices of the Climate Action Plan. We will develop a pathway to move ambitiously towards carbon neutrality by 2030.



Nature & Ecosystems



Photo by Prof Chaosheng Zhang

Highlights

- There has been ongoing work to progress actions set out in the [University of Galway Biodiversity Action Plan 2021-2025](#). New wildflower enhancement schemes were introduced across the campus, 60 new bird boxes has been installed, insect hotels introduced and a new orchard has been established beside the Orbsen Building.
- In conjunction with Buildings and Estates, Galway Bat Group, Terryland Men's Shed, Explore Project, OneStepCloser and GreenCampus, 60 new bat boxes were made and installed.
- Approximately 20 bee orchids, as well as numerous common spotted and pyramidal orchids, were recorded in the meadows in front of the Alice Perry Engineering Building in June 2022, which is a testament to the success of pollinator friendly actions undertaken across the University of Galway campus grounds.
- University of Galway sports pitches are managed in accordance with actions set-out in the All-Ireland Pollinator Plan - Pollinator Friendly management of Sports Clubs. A pollinator friendly pesticide code has been adopted, reducing the amount of herbicides on the sports pitches by 92%. Off-pitch grass continues to be managed for pollinators by developing short and long flowering meadows.
- Efforts to further minimise our use of chemicals are ongoing with trials using environmentally friendly weed prevention measures. No trials so far have been satisfactory, showing how fine a balance it is to manage for biodiversity. We will continue to investigate and trial other alternatives.
- Habitat enhancement measures for brown hairstreak butterfly are being implemented (*Thecla betulae*). Breeding was confirmed again on campus, with a student project demonstrating significant preference for young blackthorn. A management plan is in place to maintain sufficient young blackthorn, and environmental science staff and students continue to survey for suitable habitat and presence of the butterfly elsewhere on campus.
- A student on the MSc Sustainable Resource Management Policy and Practice course identified and mapped areas of the campus grounds that are suitable for beetles and fungi. These areas include dead and decaying

Strategic Aim

To become a role model for our positive impact on the environment. To continue to enhance the management of our campus environment in ways that are sensitive to our ecosystems, in keeping with our aspirations to be an exemplar in biodiversity research and learning.



tree stumps, as well as fallen branches, which are home to a wealth of wildlife such as longhorn beetles and specialist fungi. This map will be incorporated into the biodiversity action plan.

repointing existing paving; installing climbers such as Honeysuckle and Jasmine around a pergola; applying bark, mulch and edging around planted beds; installing composite roofed picnic benches for non-commercial, community use and replacing existing benches with sustainable seating.

- Another MSc Sustainable Resource Management Policy and Practice student carried out a pilot monitoring to start a baseline record of calcareous grassland on campus.
- Additional student projects identified a significant number of anthills and oak regeneration on campus.
- Buildings and Estates have collaborated with teaching and other staff to identify areas suitable for outdoor teaching. Picnic benches and large tree trunks have been placed to facilitate this and are already being used.
- Work has commenced on upgrading a number of courtyard and garden spaces with outdoor, non-commercial social seating and planting with pollinator friendly, permaculture and sensory plant themes. The overall aim is to create opportunities to connect students and staff to the natural environment for health and wellbeing. The project involves enhancing permaculture by planting pear and plum trees and soft fruits like blackcurrants, raspberries, gooseberries;

- Members of the Nature and Ecosystems team in conjunction with the An Taisce Climate Ambassadors Programme led a biodiversity, heritage and sustainability walk on the University of Galway campus grounds as part of the Climate Ambassadors programme in June 2022. Approximately 50 people attended and the feedback from the event was very positive with plans to host further events in the coming months. Our members also hosted a **Bat Walk** in conjunction with Friends of Merlin Woods as part of National Heritage Week 2022.
- A working group in conjunction with **Leave No Trace Ireland** has been established to progress University of Galway as a Leave No Trace Accredited Training Centre. The overall aim is to embed Leave No Trace skills and ethics in University of Galway course modules and fieldwork to help protect our environment and outdoor spaces and promote responsible, sustainable outdoor pursuits and recreation.

CUSP University of Galway in conjunction with the An Taisce Climate Ambassadors Programme lead a sustainability and heritage walk on the campus grounds. Photo Credit: Gary Tyrrell, An Taisce



- University of Galway is a champion of the **Galway National Park City initiative**. Galway National Park City in conjunction with Tuatha (Terryland Forest Park volunteers) and University of Galway Energy Society held a sustainability festival in Terryland Forest Park on 7th April 2022. The aim of the event was to highlight local environmental groups working to make Galway a cleaner, greener, more sustainable place. Local groups had the opportunity to share their work with members of the broader Galway community through informative stalls, activities, and live demonstrations. Some highlights of the day included a free bike service station by An Mheitheal Rothar, a live demonstration on how to maintain the natural environment by Leave No Trace Ireland, live music

by local traditional musicians and a local flora and fauna exhibition by University of Galway Biodiversity staff.

- University of Galway staff recorded the sounds of a biodiverse campus. This had high traction on social media, showing that many people are interested in our biodiverse campus. The **podcast** has also been used in teaching.
- As part of the Kylemore Abbey partnership, students from across the School of Natural Sciences are working on biodiversity stewardship projects. In addition, research has been carried out by Earth and Life Sciences staff and students.



Photo by Prof Chaosheng Zhang



Health & Wellbeing

Highlights

- The University of Galway maintains accreditation with the **Keep Well Mark™**, a workplace wellbeing accreditation from Irish Business and Employers Confederation (IBEC). At the 2022 mid-term review meeting, the review team pointed to our 'significant progress since the remote assessment in 2021'.
- In June 2022, the inaugural meeting of the Wellbeing Ambassador Membership took place and the Terms of Reference for the Ambassador programme was agreed. The committee has a current membership of 54 staff from across all areas and grades within the University.
- Work continues on the development of a Hybrid Working Policy; this is an emerging area and requires balancing the University needs as we return to on campus teaching for this new academic year. Work underway on the development of a Bereavement Policy and a Staff Mental Health Policy.
- A number of staff training and awareness events took place throughout the year. For example, Financial budgeting related training; Mortgage clinic; Menopause in the workplace; Grief at work training; Virtual cooking demonstrations and; a Be Active pilot for staff in conjunction with the School of Physiology. Collaborative, campus wide events took place to support World No Tobacco Day, National Workplace Wellbeing week and the Mental Health Ireland Hello How Are You wellbeing initiative. The University of Galway continues to work in partnership with the Galway Sports Partnership promoting physical activities which are beneficial to our university community.
- There has been ongoing work throughout the year to deliver training on mental health literacy and suicide awareness, for all students and staff. The demand and delivery of Students in Distress Training is growing; Resilience training was delivered in a number of undergraduate and postgraduate programmes as part of the Students Resilience Programme; **Students in Distress**, Mental Health First aid, **Seas Suas** and **Active Bystander Training** programmes delivered through-out the year. **ATS mentoring** is the university's largest peer mentoring programme with over 2,000 mentees and 300 mentors participating on the programme. A new **Speak-out** tool has been launched to show zero tolerance to bullying and harassment.

- Céim is a co-curricular academic peer-learning programme that supports first year students' transition to higher education, health and wellbeing, academic progression and transferrable skills. Céim was offered to approximately 1900 student in AY 21-22. After a year of online peer learning, CÉIM successfully transitioned back to in-person delivery this year.
- In January 2022, the university **launched** a new publicly available online learning hub to promote educational and information resources on sexual consent, the first-ever publicly available online national resource on consent awareness and learning in Ireland. The hub was developed by Active* Consent in partnership with the Department of Justice and the Department of Further and Higher Education, Research, Innovation & Science. The hub hosts a variety of consent educational tools and awareness-raising resources, including an eLearning module on sexual violence and harassment; a staff awareness video; answers to frequently asked questions on consent; and more.
- In February 2022, the university launched a new well-being programme to support students' physical and mental health and research its impact. **Mind Body Boost** is an evidence-based intervention, devised to support young people in managing their mental and physical health. The project includes partners from six European countries and is co-funded by the European Commission under the Erasmus + Sport programme. The project is aiming to address social isolation, poor lifestyle balance, mental health difficulties and low levels of physical activity among young people. The programme is designed to be accessible and welcoming for third level students with low levels of physical activity and mental health struggles, and who have had limited opportunities to participate in physical activity. The feedback from the pilot programme rolled out across Europe is overwhelmingly positive.
- There has been ongoing work throughout the year to develop social spaces that connect students and staff to the natural environment for health and wellbeing. Refer to Nature and Ecosystems section for further details.
- The SU hosted many campaigns and awareness days throughout the year focusing on physical, mental, social and sexual health and wellbeing. For example, Mental Health Week took place in November 2021 encouraging students to look after their mental health, to raise awareness and to recognise the signs of mental health issues. The first Consent week took place in February 2022. Events included free rapid HIV testing, an Active* Consent workshop, disclosure training and an image-based sexual abuse workshop. Free Sexually Transmitted Infections (STI) testing was available throughout the week. Brain week took place in March 2022 and included Epilepsy Ireland Seizure Training, a talk on bipolar disorder and a talk on addiction. To mark Irish Traveller Ethnicity Day there was an unveiling ceremony of new artwork in the SU by Mincéirs Whiden Society. The SU hosted walk and talk events throughout Semester 1, providing students with an opportunity to spend time outdoors, exercise and meet their SU officers and other students. Free online stress buster workouts by before the Christmas exams encouraged students to keep active during the exam period. Walktober in October 2021 and Marchathon in March 2022 encouraged students to keep their steps up throughout the year.
- During AY 21-22, more than 900 participants from the university took part in the UniCoV project, a programme testing the efficacy of COVID-19 testing in Irish universities. UniCoV carries out large-scale comparative analysis of COVID-19 testing technologies to inform the development of early warning systems for future disease outbreak, prevention and control. The university is the lead site for the project. A walk-in vaccination clinic



Photo Credit: Xiaojian Zhen

was established on campus in September 2021, to encourage students and staff members who weren't already vaccinated to avail of the facility, in order to make the campus as safe as possible. Free COVID-19 antigen tests were distributed to students throughout Semester 2, to encourage self-testing and early self-isolation.

- To mark World Autism Day, the university opened the **Cubbie Sensory Hub**, a safe space on-campus for students and staff to balance sensory needs. The opening of the Cubbie forms part of the university's wider efforts to break down barriers to inclusion by investing in facilities and supports to make the campus friendlier for autistic people.

Strategic Aim

Using a whole-of-university approach, improve the health and wellbeing of students and staff who live, learn, work and play in our community by helping them to attain full physical, social, sexual and mental health and wellbeing.



Built Environment

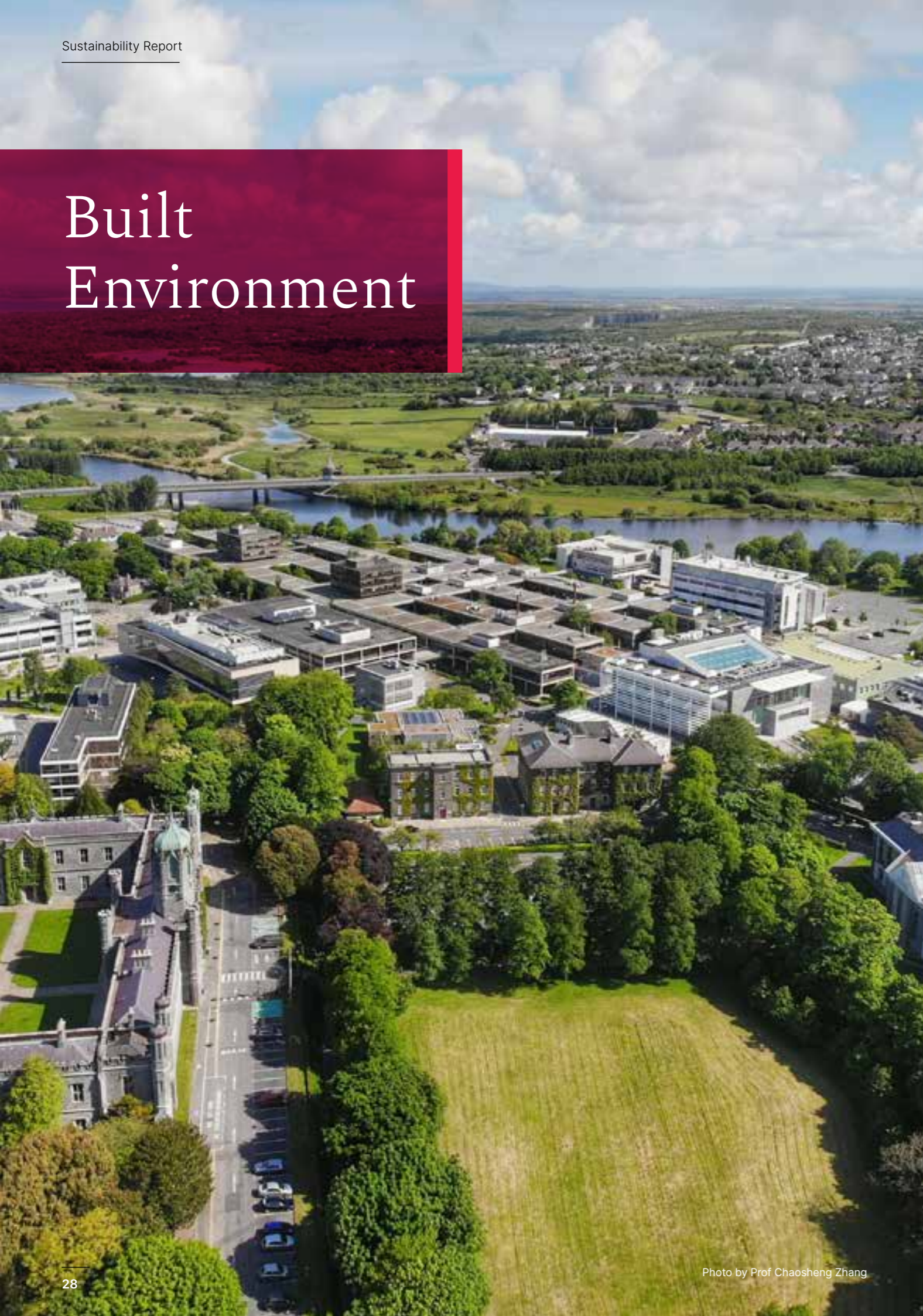


Photo by Prof Chaosheng Zhang

Highlights

WATER

- Our University of Galway **Water Stewardship Charter**, sets out our commitment to maintain and achieve further reductions in water usage on campus and to highlight the importance of water as a critical and limited resource. The Charter sets out our commitment to reduce water usage on campus by 10% by 2025; we reached a figure of 6% in AY 21-22. As a participant in the **Water Stewardship Programme**, University of Galway is working in conjunction with **Irish Water** to 'lower our water use and operating costs while protecting the environment'.
- Progress has been good in our on-going programme of installing water-saving devices in laboratories, kitchens, workshops and WC facilities across the campus e.g. low flow taps, dual flush WC's, time control on urinal flushes and showers, and low flow shower heads.
- As part of our Building Management System (BMS), the plumbing maintenance team installed 16 No. additional digital water meters for data collection. Our aim is to extend the programme of measurement, analysis and efficiencies to all significant buildings on campus by 2025.
- Water is part of the new data collection, monitoring and verification system pertaining to ISO 50001:2018. A new spreadsheet has been developed capturing the volume of water consumed across the campus and data is compared to bills issued by Irish Water. This allows us to calculate accurately our water carbon footprint.
- All rainwater harvesting systems have been tested and upgraded where required.
- Collaboration with the **My Green Lab** programme to reduce unnecessary water usage in scientific laboratories across the campus.
- Delivery of drinking water stations across the campus is ongoing in AY 21-22 with the installation of 4 additional indoor stations and 3 outdoor stations located outside the Human Biology Building, Kingfisher and Alice Perry Engineering Building.
- Beach clean ups were organised throughout the year by the SU, Marine Society and Energy Society. For example, the SU organised beach cleans every month throughout the year, adopting a different location each time to try to make Galway a cleaner, greener place. As well as benefiting the environment, this monthly event also served as a social event a chance to meet like-minded students.



Photo credit: Michael Curran

Strategic Aim

To raise awareness with staff, students and visitors of water as a critical and limited resource that must be used responsibly. To eliminate all unnecessary water usage on campus, to maintain and further improve the water usage reductions achieved on campus in the last period. To eliminate the reliance of staff, students and visitors on single use plastics for water consumption.



Highlights

WASTE

- University of Galway ranked 5th in the world in the THE Impact Ranking for SDG12 - Responsible Consumption and Production. Our University of Galway **Waste Management Plan** published in 2022 outlines the university's performance, current policies, future initiatives and commitments pertaining to sustainable waste management. Our **Waste Reduction Reuse and Recycling Guidelines** published in November 2021 sets out the University's processes, procedures and initiatives to ensure compliance with environmental legislation and best practice and encourages our waste producers to reduce the overall waste that they produce, and prevent waste production wherever possible.
- Through AY 21-22, the combination of COVID-19 and the cyberattack led to reduced campus footfall and an associated reduction in the quantity of waste generated based on pre-COVID levels. The volume of waste produced on campus was approximately 45% less than the normal amount. The recycling figure for AY 21-22 is 53% remaining consistent with the figure for AY 20-21.
- At the beginning of 2022, the University progressed to incorporating a 'Whole Campus' approach to waste data collection. This involved a collaborative approach by Commercial Services and Buildings & Estates to gather all necessary data and garner complete picture of the waste and recycling activity across the site.
- Waste characterisation surveys were carried out in January 2022 that highlighted the negative impacts of COVID-19 on our recycling efforts. For example, a significant increase in disposable coffee cups and the presence of large amounts of masks, gloves and sanitising wipes. Other

findings included an increased quantity of paper and plastic bottles in the general waste stream and a notable increase in laboratory related single use plastics discovered in the general waste stream.

- University of Galway is committed to the target of banning single use plastic convenience items by 2025 and is in the process of aligning all catering outlets to the 2GoCup deposit and return scheme. We are proud to be the first university in Ireland taking part in this scheme, which involves paying a €1 deposit for the **2GoCup**, which will be returned to the customer once the cup is brought back to any of the campus catering facilities. University of Galway is supporting a Galway City Council led campaign to Reuse your Mug. By providing student volunteers through the ALIVE programme to support the campaign and participating in the 2GOCups scheme, we are supporting a reduction in single use cups throughout the city.
- The roll-out of green lab certification across campus has gathered pace during the last 12 months. First to be awarded MGLC at the highest 'green' banding, was the Molecular Parasitology lab, based in the Orbsen Building. The Carbohydrate Signalling group was the next to achieve a 'green' MGLC. The Earth & Ocean Sciences team achieved an impressive 'green' MGLC for four labs and platinum-level for two. July and August saw the awarding of 'gold' GLC to the Microbial Ecology Lab, and 'platinum' to the Pharmacology labs and the Mass Spectrometry Core Facility.
- Since May 2022, University of Galway has been partnering with Novelplast Teoranta Ltd, Technological University of the Shannon, Envetec Ltd, and the Waste Resource Office for Connaught and Ulster, in an eight-month **CirculÉire Innovation funded project** that aims to circularise

single-use lab plastics on the island. Between March and July 2022, researchers based in the biomedical sciences building collected 80 kg of discarded polypropylene (PP) tubes, pipette tip box lids and PCR plates. This demonstrator project aims to show that decontaminated single-use PP resin can be flaked, pelletised and remoulded into recycled PP lab product.

- University of Galway is participating in the **Campus Living Labs Sustainability Project**; a 2- year joint project delivered by the Irish Universities Association (IUA) in partnership with the National Waste Prevention Programme (NWPP) of the Environmental Protection Agency (EPA). Campus Living Labs is aimed at reducing waste, improving recycling practises and driving circular economy efforts in Irish universities.
- In November 2021, a new organic waste circular economy process was introduced. Food waste from catering kitchens and green waste from the campus grounds are mixed together at the Barna Waste Recycling Facility and converted into a fertiliser that is returned for use on the campus grounds. The project is a great example of the Circular Economy and reduces our use of artificial and imported fertilisers. A Masters student has documented the process as part of her thesis and created a **promotional video**.
- Buildings and Estates have set up an initiative to recycle and repurpose office furniture for redistribution to local charities, e.g. COPE Galway and Ability West. Since

the start of October 2021, €14k worth of furniture has been repurposed and donated; a worthwhile initiative that reduces waste, promotes the circular economy and provides support to local charities.

- Glassary** is a student led equipment reuse initiative, part of the ALIVE volunteering programme, that encourages University of Galway students to divert unwanted household items from landfill. Equipment collection points are set up at student accommodation centres across the campus and students are encouraged to donate unwanted white goods, household items and clothing. The items are donated to charity, or stored for the benefit of incoming students. This circular economy initiative is now in its third cycle.
- The University of Galway **Student Pantry** is a student led initiative where leftover food is collected from supermarkets and re-distributed to students. The food is sourced through FoodCloud, a system creating links with local supermarkets to redistribute food and reduce food wastage. The collections consist of surplus food, food with damaged packaging, end of line items and food that is nearing its best before date. As well as a valuable food waste reduction initiative, the food has proven invaluable to many University of Galway students struggling to make ends meet. Upon opening its doors in early 2022, the Student Pantry was met every week by a long queue of people and the food was cleared out within minutes.

Strategic Aim

Prioritise prevention of waste at every opportunity through eco-design, reuse and repair. Recycle and re-use waste in ways that promote resource efficiency, reduce cost, protect health and the environment and move us towards a circular economy.



Students from University of Galway Energy Society organise Anti-Fast Fashion Show to highlight the environmental impact of the fast fashion industry

Photo credit: University of Galway Energy Society

Highlights

TRANSPORT

- The Transport working group is leading the development of a new University of Galway Travel Plan 2022-2025. A Campus Community Travel Survey was carried out in February 2022. Findings indicate no real shift in the modal share over the last 8-10 years where car use is still the dominant form of transport for staff with over 50% of staff and 25% of students commuting to university by car. 18% of students and 21% of staff live outside Galway city due to accommodation issues. Remote working for staff could save 40% staff related commuting emissions. Consultation is taking place on a list of actions to address survey findings that will feed into an updated Travel Plan 2022-2025.
- Our Business Travel Report for SEAI indicate that business car journeys reduced by 69% between 2019 and the end of 2021. Air travel reduced by 93% over the same period. Travel figures are expected to increase again throughout 2022/23 with the lifting of COVID-19 restrictions.
- We are committed to continuing the process of upgrading our university transport fleet with electric vehicles. We continue to seek funding to replace diesel vehicles with electric alternatives. We have encountered ongoing challenges fulfilling an electric vehicle order initiated in 2021 due to supply issues associated with a component for the vehicle's battery.
- The Cycle to Work scheme and the Travel Pass scheme are promoted at all Employee Relations Roadshows. The Cycle to Work scheme includes €1250 for a bicycle and €1500 for an E-Bike. The Travel Pass Scheme allows for the purchase of annual bus, rail and Luas tickets through University of Galway, with a saving of up to 52% on travel costs.



- *Marchathon, Walktober* and Smarter Travel Team Cycle are examples of Smarter Travel Workplaces and Campus walking challenges hosted by the University of Galway SU during AY21-22. Smarter Travel Team Cycle took place in September and *Walktober* ran through-out October. *Marchathon* is a team challenge, with teams of 3-6 people signing up and aiming to take as many steps as possible during the month of March. 25 teams took part in *Marchathon*, 35 teams in *Walktober*, and 6 teams took part in the *Smarter Travel Team Cycle*.

- A planning application to Galway City Council for 3 No. new universally accessible, family friendly, covered bicycle parking facilities at 3 locations across the campus was successful and work has started on their installation.
- We are exploring introduction of Bleeper Bikes; to provide a dedicated Bike Sharing scheme for the University community.
- €1 million euro has been invested to enhance web/video conferencing facilities and promote video conferencing and collaboration technologies as viable alternatives to physical travel. In August 2022, upgrades were carried out to 24 classrooms, 6 meeting rooms and a science laboratory.

Strategic Aim

Support day-to-day operations and planned growth of the university, while minimising traffic impact and enhancing mobility and sustainable travel options. Working in collaboration with local government and other partners, endeavour to reduce the carbon footprint of transportation.



Governance & Leadership

Highlights

- University of Galway awarded a Gold **Sustainable Tracking and Rating System (STARS)** rating by the Association for the Advancement of Sustainability in Higher Education (AASHE). A gap analysis was completed, identifying the actions needed to achieve the Platinum STARS Rating in the future. The gap analysis fed into the AY 21/22 and AY 22/23 action plans.
- In May 2022, University of Galway published its updated **Sustainability Terms of Reference**, which sets out the governance structure for the implementation of our sustainability agenda. A major aspect of the update includes the establishment of a Sustainability Office led by a Director of Sustainability, which is expected to be in place in AY 22-23.
- In August 2022, University of Galway is named as a top performer in the **2022 AASHE Sustainable Campus Index**.
- The 2022 Sustainable Campus Index (SCI) produced by Sustainability Tracking Assessment and Rating System (STARS) ranks University of Galway at 3rd in the World for Coordination and Planning, where this category is defined as "Coordination and planning help institutions organize, implement and publicize sustainability initiatives. These efforts provide the infrastructure to foster sustainability, establish priorities, guide decision making and budgeting, and clarify a vision for a sustainable future. This section covers sustainability planning, coordination and participatory governance."
- University of Galway ranks 47th (out of 1406 institutions i.e. Top 3.3%) in the world in the Times Higher Education (THE) Societal Impact Ranking 2022 making us the most sustainable university in Ireland by this measure. In addition to its top 50 Overall Impact rank, University of Galway was ranked 5th in the world for SDG12: Responsible Consumption and Production, ranked 31st in the world in both SDG 11: Sustainable Cities & Communities and also SDG 14: Life Below Water, in addition to a number of other top 100 and top 150 ranks in other SDGs. The overall ranking for 2022 is a significant improvement for the University of Galway, where it was ranked 82nd (out of 1118 institutions i.e. Top 7.3%) in the Times Higher Societal Impact Rankings in 2021 and 68th (out of 768 i.e. Top 8.9%) in 2020. In total, University of Galway was ranked under 11 of the SDGs in 2022, up from 9 of the SDGs in 2021 and up from 7 of the SDGs in 2020.
- University of Galway increases its participation in International partnerships and is an active member in the **ENLIGHT European University network**, the **Environmental Association of Universities and Colleges (EAUC)** the **Association for the Advancement of Sustainability in Higher Education (AASHE)** and **UN Academic Impact**.
- ENLIGHT Presidents, including University of Galway President Prof Ciarán Ó hÓgartaigh, endorse a joint **Sustainability Engagement**, committing the nine universities to being key contributors of sustainable development and to leading by example with concrete actions in governance, education and research.
- As a signatory to the **SDG Accord**, University of Galway continues to fulfil its commitment to 'share our learning' and 'account to both local and global communities our progress toward the SDGs'. In May 2022, University of Galway submitted its SDG Accord Annual Report 2022. Its three case studies (Energy and carbon-efficient upgrade of a teaching and research facility; developing a new interdisciplinary

Strategic Aim

CUSP will provide leadership in the transition to a sustainable future through our teaching, research, professional support services, actions and impacts. We will sustainably manage our campus and all our external affairs and become a role model for similar organisations, by our positive impact on the environment and society. We will develop our graduates as future sustainability leaders in Ireland and globally, developing the next generation of students, researchers and innovators for tackling the world's evolving sustainable development challenges.



module on sustainability; new solutions for efficient, EU-wide pandemic management) feature in the international **EAUC SDG Accord Annual Report 2022**.

- The University's approach for progressing the SDGs is featured as a case study in Ireland's **Second National Implementation Plan for the Sustainable Development Goals 2022 – 2024- Draft for public consultation**. The final report will be published in October 2022.
- In October 2021, University of Galway launched a new **Climate Action and Sustainability Policy** (QA205) to formalise the target of net zero carbon emissions, agreed by the University Management Team in June 2021. In line with the *'Climate Action and Low Carbon Development (Amendment) Bill 2021'*, University of Galway has committed to pursue and achieve no later than 2050, the transition to being a university with net-zero greenhouse gas emissions that is climate resilient, biodiversity-rich and environmentally-sustainable. **Climate Action and Sustainability Policy** (QA205) also requires that University of Galway embed the SDGs, targets and indicators into all University of Galway's major efforts, including education, research, leadership, professional support services, operations and engagement activities.
- The roll-out of green lab certification across campus has gathered pace during the last 12 months. First to be awarded 'My Green Lab' certification (MGLC) at the highest 'green' banding, was the Molecular Parasitology lab, based in the Orbsen Building. The Carbohydrate Signalling group was the next to achieve a 'green' MGLC. The Earth & Ocean Sciences team achieved an impressive 'green' MGLC of

four labs and platinum-level in two. July and August saw the awarding of 'gold' GLC to the Microbial Ecology Lab, and 'platinum' to the Pharmacology labs and the Mass Spectrometry Core Facility. News of the above achievements has been disseminated via **Irish Green Labs website**, currently chaired by Galway Green Labs founder and University of Galway academic and launched on 'Earth Day', April 22nd, 2022.

- Our university continues to demonstrate Public Sector leadership in reducing its energy usage. The **Sustainable Energy Authority Ireland (SEAI) Annual Report 2021 on Public Sector Energy Efficiency Performance**, published in November 2021 highlights our 54.2% energy savings since baseline year. For 2022, we reached a figure of 51% savings as reported through the SEAI M&R system.
- Through our service learning programmes at University of Galway, academic staff have created over 30 modules that engage all 17 of the SDGs across the curriculum and encourage students to explore issues vital to society. In AY 21-22, approximately 275 students received ALIVE certificates with more than 26,000 hours of voluntary activity undertaken by these students across the University campus, Galway city, and wider communities to develop their own practical skills and civic awareness. The ALIVE certificate acknowledges the volunteering contribution that students makes to the community, through clubs, societies and directly through engagement with over 400 community organisations and voluntary bodies. Through the programme, students have an opportunity to build civic leadership skills, enrich their personal development and employability skills and connect with the SDGs.

Section 2:

Progress on the SDGs



SDG 1

End Poverty in all its forms everywhere



8%

of University of Galway students come from disadvantaged areas

(HEA Deprivation Index Score Report)

Students and Learning

The NUI Galway Access Centre

The **NUI Galway Access Centre** aims to create a supportive learning environment for students who have experienced socio-economic disadvantage by offering a wide range of supports, enabling students realise their educational potential irrespective of their socio-economic background. Examples include Foundation and Pre-entry Access Programmes, **Breaking the SEAL**, the **Higher Education Access Route (HEAR)**, the **Attract Transition Succeed (ATS)** Mentoring programme, the **Laptop Loan Scheme, 1916 Bursary** and the **School of Sanctuary**. In AY 21-22, and in collaboration with Irish Traveller organisations, the Access centre delivered the National Forum for the Enhancement of Teaching and Learning in Higher Education funded **Mincéirs Mis'd in Education (MMIE)** Project which empowered Irish Travellers to identify and overcome barriers to access, progression, retention, and success in higher education. This year also saw a significant increase in the number of students applying for the **Financial Aid Fund**, with over 2,200 students applying for this fund, up from 972 in AY 20-21. It also saw a significant increase in the number of students awarded the 1916 Bursary Fund, with 9 Tier 1 bursaries of €5,000 per year and 16 Tier two bursaries of €2,000 per year awarded to undergraduate students for the duration of their studies, as well as 7 Tier three once-off payments of €1,500 being allocated to students. In addition, and building on the success of AY 20-21's Laptop Loan Scheme, **260 new laptops were made available to students**, with an additional 450 laptops being ordered for students in AY 22-23.

Masters in International Development Practice

Climate change disproportionately put a burden on the poorest and most vulnerable. Apart from internal displacement from climate change, forced displacement related to disasters, including the adverse effects of climate change, is a reality and among the biggest humanitarian challenges facing states and the international community. People who are forced to cross a border in the context of a disaster and the effects of climate change have limited protection when they arrive in another country. Our new **Masters in International Development Practice (MIDP)** focuses on wide ranging global poverty concerns, from sustainable development and climate action, to food security and alleviating poverty. The MIDP includes a range of international speakers; International Organisation on Migration, the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Development Programme (UNDP) are providing

important lectures to students. The SDGs are central to MIDP programme. Whilst embracing interdisciplinarity and focusing on cutting-edge thinking in international development, the MIDP has a strong focus on the 'skills in demand' by development organizations to achieve the 169 SDG targets across the 17 SDGs.

The Open Educational Resources Project

The **Open Educational Resources Project** is a new online platform with free reusable materials for students to use in teaching and research. The project sees academic staff and students supporting the development of textbooks, videos, lecture notes, handbooks, manuals, lesson plans, worksheets, and annotated books/memoirs. The original materials are easily accessible, free and tailored for specific courses such as anatomy, genetics, mathematics, history, media studies and Irish studies. Not only does this initiative remove the significant barriers of cost accessibility, with the materials developed estimated to result in ongoing annual savings of €45,000 per year for our student body, but this resource also demonstrates the innovation and talent of our University staff and students. By having students directly involved in the development of the resources, this supports the development of materials that fits the learning approach of our students.

Research

Research shows High Cost of Accommodation

Research carried out over the last year by our **Centre for Housing Law, Rights and Policy**, has found that cost of purpose-built student accommodation is a barrier to full participation in third level from prospective students. The research compares rents and availability of university provided student accommodation in Ireland, Northern Ireland, Scotland, Wales, England and some European Universities. The report shows that purpose-built student accommodation (PBSA) offered by Irish universities is relatively costly, compared with universities in Northern Ireland and some European universities. The research noted that the cost and extent of PBSA is of major concern to Student Unions and prospective students, and that it acts as a barrier to full participation from potential students, including those with disabilities, as well as some international students. The development of high cost, private, tax relief driven; investor-led PBSA is driving higher rents and lowering space and accommodation standards. Without a capital subsidy to the university providers, it will be increasingly



76 Scholarly Publications related to SDG1

(Scopus Publications 2017-2021)

difficult to provide affordable new student accommodation. The report recommends the establishment of Student Housing Associations (Approved Housing Bodies) to provide affordable student accommodation. The report advocates for low-cost, socially inclusive, disability friendly, digitally advanced, student housing.

Lost & Found - The Immersive Empathy Project

Lost & Found is a co-created, virtual reality film produced in collaboration with clients from the Galway Simon Community. This 360-degree film captures and conveys the experience of homelessness from the perspective of those who have lived it. Co-created by clients of Galway Simon, leading virtual reality filmmakers and researchers from the University of Galway as part of the **Immersive Empathy** project, the film was developed through a process of oral history interviews and collaborative workshops and shot over two days in Galway.

Much is written in academic literature and the popular media about the power of virtual reality to put the viewer in someone else's shoes and increase empathy towards those who experience social marginalization. The Immersive Empathy Project is the culmination of two year's collaboration between University of Galway researchers and the Galway Simon Community that tests the impact of collaboratively produced virtual reality film on public attitudes towards homelessness. **Lost & Found** invites viewers to explore the significance of 'home' in Irish society through an immersive experience, produced by and not merely about, people who have experienced homelessness.

Ryan Institute Research Activities on Poverty Reduction

The Ryan Institute has a range of research projects underway that contribute to the SDG1 targets. For example, the Irish Research Council COALESCE project in collaboration with the Vietnam National University of Agriculture on **Resilience at the margins: Climate risk mapping and spatial decision support systems for strengthening the climate change resilience of the furthest behind in rural communities in Viet Nam**. This project

directly aligns with the Agenda 2030 ambition of reaching the furthest behind first.

Community Engagement

The SU Second-Hand Bookstore

The SU operate a year-round online second-hand bookstore where students can buy or sell textbooks covering every subject taught in the university. Students can sell old textbooks through this platform by dropping the books in to the SU office and setting the price for the book, minus a €2 administrative charge for each book sold. All books are at a price lower than the original cost, offering students a low-cost and sustainable way to buy college materials. If the books do not sell by the end of the academic year, students can have the books returned to them or there is an option to donate the books to charity.

Hygiene Bank Drive

The SU partnered with the Hygiene Bank Galway, holding monthly donation drives for hygiene, personal care and household cleaning products for those in need throughout the year. This partnership was a great success, with over 190kg of donations received. The donations are distributed to the hygiene bank's community partners including COPE Galway, Galway Simon Community, Galway Traveller Movement and St Vincent de Paul, among others. In addition to supporting the wider Galway community, the SU also provided free period products and sexual protection materials to University of Galway students in need.

Glassary

'Glassary' (green glossary) is a worthwhile circular economy initiative, making household items available to students at affordable prices and connecting donations to local charities and community groups. Collection points are set-up across student residences at the end of every semester where students can donate their unwanted and surplus household items. The items are then donated to local community organisations; alternatively items are made available to students at affordable prices. The initiative reduces household waste generated across student accommodation residences, whilst simultaneously providing support to local community groups and voluntary organisations. This circular economy initiative is now into its third cycle. Glassary is an example of an ALIVE student volunteer project, giving students the opportunity to participate in a volunteering initiative related to sustainability. 'Glassary' was founded in 2020 by a University of Galway student participating in the CKI ALIVE programme and supported through seed funding received from the Explore Programme.

In AY 21-22, 190 students entered full-time undergraduate programmes at University of Galway through the **Higher Education Access Route** (HEAR) admissions scheme and 61 students entered through the pre-university **Access Programme**.



SDG 2

Zero Hunger

2 ZERO HUNGER



Students and Learning

University of Galway and Teagasc partner on new Agricultural Science degree programme

Our **bachelor's degree in Agricultural Science** is grounded in sustainable food production, environmental science and rural development. The degree course attracted over 500 applicants in the first year. Building on close research and education links between Teagasc and University of Galway, the two institutions **announced a partnership in January 2022** to deliver on the Agricultural Science degree programme. With University of Galway's expertise in agricultural sustainability, bioeconomy and rural development and Teagasc expertise in animal science, farm management and knowledge transfer, the degree programme is aiming to prepare the Agri-food leaders of the future to navigate the challenging transition towards climate neutral farming. University of Galway provides a range of Masters programmes that aim to provide students with the skills and tools for developing sustainable agricultural practices and address the challenges that global warming pose for agriculture and food security worldwide. For example: **Masters in AgriBiosciences**; **Masters in AgriFood Sustainability and Technology** and **Masters in Climate Change, Agriculture and Food Security**.

Annual Research Conference on Climate Resilient AgriFood Systems Transformation

Students from the Masters degree programme in Climate Change, Agriculture and Food Security (**MSc CCAFS program**) presented their research at the **2022 Annual Conference of the MSc CCAFS program at the University of Galway** entitled Climate Resilient AgriFood Systems Transformation. The conference was broadcast as a webinar on the **Ryan Institute Youtube Channel**. Student presentations covered topics including: Climate change policy implementation and innovation; Social inclusion and justice in climate change transformation pathways for sustainable agrifood systems; Food Systems Transformation; Climate change resilience of agrifood systems; Ruminant livestock, climate change and sustainability challenges and Emissions reduction pathways from global agrifood systems; and Emissions reduction pathways from global agrifood systems. The conference was organised in partnership with the Irish Forum for International Agricultural Development and provides an annual forum for students to share their work, post comments and ask questions.

Research

University of Galway Ryan Institute's Agriculture and Bioeconomy Centre

The Ryan Institute's **Agriculture and Bioeconomy Research Centre (ABRC)** is focused on the major challenge of accelerating the development and introduction of new suites of productivity-increasing, bio-based technologies and systems (for crops, animals, algae, fish, forestry, food and biological wastes), that are sustainable. Sustainable agrifood systems will involve transitions to zero-waste and circular economy concepts in all food related bioeconomies at the production, processing and consumption stages. This includes development of biorefinery systems, which can be the sources of the renewable bio-based products of the future. There is a wide range of interdisciplinary projects underway within the 27 Research Groups in the ABRC that are contributing to SDG2. For example, the University of Galway's Ryan Institute leads the €7.2 million EU funded **Legumes for Development (LEG4DEV)** programme which is in partnership with Wageningen University & Research, University of Hohenheim, Swedish University of Agricultural Sciences, International Institute for Tropical Agriculture, the International Maize and Wheat Improvement Center and the International Livestock Research

Institute. The LEG4DEV programmes goal is to promote scaling of legume-based sustainable intensification of smallholder maize and cassava cropping systems in sub-Saharan Africa for water-food-energy nexus sustainability that enables food security and livelihood resilience.

The Risk Aqua Soil Project

Sitting at the edge of Europe with 5,000 miles of ocean ahead, Ireland's Atlantic coast is at high risk from climate change, especially storms, drought, and flooding. Agriculture in the area will be affected, leading to uncertainty about the future of agriculture and food systems. The **RiskAquaSoil** project team in University of Galway is developing a plan to manage soil and water risks, and improve the resilience of Atlantic rural and agricultural areas. They want to alert people that climate disasters can and will happen during our lifetime. The project proposes simpler and more efficient tools for managing risks and invites local communities to participate and apply the solutions.



125 Publications

(Scopus Publications 2017-2021)



Delegates at the University of Galway-led Legumes for Development Project Workshop in Lusaka, Zambia. The project is funded by the EU Commission's Directorate-General for International Partnerships. The project is led by Prof Charles Spillane (Director of Ryan Institute, University of Galway) in partnership with Wageningen University and Research, Swedish University of Agricultural Sciences, University of Hohenheim, International Institute of Tropical Agriculture, International Livestock Research Institute and the International Maize and Wheat Improvement Center.

Microbial Ecology Lab Reducing Methane Emissions from Ruminant Livestock

At the **Microbial Ecology Laboratory** in the Ryan Institute's ABRC at University of Galway, researchers are harnessing the power of microbial metabolisms to drive more sustainable food production, particularly in Ireland's primary industries - meat and dairy. A central challenge is investigating how to increase food production while decreasing greenhouse gas emissions and manage waste sustainably. At the Microbial Ecology Lab, addressing this challenge is all about harnessing the power of microbial metabolisms. In collaboration with Teagasc, researchers are working on innovative solutions to reduce methane production from within cows and sheep without causing any harm or adverse effects to downstream meat/dairy products. The goal is to find creative ways to inhibit the group of microorganisms that produce methane, without affecting the bacteria that helps the animal digest its food. For example, by testing out different feeding strategies on cows and sheep, researchers work to pin down the optimal feeding regime that will reduce emissions. Relatedly, agriculture produces waste in the form of manures and slurries that are legally required to be stored on site before they are suitable for reuse as fertilisers. As they sit in storage, these wastes also produce and release methane into the atmosphere. These same methane inhibitor processes can be used to reduce methane emissions in stored slurries without reducing the nutrient capacity of the material.

The Student Pantry has been over-subscribed, since opening its doors in early 2022. Following the successful pilot, the Student Pantry will return revamped and improved in AY 22-23.

The University of Galway's Ryan Institute is a member of **Agrinatura**, which is the European University Alliance on Agricultural Knowledge for Development, an entity established jointly by European Research and Education organisations.

Report on Land & Resources in Near East and North Africa (NENA) region published by the Food and Agriculture Organisation of the United Nations (FAO)

A lecturer from the University of Galway's Discipline of Geography and the Ryan Institute was the editor and writer for a new landmark **UN Report on the State of Land and Resources for Food and Agriculture in the Near East and North Africa (NENA) region**. The FAO report provides information and analyses on the trends and challenges facing the NENA region. The report highlights that food and agricultural systems in the NENA region are at breaking point. It is predicted that the NENA region will be gravely affected by climate change, which is already altering crop productivity and growth cycles. A major objective of this publication is to build awareness on the status of land and water resources in NENA and highlight current opportunities and challenges. The evidence and knowledge in this report will serve to mobilize political will, priority setting and policy-oriented remedial actions, at the highest decision-making levels.

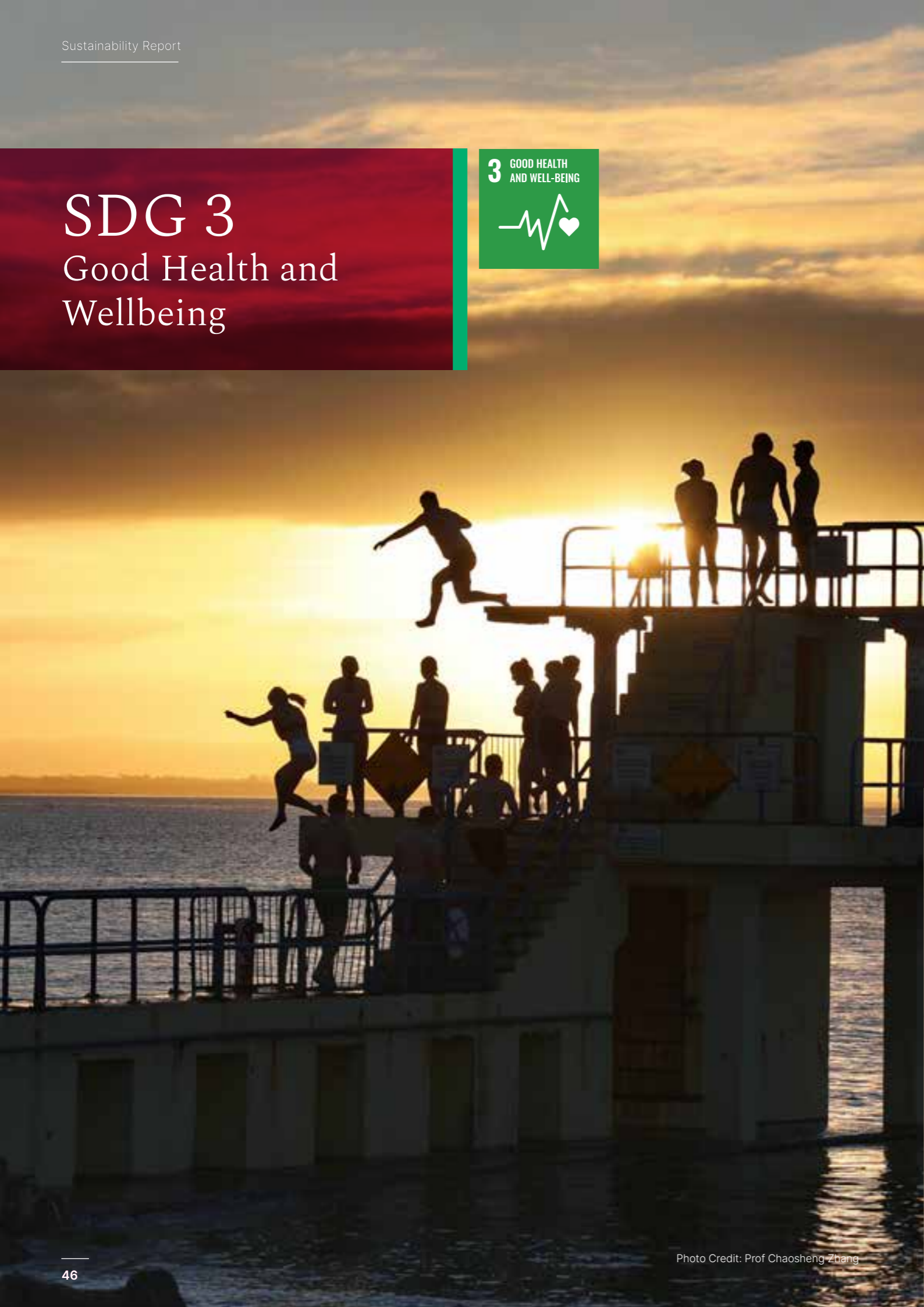
University of Galway is a **founding member** of the **Irish Forum of International Agricultural Development** whose vision is transformed livelihoods of people living in poverty in the developing world through initiatives which support resilient, equitable and sustainable agriculture, food and nutrition security.

Community Engagement

The Food Pantry

The University of Galway **Food Pantry** is an initiative set up by a University of Galway student to collect leftover food from supermarkets and distribute it to students. The initiative was implemented on a pilot basis in January 2022, with the help of the SU and the Societies Office. The food collected is obtained through FoodCloud, a system creating links with local supermarkets to redistribute food and reduce food waste. The collections consist of surplus food, food with damaged packaging, end of line items or food that is nearing its best before date. The food ranges from bread to frozen food to readymade meals; all food that would end up in the waste stream if it were not collected and re-distributed. This food has proven invaluable for many University of Galway students that are struggling to make ends meet. In addition to combatting food poverty, this impressive initiative prevents greenhouse gas emissions by diverting food from landfill.

SDG 3 Good Health and Wellbeing



Students and Learning

New Clinical Simulation and Interprofessional Education Facility

Minister for Health Stephen Donnelly T.D. has officially opened the **Clinical Simulation and Interprofessional Education Facility** at University of Galway. The state-of-the-art space spans more than 1000m² and has more than 20 immersive learning rooms fitted out to hospital standard and simulating all aspects of a leading healthcare environment. The new facility will provide education and training for more than 600 medical students in clinical years and accessible space for more than 4,000 multi-professional clinical staff in Galway University Hospitals. All training rooms are fitted with high-powered cameras and audio-visual equipment with remote and observation spaces for assessing and reviewing learning. Patients are replaced by complex manikins with physiological characteristics that respond to medical treatments and procedures in safe and realistic environments. Based at University of Galway's Clinical Science Institute, on the grounds of University Hospital Galway, it is the largest and most modern facility of its kind on a clinical site in Ireland. The facility is a partnership between University of Galway and Saolta University Healthcare Group.

Mind Body Boost

In February 2022, the university launched a new well-being programme to support students' physical and mental health and research its impact. **Mind Body Boost** is an evidence-based intervention, devised to support young people in managing their mental and physical health. The project includes partners from six European countries and is co-funded by the European Commission under the Erasmus + Sport programme. The project is aiming to address social isolation, poor lifestyle balance, mental health difficulties and low levels of physical activity among young people. The programme is designed to be accessible and welcoming for third level students with low levels of physical activity and mental health struggles, and who have had limited opportunities to participate in physical activity. The sessions included a mix of low-moderate intensity physical activity, relaxation, and resilience sessions. The feedback from the pilot programme rolled out across Europe is overwhelmingly positive.



University of Galway is ranked 51st in the world for SDG 3 in the 2022 Times Higher Education Societal Impact Rankings

University of Galway launches Mind Body Boost - a new well-being programme to support students' physical and mental health.



Research

Pandem-2

PANDEM-2 is a H2020 EU-funded project that is developing new solutions for efficient, EU-wide pandemic management. Led by University of Galway, the PANDEM-2 consortium consists of 19 partner organisations with expertise in information technology, public health, microbiology, communications and pandemic management from across the EU. The PANDEM-2 Advisory Board membership includes leading international health agencies the World Health Organisation (WHO) and European Centre for Disease Prevention and Control (ECDC). The goal of PANDEM-2 is to prepare Europe for future pandemics through innovations in training and to build capacity between EU member states responding to pandemics on a cross-border basis. While focus of the project is on strengthening EU capacity for pandemic preparedness, the outputs of the project will have global applicability. Implementation of the €10 million, 2-year EU funded PANDEM-2 involves the development of a suite of novel concepts,

services and IT systems which will enable pandemic managers to prepare for a wide variety of different scenarios and possible responses. For example: the identification, mapping and integration of pandemic-related data from multiple sources into a coherent pandemic-management database; the development of an extensible dashboard for pandemic preparedness training and response; development of modelling tools for disease prediction and resource planning; development of resources, innovations and training for pandemic communication; and development of operational strategy for cross border pandemic response in Europe.

University of Galway Delivers Cutting-edge Medical Research

University of Galway researchers have been contributing to cutting-edge medical and health research, with fantastic discoveries this year. For example, **a global study** co-led by University of Galway into causes of stroke found that stroke might be triggered by anger, or emotional upset or heavy physical exertion. The study revealed that one in 11 survivors experienced a period of anger

€3m

€3 million investment announced for the Clinical Research Facility Galway. The Clinical Research Facility Galway is a joint initiative of University of Galway and the Saolta University Health Care Group for the promotion of clinical research and conduction of clinical trials.

or upset in the one-hour leading up to a stroke, and one in 20 had engaged in heavy physical exertion. The research has been published in the **European Heart Journal**. A team of researchers at CÚRAM, the SFI Research Centre for Medical Devices at University of Galway, discovered a **radically new approach** to the treatment of Inflammatory Bowel Disease (IBD). The hyaluronan enema has shown significant potential in protecting against damage to the intestinal lining by decreasing inflammation. The team also identified inflammation-specific targeted carriers for local drug delivery in IBD. The research is published in **Biomaterials**. Global research led by University of Galway revealed that Isolated Diastolic Hypertension increases the risk for cardiovascular events, or death, for younger people. The findings are published in **Hypertension**, a journal of the American Heart Association. Research from University of Galway and Boston University identified a blood biomarker that could help identify people with the earliest signs of dementia, even before the onset of symptoms. The analysis found that elevated levels of P-tau181 in the blood were associated with greater accumulation of β -amyloid, an abnormal protein in Alzheimer's disease, on specialised brain scans. The research has been published in the **Journal of Alzheimer's Disease**. International research **led by University of Galway** shows that controlling high blood pressure and diabetes and following a healthier lifestyle from an earlier age could reduce the risk of vascular dementia. The research is published in *Neurology*, the medical journal of the American Academy of Neurology.

Ryan Institute - Centre for One Health

The **Centre for One Health** (COH) is an integral part of the **Ryan Institute** at University of Galway and brings together experts in human health, animal health, microbiology, infectious diseases, agriculture, environmental policy, social marketing and behavioural change from within and outside University of Galway. The Ryan Institute COH places sustaining human health, animal health and environmental health at the centre of public policy through teaching, research and advocacy.

One Health research is communicated at annual conferences and public events. For example, **The Ryan Institute COH Annual Conference 2021** communicated the One-Health concept using a series of themed sessions focusing on Infectious disease and zoonoses; Antimicrobial resistance; Emerging pollutants; People, nature and the environment. Examples of current Ryan Institute COH research projects include PANDEM 2, FED-AMR, PIER, and WORLDCOM.

Community Engagement

Learning from Complaints about Hospital Care

A new **collaborative project** by researchers at University of Galway and the Health Services Executive (HSE) has evaluated acute healthcare services and complaints to identify growing problems as well as opportunities for improvements in clinical safety and quality. Using the London School of Economics Healthcare Complaints Audit Tool (HCAAT), an innovative and internationally recognised method of classifying complaints, the study aimed to identify hot spots and blind spots in hospital care in the Republic of Ireland. Hot spots are areas in care where harm (or a near miss for harm) occurs frequently; blind spots are areas in care where problems occur that are not easily observed by staff members, or are incorrectly observed. This project has highlighted the potential for complaints to be used as a form of learning to improve hospital care. The HCAAT can be used for the analysis of complaints about Irish hospitals, shifting the focus from resolving individual complaints to using patient insights to improve healthcare at a local, regional, and national level. Such analysis can help researchers, healthcare workers, and managers to make positive changes in the system, and improve the quality and safety of care for future patients. Involving stakeholders in developing ways to improve hospital care can generate new ideas that are based on the findings of complaints.

University of Galway students learning in the new Clinical Simulation and Interprofessional Education Facility



Making Every Contact Count

The HSE **Making Every Contact Count (MECC)** programme aims to support health professionals to use routine consultations to help patients recognise and change lifestyle behaviours that may be contributing to their ill health. During routine consultations and when appropriate, health professionals will ask patients about lifestyle behaviours related to chronic disease and deliver brief interventions. Through these contacts, the programme aims to help and support patients to achieve positive long-term behaviour change. Researchers from University of Galway's **Health Behaviour Change Research Group (HBCRG)** are working in partnership with the HSE Making Every Contact Count programme (MECC) team to develop an implementation strategy to optimise and scale up uptake of MECC in Ireland. The research partnership brings together academic researchers with implementation and health psychology expertise, knowledge users with strategic and context-specific knowledge, patient and public contributors and healthcare professionals to optimise the implementation of the MECC in the Irish Health Service. The outputs from this programme of research will have a clear impact on the delivery of MECC by developing an evidence base and implementation blueprint to support the integration of brief behaviour change intervention into the Irish health system. Chronic disease treatment puts unsustainable pressure on our health services. Making Every Contact Count aims to relieve that pressure by helping prevent chronic disease and empowering patients to manage their chronic disease.

COVID-19 Rapid Testing on Campus - UniCov Project

During AY 21-22, more than 900 participants from the university took part in the **UniCoV** project, co-led by Principal Investigators from the College of Medicine, Nursing & Health Sciences and the Ryan Institute. UniCov is a programme testing the efficacy of a range of COVID-19 rapid testing modalities for improved public health surveillance in Irish universities. UniCoV carries out large-scale comparative analysis of COVID-19 testing technologies to inform the development of early warning systems for future disease outbreak, prevention and control. A walk-in vaccination clinic was established on campus in September 2021, to encourage students and staff members who were not already vaccinated to avail of the facility, in order to make the campus as safe as possible. Free COVID-19 antigen tests were distributed by the UniCoV project to students throughout Semester 2, to encourage self-testing and early self-isolation.

Marine meets Medtech

CÚRAM, the SFI Research Centre for Medical Devices based at University of Galway, held a public exhibition displaying how marine resources can aid medical device research. The marine-inspired display at Galway Atlantaquaria demonstrated how scientists are studying sponge slime to fight cancer and harmful microbes; using algae for controlled release of medicine; and copying barnacle glue to create surgical glue. As well as displaying how marine-inspired medtech research can heal the body, the exhibition also reinforces the message of the importance of ocean health and conservation. The initiative helps people explore the relationship between the oceans health and our health. Keeping our oceans healthy helps us discover new ways of developing medical therapies; if we lose the biodiversity of our oceans, we also lose potential ways to help fight diseases.



1,926 Publications. University of Galway's top output for the past 5 years in terms of publications is SDG 3. Our field weighted citation index (FWCI) for SDG 3 is over twice the global average

(Scopus Publications 2017-2021)

SDG 4 Quality Education



Students and Learning

Excellence and Inclusiveness

University of Galway provides access to education across all academic programmes through a range of inclusive and responsive **Access Programmes** including those, which address educationally vulnerable cohorts.

The mission of University of Galway's **Centre for Excellence in Teaching and Learning (CELT)** is to foster a culture of excellence in teaching and learning. CELT supports academic staff in curricular design, teaching and assessment and offers a number of programmes aimed at enhancing the professional practise of those teaching in higher education. For example, the **Postgraduate Certificate in Teaching and Learning in Higher Education**; the **Postgraduate Diploma in Academic Practice**; and the **Master degree in Academic Practice**. CELT also provides training in inclusive aspects of teaching and learning, such as Universal Design for Learning and technologies in the support of flexible and accessible learning. Our aim is to support the highest quality teaching and course design, and to promote innovation amongst programme teams, schools, and academic staff. This involves supporting the University's **Awards for Teaching Excellence**, and projects funded by the National Forum for the Enhancement of Teaching & Learning. In AY 21-22, much of the focus was on making the transition back to on-campus teaching from the previous 'emergency remote teaching' arising from COVID-19. In addition, the university ran a major initiative on **Academic Integrity**, which resulted in a new university policy aimed at ensuring our qualifications are robust and of the highest quality, whilst raising wider awareness amongst students and staff of ethical issues in education. Our Learning Technologies Team continues to work with academic colleagues to develop **interactive learning resources** on aspects of sustainability and the SDGs.

Centre for Adult Learning and Professional Development

University of Galway's **Centre for Adult Learning and Professional Development (CALPD)** offers an extensive range of professional, part-time and evening courses and lifelong learning opportunities; its flexible courses allowing students to study at their own pace in a wide range of subject areas. With online and blended learning course options, access to Government funded Springboard plus courses; Recognition of Prior Learning, Continuing Professional Development programmes; the Centre aims to provide upskilling and professional development opportunities for all. In AY 21-22, over 1,000 students achieved awards with CALPD for

Certificate, Diploma, Degree and post-graduate level awards. The Centre has launched an exciting new project in the area of micro-credentials with a view to transforming lifelong and life-wide learning. Having worked with enterprise, academic staff and industry representatives to identify skills gaps for current and future needs of the Irish workforce a suite of short industry-led learning opportunities have been developed and are available to all learners. In response to the University's sustainability strategy and as part of its teaching and research mission, a one-year, part-time specialist **Diploma in Corporate Environmental Planning** has been developed. A new summer school in **Ecology** is also available. **Ecology: Living Landscapes in the West of Ireland**, aims to develop students' skills in evaluating the sustainable use and conservation of Ireland's ecological resources.

Embedding Climate Literacy in the School System in the Pacific

Education is recognised as an essential component of addressing climate change, (UNESCO, 2022). The Pacific Islands, in particular Small Island Development States (SIDS), are extremely vulnerable to climate change. The Pacific Platform for Disaster Risk Management, highlights that climate change needs to be integrated into the education system of Pacific Island states. An Irish Aid Fellowship funded student from the Department of Education in Tonga conducted her **MScCCAFS research project on embedding climate literacy for climate action & empowerment in the school system of climate vulnerable low-lying states in the Pacific**. The research identified examples of climate change education in Tonga, Fiji, and Kiribati as well as the use of pedagogical methods for designing and implementing climate adaptation and empowerment in the school curricula in SIDS in the Pacific.



University of Galway is a partner of **ENLIGHT**; a European University formed by nine comprehensive, research-intensive universities from nine European countries. The ENLIGHT alliance aims to guide students to become lifelong learners and agents-of-change ready to tackle the challenges of tomorrow.

Research

First Report of its Kind on Educational Inequality in Ireland

In September 2021, researchers from the UNESCO Child and Family Research Centre in University of Galway along with Rethink Ireland published a report on educational inequality in Ireland. The report examined the impact of Rethink Ireland's €7.5 million Education Fund, which was delivered across the country between 2017 and 2020 with the aim of supporting innovative solutions that improve educational attainment and access to higher-level institutions. The report has documented for the first time that the average progression rates of students in seven alternative education programmes amounted to 80% between January 2018 and July 2020. The progression rate reached in excess of 90% for some projects. The study also found that the total Social Return on Investment value generated for project beneficiaries was just over €68 million with a total cost of €7,790,285 for the seven awardee projects over three years. For every €1 invested in the seven projects, €9 of social value was created. In the latter part of the report, a new evidence-based model on Educational Progression and Transformation is outlined, based on an in-depth review of the 7 alternative education programmes.

Undergraduate Research Opportunities Programme (UROP)

UROP is an undergraduate Summer internship programme funded through the Science Foundation Ireland (SFI) Discover Programme. It is a collaboration between CÚRAM, the SFI Research Centre in Medical Devices, and the WiSTEM student society, the University of Sanctuary and the College of Science and Engineering at the University of Galway. The project provided the opportunity for undergraduate students to explore a variety of Science Technology, Engineering, Mathematics (STEM) research projects, and providing 20 undergraduate students with a six-week paid internship at STEM labs across the University between May and August 2022. Through these internships, students developed practical research skills and developed a new professional network with peers and mentors. Research projects ranged across maths, marine science, mechanical and biomedical engineering, regenerative medicine and data science. Central to the success of the project has been the support of lecturers and researchers across the STEM community and the recognition of the value they can add to an undergraduate experience by providing advice, highlighting potential career pathways and providing practical training in research skills.



Undergraduate students attending the Undergraduate Research Opportunities Programme (UROP) Symposium with UROP Project Director Prof Abhay Pandit (CÚRAM), Ms Aoibhín Sheedy, from the WiSTEM student society and University of Galway President, Professor Ciarán Ó hÓgartaigh. August 2022.

University of Galway School of Education

The **School of Education** at University of Galway has three research themes across the Disciplines of Education and Children Studies, namely, **Education Culture and Society; Innovation in Education** and **Professional Learning**. Our research themes recognise the interconnected relationship between economic growth, ending poverty and strategies that improve health and education, reducing inequality, along with tackling climate, the same values which underpin the UN SDGs. SDG4 forms part of each teacher education programme and many of our research projects. For example, the Rethink Ireland funded **Bridging Worlds** project, the published edited collection on **Diversifying the Teaching Profession** and the EU Erasmus **Big Ideas for Better Schools (BIBS)** project is leading the 'big issue' transformation in schools, that of diversity, democracy and equity. The COVID-19 pandemic had a global impact on education; Research at the School of Education explored the experiences of children, young people and parents during the first period of 'schooling at home' during the pandemic, and the **EU funded DEIMP project** conducted a comparative study across six countries to identify design priorities for mobile learning in a pandemic. Sustainable development is an integral component of high

quality education and is integrated in our teacher education and children studies programmes as well as in our research. For example, the Our SDGs project, between the School of Education, Discipline of Geography and international partners focuses on students contributing to the interrogation of SDG related issues. Indeed SDG17, Partnerships for the Goals, underpins all our **international and national research projects** as the School of Education collaborate with schools, industry, and the wider community.

Community Engagement

ReelLIFE SCIENCE

The **ReelLIFE SCIENCE** initiative encourages young people to engage with science and technology, and explore its impact on individuals, society and the environment, while developing their communication and digital skills. Participants in primary schools, secondary schools and youth organisations research a Science, Technology, Engineering, Maths (STEM) topic they are passionate about, e.g. Climate Action or How Things Work, and communicate it for the public via an entertaining and engaging three-minute video. The programme breaks down barriers to engagement by providing opportunities, training and resources to teachers, youth workers and

young people from all backgrounds, in Ireland and Northern Ireland. In October 2021, winning videos were selected from a record 490 entries made by over 3,000 participants in 135 schools and youth groups in Ireland and Northern Ireland. Winning videos were screened for the public as part of **Science Week 2021** and the 24th Galway Science and Technology Festival. ReelLIFE SCIENCE is based in University of Galway and is supported by the SFI Discover programme, the Community Knowledge Initiative (CKI), the CÚRAM Centre for Research in Medical Devices and the Cell EXPLORERS science education and outreach programme. Since launching in 2013, more than 20,000 young people have taken part in ReelLIFE SCIENCE in over 600 schools and youth organisations in all 32 counties, and the science videos they have produced have been viewed over half a million times at public events and online in over 130 countries.



172 Publications

(Scopus Publications 2017-2021)

Cell EXPLORERS: Debunking Science Stigma

Cell EXPLORERS is a science education and public engagement programme, based at the University of Galway and delivered nationally by the University and its nine partner institutions. **In May 2022, Cell EXPLORERS celebrated ten successful years** involving and engaging the public in hands-on modern biology. Since its establishment, the programme has trained more than 2,600 Cell Explorers scientists and has engaged more than 45,000 young people and their families in hands-on science in Ireland. In 2019, the programme received the **Outstanding Contribution to Science Communication award** by SFI. The programme has also started to develop its own research to understand how to combat misconceptions and stereotypes that relate to science and scientists and which prevent young people from seeing that science could be for them. The Cell Explorers programme has become a reference in terms of public engagement in science in Ireland and internationally.

University Appoints First Traveller Education Officer

In AY 21-22, the university appointed its first full-time **Traveller Education Officer** to lead the teaching and learning of students from the Traveller community. Owen Ward, a Traveller, qualified teacher and alumnus of the University, has taken on the role as the university develops a model to empower the Traveller community to overcome barriers to access, progression, retention and success in higher education. The role will be a key part of the work of the University of Galway Access Centre. The Traveller Education Officer will manage Mincéirs Misl'd in Education - Empowering Irish Travellers to transition and build a sense of belonging in Higher Education. Funding for the project is through the National Forum for the Enhancement of Teaching and Learning. The Traveller Education Officer will work in partnership with various stakeholders, including Traveller organisations and the Traveller community and build on critical government policies and strategies to provide a detailed, evidence-based understanding of barriers to access, progression and retention in higher education for Irish Travellers.

University of Galway is an active member of **United Nations Academic Impact (UNAI)**.



The ReelLIFE Science initiative - encouraging young people to engage with Science and Technology

SDG 5

Gender Equality

5 GENDER EQUALITY



Students and Learning

Bridging the Gender Divide: WiSTEM2D

The **Johnson & Johnson WiSTEM2D** (Women in Science, Technology, Engineering, Mathematics, Manufacturing and Design) is an undergraduate programme designed to inspire and support more women to pursue a career in Science, Technology, Engineering, Mathematics, Manufacturing and Design after university and increase female representation in the STEM2D workforce. The Johnson & Johnson WiSTEM2D programme expanded to include the University of Galway in AY 21-22. J&J WiSTEM2D Scholarships were awarded to **10 female students** undertaking courses in STEM. The recipients receive extensive industry mentoring and leadership training to help prepare them to pursue a career in STEM. The Central Statistics Office reports that women perform just 25% of STEM roles, with only 5% in leadership roles. The WiSTEM2D programme underlines Johnson & Johnson's commitment to developing and implementing high-impact strategies to support female students undertaking STEM2D degree courses at the University of Galway.

Active*Consent

Moving Parts is a student-led animation project that draws attention to issues across the spectrum of sexual violence, including sexual consent, bystander intervention, and image-based sexual abuse. Several powerful animations, in both English and Irish, have been developed as an instrument to raise awareness of these critical issues. Moving Parts is an active collaboration between Active* Consent, Institute of Art Design and Technology animation students and the University College Cork Bystander Intervention programme. The project is funded by the Higher Education Authority. The name Moving Parts was selected to reflect the spectral nature of sexual violence, and how it is affected by a multitude of factors – from social norms and gender roles to pop culture. Moving Parts animations are freely available to educators and student leaders for general use, for example, as part of student orientations, consent workshops and sexual violence prevention initiatives.

Green* Light is a new podcast collaboration between Active* Consent and the Glow West podcast, that explores how consent, sexual violence, and relationships are depicted in and shaped by pop culture, from film and TV to music and more. Hosts from the Active* Consent team are joined by some very special guests to dissect these topics and look at how we can create a better world for everyone to explore consent and positive sexual experiences. Both Active*

Consent and Glow West work to build a consent culture in Ireland through the use of workshops, research, creative learning interventions, e-learning modules, and of course - podcasts!

StartsWithAName

The College of Science and Engineering (CSE) Equality, Diversity and Inclusion Committee are piloting the **StartsWithAName** initiative at the CSE. StartsWithAName premises on respecting the correct use of people's names supported by individuals putting the phonetic pronunciation of their name on their e-mail signature/name badge/Zoom name etc. The Student Digital Pathways project is in the process of including functionality to the registration system that will enable students to add a phonetic spelling of their name, as part of student profiles. The option to upload an audio file to aid pronunciation is also under review.



121 Publications

(Scopus Publications 2017-2021)

Research

Senior Academic Leadership Initiatives

The **Senior Academic Leadership Initiative (SALI)** is an initiative by the Higher Education Authority (HEA) to accelerate progress in achieving gender balance at the senior academic level in higher education institutions. In AY 21-22, the university secured approval and funding for a new Professor of Chemistry under Cycle 2 of the SALI. In addition, a second post, Professor of Applied Economics for Public Policy has been recommended for funding, in this round. In Cycle 1 of SALI, University of Galway secured two senior leadership positions, an Established Professor of Engineering and a Professor of Older Adult Health. University of Galway's Aurora programme targets women in academic, support and research roles in the University, in order to enable leadership potential and provide an opportunity for growth and development. The programme provides an introduction to leadership in higher education and a positive view of leadership as a route to career progression.

National Surveys of Student and Staff Experiences of Sexual Violence and Sexual Harassment in Higher Education

A University of Galway academic, based in the School of Psychology has led **two state-published reports** detailing findings of national surveys of student and staff experiences of sexual violence and harassment in higher education institutions in Ireland. The reports which were published by the Department of Further and Higher Education, Research, Innovation & Science, in January 2022. The reports centre on the findings from 11,417 survey responses, including 7,901 survey responses from students and 3,516 survey responses from staff. The students and staff who took part in these surveys provided insights on a wide range of topics, across sexual violence, harassment, consent education and supporting others. Taken together, the findings described a varied picture of strengths and resources, negative experiences and gaps in knowledge. For example, a majority of people trusted that their college will support them, and a large majority endorsed positive behaviour and active consent. Yet alongside these strengths, there are gaps in knowledge about how to make complaints or access supports through their institution. The report identified a high level of sexual violence and harassment experienced by students in particular.

UniSafe

University of Galway is participating in **UniSAFE**, a three-year EU project to provide measurable evidence on the prevalence of gender based violence in universities and research organisations. UniSAFE conducted a survey among staff and students in 46 participating EU higher education/research performing organisations. Survey results will integrate with qualitative evidence in a multi-level study design. The results will be analysed, and translated into operational tools for research performing organisations and policymakers.

Gender & Social Inclusion in Agricultural Projects in Africa

The adverse effects of climate change are not biophysically or socially, distributed equally around the globe; the poor and marginalised living in developing countries experience the most severe effects. Differences in levels and types of marginalisation occur through traditional norms and preconceived social structures inhibiting social and economic development of marginalised individuals and groups. In this year's MSc CCAFS programme, in collaboration with the CGIAR CLIMBER program, one of the students focused on the topic of **extent of consideration of gender and social inclusion in large-scale agricultural transformation projects** in Kenya, Morocco, Senegal, and Zambia. The research project found that while there was a very strong emphasis on gender, there is far less of a focus on the other dimensions of social marginalisation. This highlights a need to factor in broader social equity issues into project design and implementation to ensure that adaptation is socially transformative and not maladaptive.

Community Engagement

International Women's Week 2022

A series of events took place across the campus from 7-12th March to celebrate **International Women's Day 2022 #BreakTheBias**. Among the many events, the University Women's Network hosted Dr. Máire Geoghegan-Quinn as keynote speaker as they celebrated their 10th anniversary. The College of Medicine, Nursing, and Health Sciences, hosted a panel discussion to hear from women who have availed of the Office of the Vice-President for Equality, Diversity, and Inclusion's two grant schemes – the Athena Swan Mid-Career Research Capacity Building Grant and the Research Grant for Returning Academic Careers. The College of Science and Engineering and the WiSTEM Society invited the campus community to meet the inaugural winners of the University of Galway J&J WiSTEM2D programme scholarships. The Discipline of Gender and Women's Studies hosted an International Women's Day Webinar entitled *Gender based violence and migration: Centring hidden intersections*.

€1m

In September 2021, University of Galway received **€1million performance funding** from Government to drive its equality agenda

Office of the Vice President for Equality and Diversity

The Athena SWAN Charter is a framework used across the globe to support and transform gender equality within higher education and research. In September 2021, the university secured a renewed Bronze Athena SWAN Award in recognition of its continued progression on gender equality. In particular, the panel commended actions taken to address the underrepresentation of women at senior academic grades, particularly Senior Lecturer and Personal Professor roles. The panel also noted future actions to mitigate the negative impact of COVID-19 on career progression, especially for carers, and acknowledged the removal of disadvantage related to work permits and visa restrictions on travel for international staff. Bronze award status was also granted to 7 of the University's Schools, taking the total of school awards to 9. The School of Engineering submitted its application for a Silver award in the April 2022 round. The **Office of the Vice President for Equality and Diversity** leads on embedding Athena SWAN principles across the university. The **Gender Equality Action Plan (GEAP)** sets out actions, responsibilities and times lines relating to Athena Swan and other areas including culture, governance, training & development, recruitment, and promotion. The 3rd iteration of the GEAP was approved by the University Governing Authority in October 2021. The University has been awarded a special **€1million fund by Government** to continue to drive forward its strategy and improvements in relation to gender equality and the wider Equality, Diversity and Inclusion (EDI) agenda.

The Alternative Eye - Pilot Podcast Series

The Alternative Eye is a new podcast series on Flirt FM and additional community radio stations. The aim of this pilot series is to hear reflections on various themes relating to Equality Diversity Inclusion (EDI) in a higher education context at University of Galway. The idea is to take the listener on a journey through people's personal experiences; how they play out in everyday life and in the educational sphere, all with a Galway slant. Difference is sometimes, not what we imagine, and the episodes explore a variety of themes including contributors telling their own stories about neurodiversity, providing sanctuary, studying as an Irish Traveller and navigating the world with a physical disability. The series is supported with funding from the EDI budget of the College of Arts, Social Sciences and Celtic Studies. Additional support is provided through the University of Sanctuary programme. Recordings take place at Flirt FM studios. It is hoped that the pilot can be expanded into a regular series that will provide the listener not only with insights into the unseen lives of others but also with the opportunity to consider solutions that can improve the world of education for everyone.

The proportion of female staff holding the role of Personal Professor at University of Galway increased from **16%** in 2016/17 to **33%** in 2021/22



Launch of the Johnson & Johnson WiSTEM2D programme at University of Galway, October 2021.

SDG 6

Clean Water and Sanitation

6 CLEAN WATER AND SANITATION



Students and Learning

Masters in Marine and Freshwater Resources: Management

Our **Masters in Marine and Freshwater Resources: Management** enables graduates to develop a core understanding and advanced level of knowledge and skills in key areas relevant to the aquatic environment. This will give them the skills required to start addressing some of the critical challenges' society will face during the 21st century from human impact on the aquatic environment. With modules including, for example: the Water Framework Directive; Marine and Freshwater Acidification; Environmental Problems in Marine and Freshwater Environment; the course provides a pathway for students interested in pursuing a career concerned with the protection and use of our water resources, including drinking water treatment and quality, wastewater treatment.

University of Galway Student selected as Climate Force Ambassador on International Antarctic Expedition

For one University of Galway student the high standards she has achieved in her research to date combined with the passion she has shown for sustainability have made a dream come true. Sukanya Saikia, a PhD student in the School of Engineering, travelled on an international Antarctic expedition in March 2022. Sukanya was selected as a Climate Force Ambassador by the organiser of the expedition, the **2041 Foundation**. At University of Galway Sukanya is researching the impact of urbanisation and climate change on wastewater management systems. The expedition was an opportunity for Sukanya to experience first-hand the effects of climate change on the fragile ecosystem of Antarctica and it aligns with her PhD research. The expedition aims to train and inspire young leaders in up-to-date climate change, sustainability and clean energy skills, and to provide a platform to engage in discussion and exchange ideas with world leading climate and sustainability leaders and help build strong collaborations. About the trip, Sukanya said, *"It was the most humbling and spiritual experience of my life. It is not every-day that you go to the last great wilderness on Earth. It was my first and probably last time. As a climate researcher, I have always known about the impacts of climate change. I have always been passionate about Antarctica. When you see up close, when you bask in the silence of the place, listen to the echoes of the whales, the blizzard hitting on your face, the lashing rain in the coldest desert, an unusual phenomenon, it hits you hard! It was an out-of-body experience. I have learned a lot and have been fortunate enough to meet a strong network working in the fields of climate change and sustainability, working our way up towards individual and collective climate action"*

University of Galway's campus **water network is 2.8 km long**; it is mapped-out and zoned and actions agreed to eliminate all unnecessary water usage. Our Water Stewardship Charter sets out our commitment to reduce water usage on campus by **10%** by 2025.

Research

Investigating Contamination Risks for Wells

Researchers from University of Galway are carrying out a large-scale project that aims to protect private well owners from infection from potentially lethal bacteria. The team based in the Antimicrobial Resistance and Microbial Ecology Group (ARME), School of Medicine has been awarded funding by the Environmental Protection Agency (EPA), to develop detection and risk-management models. The **DERIVE** project focuses on pathogenic E. coli VTEC. The bacteria is carried naturally and harmlessly in the gut of cattle and sheep but it can cause severe gastrointestinal infection in humans. The innovative research project will develop new, rapid, on-site detection methods, as well as risk models and open-source risk-management software to predict private drinking water contamination. The researchers will use DNA sequencing methods to characterise the VTEC found in water and compare this to VTEC causing human infection and to those found in animals and food. The research is an important step for Irish authorities implementing risk-based 'source to tap' approach under the new European Drinking Water Directive. The project involves collaboration with University College Cork (UCC), Technological University Dublin (TUD) and Teagasc.

Optimising Wastewater Treatment Design

The wastewater treatment sector faces increasing pressures to reduce resource usage such as chemicals and energy. However, due to population growth, industrial growth, and adaptation to climate change, reducing energy consumption is a significant challenge. This challenge must be addressed, without compromising adherence to discharge regulations, to protect public health and the environment. **ACET**, funded by the SEAI, leverages existing partnerships between the University of Galway and Irish based companies (Vortech and Ward & Burke) to develop and demonstrate the application of real-time control systems in wastewater treatment plants designed to improve plant efficiency and compliance.

The **NexSys** partnership programme, funded by SFI, industry and philanthropic sources is a

5-year, €16 m all-Island programme to develop the next generation energy-related research. The University of Galway co-lead the €2 m water strand which involves partners from University College Dublin, Dublin City University, University College Cork and the University of New South Wales as well as industry collaborators. As part of this work, researchers at the University of Galway are developing new understanding that will lead to improved water and wastewater infrastructure design, particularly aimed at meeting challenges posed by climate change. Furthermore, the team will investigate how the wastewater sector can optimise compliance with regulation and, in parallel, minimise overall life cycle impacts. These are key challenges for utilities in meeting net-zero climate targets.

Using Floating Wetlands to Clean-up Pollution

The **Innovative Energy Technologies for Biofuels, Bioenergy and a Sustainable Irish Bioeconomy** (IETS BIO³) research group, based in the Department of Microbiology at University of Galway in collaboration with Ho Chi Minh City University of Technology (HCMUT) are working on a project entitled *Clean-up of diffuse chemical and microbiological pollution by floating wetlands*. In the project, a nature-based solution is being developed that partly removes heavy metals, micropollutants (e.g. antibiotics and pesticides) as well as pathogenic microorganisms, with the aim of reducing the deaths and illness caused by these pollutants. This project is funded by the SFI Future Innovator Prize Programme, through

The PIER Project – Investigating the public health impact of exposure to antibiotic resistant bugs in recreational waters Photo Credit: Prof Chaosheng Zhang



the SDG 3 Challenge and in collaboration with Irish Aid. As part of this project, the researchers took part in the SFI/NSF I-CORPS@SFI Entrepreneurial Training Programme. As part of this training programme, they engaged with the local communities, representatives from Galway City Council and Non-Government Organisations to explore whether the implementation of water treatment technologies that imitate natural environments could help reclaim both clean water and green spaces in urban settings.

A Novel Method to Assess Surface Water Quality

University of Galway, in collaboration with Charles Sturt University in Australia, have used artificial intelligence and data mining on Cork Harbour to revise a water quality index. Findings are published in the **Journal of Water Research**. Surface water quality poses significant environmental, sociological, and economic risks in many parts of the world and the new model can benefit individuals and a range of government and non-government agencies. Using complex mathematical algorithms, the team developed a simple water quality tool that can be used to assess the level of pollution in waters. While similar tools have been developed in other countries, including, USA, Canada, Spain and the UK, one had not been developed for Irish waters. The tool provides a highly accurate assessment of water quality and is universal; this means the tool can easily be adopted for use by other countries. For example, the methodology can be adopted by EU countries because the model is specifically focused on EU coastal water quality. The model presents an effective way to optimize water quality monitoring and reduce the monitoring cost.

Community Engagement

Pier Project

PIER (Public Health Impact of Exposure to Antimicrobial Resistance in Recreational waters) is a 4-year EPA funded multidisciplinary research project led by a professor in the School of Medicine, in collaboration with researchers from the J.E. Cairnes School of Business and Economics. PIER combines the One Health approach with Systems Social Marketing to understand the barriers and facilitators to improving recreational waters from a multi-stakeholder perspective. In May 2022, 25 stakeholders from across Ireland were invited to co-create a Blue Space Barrier Systems Map. The purpose of the workshop was to encourage stakeholders from different backgrounds and perspectives to work collaboratively to identify and map the relationships between barriers to using Blue Spaces. The Blue Space Systems

Map generated will be used to identify the blockages in the Blue Space system as well as the leverage points for change, and opportunities for interventions, to improve the quality of Blue Spaces in Ireland in the future. Many of the barriers discussed during the workshop were identified in the 2021 Blue Space National Survey. Following the workshop, the process of validating the map commenced. This involves inviting stakeholders from different backgrounds ranging from policy to community to Blue Space Users to reflect on the map to ensure it reflects a multi-stakeholder perspective on the issue..

WaterLANDS - large scale restoration of European wetlands

Wetlands retain and purify water, remove pollutants and excess nutrients, store atmospheric carbon, moderate flooding and coastal storms, support an immense variety of wildlife, and offer recreational, well-being and economic benefits to surrounding communities. When mismanaged, these essential services for landscapes and society are lost. Scaling up the restoration of isolated wetlands can work towards re-establishing former wetland landscapes and realising new opportunities for local communities. An ambitious project has been launched to tackle large-scale restoration of Europe's wetlands, with €23 million of funding from the EU Horizon 2020 Programme Green Deal. **WaterLANDS** (Water based solutions for carbon storage, people and wilderness) will restore the wetland sites across Europe that have been decimated by human activity and lay the foundations for scalable protection across much wider areas. WaterLANDS will undertake hands on restoration of specific wetland sites, covering an initial 10,500 ha, and create best practice models that can be applied to wetland restoration at other sites. By engaging with local communities and stakeholders, the project will ensure that wetland restoration results not only in environmental gains but also in social and economic benefits for the communities involved. The five-year project brings together 32 organisations from research, industry, government and non-profit sectors in 14 European countries including University of Galway who are work package leaders on the policy section and will also be working with data from the sites involved in the project.



242 Publications

(Scopus Publications 2017-2021)

SDG 7

Affordable and Clean Energy

7 AFFORDABLE AND CLEAN ENERGY



Students and Learning

Energy Engineering specialisation

University of Galway offers degrees in **Energy Systems Engineering** at both undergraduate and postgraduate levels. Energy Systems Engineering is a multidisciplinary programme that aims to meet the current and growing challenge of dwindling fossil fuel resources and the critical demand for alternative, renewable energy sources as a national, Europe-wide and global priority.

University of Galway Energy Society - Students Leading the Way

The goal of the **University of Galway Energy Society** is to use fact-based discussion and open collaboration to develop an understanding and awareness of energy production, consumption and its impacts. The society strives to make renewable energy options and everyday sustainable habits visible on campus and integrated into students' lives however possible. In October 2021, University of Galway Energy Society travelled to Strasbourg to showcase their **Anti-Fast Fashion Show** at the European Parliament Youth Event on the Climate Crisis. Here they performed an in-person fashion show displaying their creative and vibrant outfits for people from all around Europe. While on stage, some models held cardboard signs displaying shocking facts about the fashion industry, illuminating the dark side of fashion simultaneously. The Energy Society hosted a weeklong **Energy Awareness Week**, in February 2022. A range of events took place throughout the week. For example, Meatless Monday; Potluck event and tips to reduce food wastage; Tour of University of Galway energy facilities; Group cycle; Electronics waste collection and; Talk on the energy crisis and next steps for Ireland. The Energy Society in conjunction with Galway National Park City and the Terryland Forest Park volunteers held a **sustainability festival** in Terryland Forest Park on the 7th April, 2022. The aim of the event was to highlight local environmental groups working to make Galway a cleaner, greener, more sustainable place. Local groups had the opportunity to share their work with members of the broader Galway community through informative stalls, activities, and live demonstrations. In June 2022, the Energy Society in collaboration with University of Galway staff and the An Taisce Climate Ambassadors Programme **hosted a guided heritage and biodiversity walk** along the River Corrib.

The Sustainable Energy Authority Ireland (SEAI) Annual Report 2021 on Public Sector Energy Efficiency Performance highlights our **54.2% energy savings** since baseline year

Research

World leaders in testing of tidal turbine blades

The **Sustainable & Resilient Structures Research Group** at University of Galway, which is part of the **SFI MaREI Research Centre for Energy, Climate and Marine**, has been working over the past 13 years at the cutting edge of renewable energy research and development, which has resulted in the establishment of the world leading testing facility and an open-course design software (BladeComp) for full-scale wind and tidal turbine blades.

In AY 21-22, the team began work on four SEAI-funded wind energy projects, **REBLADE**, **SPOTBlade**, **WindLEDeRR** and **DeepWindDemo**. The technologies developed in these projects will explore solutions for the prevention of leading edge erosion in both onshore and offshore wind turbine blades, strategies for blades at their end-of-life and novel solutions for harnessing of offshore wind energy. For wind energy developers, this will see the operational costs of wind energy installations reduce, resulting in a lowering in the levelised cost of wind energy to a point where it is economically, not just environmentally, a better option than generating energy from fossil fuels.

This year, funding was awarded for the **TIDAL-GES Project** through the University of Galway Global Challenges Initiative under the theme of 'decarbonisation and just transition', which will complement the ongoing **H2020 CRIMSON Project** that is due to test a next generation tidal turbine blade in 2022. The TIDAL-GES Project is focusing on solutions to secure transition to affordable and clean energy that also enhances the health and resilience of communities, wildlife and environment.

During AY 21-22, in collaboration with the **Advanced and Sustainable Manufacturing and Materials Engineering Research Group**, work began on the **MI-DRONE Project**, which is led by industry partners Éire Composites Teo and Manna Aero. The technologies developed for the renewable energy sector will be applied to improve the sustainability and efficiency of delivery drones, while developing advanced manufacturing solutions for high volume production.

Green Hydrogen from Sea Water

A new project led by University of Galway will explore new methods to generate green hydrogen from low-quality water sources, such as seawater and wastewater. Funded by the European Innovation Council, the **ANEMEL** project brings together experts from academic institutions, research facilities, technological centres, SMEs



In 2022, University of Galway was shortlisted as a finalist in the Energy Manager/ Energy Team of the year category of the SEAI National Awards for the fourth consecutive year.

and industries in seven European countries to develop efficient electrolyzers, which split water into hydrogen and oxygen, and expedite the design of prototypes over a four-year period. The project fits within a bigger initiative by the European Commission to design and test novel routes towards the production of green hydrogen. Obtained by splitting water into its basic elements - hydrogen and oxygen - using renewable energy sources, green hydrogen could replace fossil fuels in transportation and industry. Moreover, it provides a cleaner raw material for the chemical industry - where green hydrogen could lead to more sustainable fertilisers, feedstocks and fundamental materials like steel. Under the leadership of University of Galway, ANEMEL project partners include: Technical University of Berlin, Germany; AGFA, Belgium; LEITAT and AGATA Comunicación Científica, Spain; De Nora, Italy; Technion Institute of Technology, Israel; EPFL (École Polytechnique Fédérale de Lausanne) and HES-SO (Haute École Spécialisée de Suisse Occidentale), Switzerland.

Enabling Access to Clean Cookstove Technologies for the Energy Poor in Developing Countries

Around 3 billion people cook using polluting open fires or simple stoves fuelled by kerosene, biomass (wood, animal dung and crop waste) and coal. Each year, close to 4 million people die prematurely from illness attributable to household air pollution from inefficient cooking practices using polluting stoves paired with solid fuels and kerosene. Household air pollution causes non-communicable diseases including stroke, ischaemic heart disease, chronic obstructive pulmonary disease (COPD) and lung cancer. Close to half of deaths due to pneumonia among children under 5 years of age are caused by particulate matter (soot) inhaled from household air pollution. SDG Target 7.1 aims to ensure universal access to affordable, reliable and modern energy services by 2030. Ryan Institute researchers have been working with the World Bank Energy Sector Management Assistance Programme on research to enable access to clean cooking technologies. In 2021, the Ryan Institute team published a seminal paper on this work "**The forgotten half: Men's influence over cookstove adoption decisions in Northern Kenya**" which highlighted that cookstove scaling programs that overlook the important role of men are unlikely to succeed.



The Galway Hydrogen Hub is launched at an event in University of Galway, June 2022

Community Engagement

Ireland's First Hydrogen Valley in Galway Harbour

The Galway Hydrogen Hub (GH2) is a consortium consisting of seven members: University of Galway, the Port of Galway, CIÉ Group and Bus Éireann, Aran Islands Ferries, Lasta Mara Teo, Aer Arann Islands, and SSE Renewables. GH2 proposes to establish a Hydrogen Valley in Galway, similar to ones already established in other European nations. A Hydrogen Valley is a regional ecosystem that connects hydrogen research, manufacturing, distribution, and transportation to a variety of end customers in the transportation and industrial sectors. Utilizing indigenous renewable hydrogen in Hydrogen Valleys is regarded as a critical first step towards enabling the creation of a new hydrogen economy. GH2 will establish Galway as Ireland's first Hydrogen Valley, supplying clean hydrogen for use in transportation, industry, and local communities throughout the greater Galway region. The GH2 consortium's initial flagship demonstrator project at Galway Harbour will focus on the indigenous generation and supply of pure green hydrogen fuel for public and private vehicles. This will comprise buses and trucks and will result in a multi-modal, zero-emission, renewable hydrogen transportation hub that can be reproduced easily, throughout Ireland. With University of Galway as the lead academic partner, the projected hydrogen transport hub is expected to be fully operational by the second half of 2024 and will demonstrate Ireland's potential as a significant hydrogen producer and exporter. Green hydrogen can contribute significantly to Ireland's greenhouse gases reduction efforts, by ensuring energy supply stability, mitigating

long-term energy price fluctuations, and assisting in mitigating long-term energy price volatility.

Decarbonising Energy Use of Buildings

University of Galway continues to decarbonise energy use of our buildings, sharing lessons learnt with other third level institutions, public authorities and the wider community. In AY 21-22, we invested €2.2 million in infrastructural energy projects. For example: the expansion of our Solar Photovoltaic (PV) Installation to achieve 400kW of Solar PV; expansion of our LED lighting programme to reach an installation figure of over 6,000 LED light fittings across campus since the project commenced in 2015; the installation of additional electric car charging points with 22 points now installed; and the Installation of new energy efficient cooling to the main university data centre. Researchers in the School of Engineering at University of Galway, working with colleagues in Buildings & Estates and others, have developed pilot innovative/intelligent ground source heat pump infrastructure to decarbonise heating infrastructure for University of Galway, targeting An Sport Ionad as the net thermal energy beneficiary. This is part of the H2020 **EU GEOFIT project** and the installation is scheduled for completion by December 2022.



339 Publications

(Scopus Publications 2017-2021)

SDG 8

Decent Work and Economic Growth

8 DECENT WORK AND ECONOMIC GROWTH



Students and Learning

New Postgraduate Certificate in Creative Arts Management

University of Galway's long standing education partnership with Galway International Arts Festival (GIAF) has led to a three-year Government funding package, announced in August 2022, for a new programme focusing on creative arts management. Delivered in collaboration with GIAF, Druid Theatre and other creative arts partners, the **Postgraduate Certificate in Creative Arts Management** will provide graduate with skills in design thinking, production, curation, business and management, while also offering an accredited work placement with a creative arts business. The investment through the Springboard+ initiative comes as the University and the Festival mark 11 years of the partnership. The success of the partnership has been further acknowledged with a shortlisting in the **Best Long-Term Partnership** category of the Business to Arts Awards, 2022. The shortlisting acknowledges the long-standing partnership between the two bodies, which sees the parties collaborate across education, culture and vision. The partners have also collaborated on the **SELECTED** internship programme, which educates the next generation of arts professionals. The partnership covers GIAF's very successful volunteer programme, which, with a recruitment of 1,000 volunteers (many University of Galway students) in a 'normal' year, is integral to the delivery of the festival. GIAF and University of Galway collaborate by playing a central role in re-imagining Galway, defining the landscape in which University of Galway graduates operate by supporting new career pathways, and pursuing a creative industries development strategy

96%

Over 96% of our graduates are employed or in further study within 6 months of graduating

(2021 Graduate Outcome survey)

Designing Futures

Designing Futures is a new educational programme that prepares students to deal with the complexity and uncertainty of life and the future world of work. Delivery of the programme is to enhance the employability of University of Galway graduates, by offering additional practical and creative teaching, learning and skills development, alongside traditional degree studies. The programme aims to promote greater student engagement with civic society, community and enterprise, while expanding their education and preparedness for life and a career. Additionally to empower students to design personalised skills development pathways and to ensure graduates transversal skills achievements are recognised alongside their degree; and to enhance the university's position as a leader in innovative, student-centred and enterprise-engaged education in Europe and internationally. More than 1,500 students are taking part in design thinking programmes each year, with more than 300 students attending new transdisciplinary modules in AY 21-22. One of the first modules delivered as part of the Designing Futures programme is the Introduction to Sustainability Module. The Designing Futures programme is funded with an award of €7.57 million from the Higher Education Authority's Human Capital Initiative of the Department of Further and Higher Education, Research, Innovation and Science.

Leading Irelands Future Together

Leading Irelands Future Together (LiFT) Ireland is a social enterprise initiative aimed at building a nation of powerful leaders. LiFT Ireland recognises that leadership is not limited to a select few and that everyone can be leaders in their own way. LiFT's partnership with University of Galway is the organisation's first formal partnership with a third-level institution. LiFT's leadership programme is an eight-week programme delivered through roundtable sessions, led by a volunteer facilitator. Each session focuses on one of eight key leadership values, such as honesty, competence, accountability, empathy, respect and positive attitude. The programme supports participants to develop these leadership attributes on an ongoing basis. As a facilitator students are trained in the LiFT programme, through a 4-hour training session. Facilitators then lead their own roundtable group for 8 weeks as volunteers and contribute to reflection and development of LiFT at University of Galway. In AY 21-22 114 students from a range of academic backgrounds completed LiFT facilitator training.

Research

Ireland's National Remote Working Project

University of Galway and the Western Development Commission are leading the **Remote Working in Ireland project**. Findings from Irelands **Third annual National Remote Working Survey** shows 95% believe working remotely makes life easier. The survey gathered responses from more than 8,400 employees, in late April and early May 2022, on their current experience of remote working. Some of the key findings include, of those who could work remotely, 52% were currently working hybrid, 40% fully remotely and only 8% were fully on-site. If their future remote working preferences are not facilitated, 30% of all respondents indicated that they would change job, with 33% indicating they may change jobs even if it meant a pay cut. Almost half (49%) believe remote working has no impact on opportunities for promotion, and 49% of all respondents clock more hours while remote working, compared to working on-site. The findings from the latest survey indicate that Irish workers expect to continue to work remotely all of the time, or to find a balance in line with their lifestyle. By providing up-to-date information on remote working experience of employees, the surveys are building on work to make remote working a permanent reality for many, post COVID-19.



137 Publications

(Scopus Publications 2017-2021)

Payment of Wages Act and the Work Organizations and Society Cluster

The **Payment of Wages (Tips and Gratuities) Act 2022** became law on 20 July 2022. The Act mandates that tips, gratuities and service charges are the property of the employees for whom they were intended. A University of Galway lecturer and Whitaker Institute member of the **Work, Organizations and Society Cluster**, has conducted research on the hospitality sector. Findings from her research was used to influence the content of the new Act by providing the Tánaiste with evidence of abuses relating to tips, gratuities and service charges. Abuse of tips is

one aspect of ill-treatment uncovered by the research and research findings were presented to an Oireachtas Committee on Wednesday 29 June arguing that the pandemic has exacerbated problems already present within the industry. Through her research, which highlights the perspective of employees, the lecturer addressed the 'chronic labour shortage' and pointed to low wages, antisocial hours, staff being 'overworked and overwhelmed, and an absence of job security in the post-pandemic period as contributing to the shortage. The research report *Inside Out Hospitality* can be accessed [here](#)

Examples of other recent opinion pieces include:

RTÉ Brainstorm – **'Tip not included: how some restaurants exploit their staff.'**

RTÉ Brainstorm – **'Will the new tips bill give restaurant workers what they're due?'**

Community Engagement

Launch of Speak Out for Students and Staff

University of Galway has launched Speak Out for its students and staff. Speak Out is a novel online tool set up for people to anonymously report experience of bullying, cyberbullying, harassment, discrimination, hate crime, coercive behaviour/control, stalking, assault, sexual harassment, sexual assault, and rape. The aim of the platform is to deliver a trauma-informed tool that will provide users with support services relevant to their experience. The University platform is part of a national initiative rolled out in higher education institutions during AY 21-22 to allow for increased recording and monitoring of incidents. Developed for Ireland's higher education sector, Speak Out is led by the Psychological Counsellors in Higher Education Ireland (PCHEI), with the support of the DFHERIS and the Higher Education Authority. In addition, Speak Out also provides information on supports and reporting procedures available through the University, as well as information on specialist services in the community. The Speak Out tool ensures that both students and staff will be able to make an anonymous report, helping to guide the University toward having better supports and procedures founded on direct experience.

University of Galway Awards Gold Medals for Civic Engagement

ALIVE (A Learning Initiative and the Volunteering Experience) is University of Galway's Student Volunteer Programme. The ALIVE certificate acknowledges the volunteering contribution that

students makes to the community, through clubs, societies and directly through engagement with over 400 community organisations and voluntary bodies. Approximately 275 students received ALIVE certificates in AY 21-22 with more than 26,000 hours of voluntary activity undertaken by these students across the University campus, Galway city, and wider communities to develop their own practical skills and civic awareness. The majority of students selected SDG 3 and SDG 4 as the focus of their volunteering projects in their reflection learning diaries. In October 2021, two graduates were awarded gold medals for civic engagement. A graduate of Medicine awarded by the School of Medicine, for her outstanding community outreach and volunteering work, as well as her research work in the area of global health. A graduate of Speech and Language Therapy awarded by the School of Health Sciences for raising awareness around mental health, volunteering, fundraising and providing peer support to first year students during the pandemic.



University of Galway has been named **University of the Year** in the new edition of The Sunday Times Good University Guide 2022, published in November 2021.



SDG 9

Industry, Innovation and Infrastructure

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



2021-2022

Student and Learning

Séamus McDermott Entrepreneurial Scholarship

The Séamus McDermott Entrepreneurial Scholarship is a new scholarship programme for entrepreneurial undergraduate students. Funded by the Liffey Trust, it will run for an initial 10-year period. The scholarship will help to support students in [IdeasLab](#), University of Galway's student innovation and entrepreneurship hub. It will also help to promote the concepts of job creation, entrepreneurial development and education for life for undergraduate students commencing their studies. The scholarship is open to first year undergraduate students at University of Galway and is valued at up to €9,000 for the duration of their studies at the University. In May 2022, University of Galway announced the inaugural winner of the Séamus McDermott Entrepreneurial Scholarship; a first year BSc Financial Mathematics and Economics student that developed a suite of Digital Flashcards to help with revision. The next call for applicants will commence in October 2022.

START 100

IdeasLab launched their new student incubator programme, [Start100](#) earlier this year. Start100 helps students with an early-stage concept to transform their ideas into potentially investible innovations. Start100 programme provides physical space, key networking opportunities, expert mentorship from alumni and enterprise, as well as a support fund of over €40,000. Students have access to funds to research and develop their idea throughout the programme. The final START 100 showcase allows students to pitch their ideas for the chance to win a final event prize fund to kick-start their innovation journey. For example, in July 2022 nine teams of students presented their innovative ideas to a panel of judges from the worlds of academia, research, industry and enterprise after an intensive six-week programme hosted by IdeasLab. ICTUS Medical and IRIS were announced the [winners of the inaugural Start100 programme](#) from University of Galway's IdeasLab.

Biolnnovate

[Biolnnovate Ireland](#) is a national health technology innovation programme based at the University of Galway. The programme operates in partnership with a host of national and international partners including Stanford University, American College of Cardiology, our EIT Health funded European Fellowship Network, University College Cork, Trinity College Dublin, Mayo Clinic, Boston Scientific, Medtronic, Abbott Vascular, Creganna, and Aerogen. Initially all

fellows register for the PDip in Biolnnovation Programme. During the programme, fellows have an opportunity to transfer to the Masters in Biolnnovation where they are required to submit a Masters thesis by research. Supported by Enterprise Ireland, Biolnnovate Ireland has so far trained over 100 fellows and 250 industry professionals, equipping them with the skills and mind-set to drive innovation in start-ups and industry. The programme has been involved in the creation of 22 new companies who, between them, have raised over €60 million in funding. Alumni also work to bring innovative ideas to patient care in industry and healthcare.



IdeasLab Start 100 Winners 2022 together with competition judges

IdeasLab Enterprise Challenge

Each semester IdeasLab work with companies across the region to solve enterprise challenges that companies are facing as part of the [IdeasLab Enterprise Challenge](#). Multidisciplinary teams from across all 4 Colleges of the University ranging from 1st year undergraduate to PhD work together to create a viable solution for the enterprise to consider. The programme runs for 8 weeks each semester, topics thus far have included reducing medical waste packaging, creating better communications and engagement strategies and reimagining the future of festivals. The programme is co-curricular and culminates in a final presentation to enterprise and expert panels with a view to progressing some ideas further in partnership with the enterprise team.



280 Publications

(Scopus Publications 2017-2021)

The Innovation Office Impact Series 2022

The Innovation Office Impact Series was a seven-week online training programme delivered by the Innovation Office teaching the fundamental aspects of entrepreneurship, business collaboration and commercialisation. It was open to all staff and post-graduate students and delivered through the Researcher Development Centre. Over 100 attendees from research, academic, professional services and technical staff took part in the series. Attended learned about concepts such as design thinking, collaborations, start-up companies and impact. The Impact Series runs annually; the next iteration will begin in March 2023.

Research

The Atlantic Innovation Corridor

The University of Galway and Ulster University have been announced as the lead partners on a new €4 million strategic regional development research project under the Government's North-South Research Programme. The **Atlantic Innovation Corridor** is a cross-border collaboration aiming to advance understanding of region and foster sustainable innovation. The project will focus on themes such as rural entrepreneurial ecosystems, business scaling, female entrepreneurship, digitalisation, freight connectivity and mental health. University of Limerick and Atlantic Technological Institute are co-partners on the research. The Atlantic Innovation Corridor will create a research team organised in hubs in Derry/Londonderry and Limerick and administered in the third hub in Galway. Examples of projects in the partnership are mentoring scheme for female entrepreneurs in the region; identifying economic growth bottlenecks and how to take action; business masterclasses for growth; mental health promotion; digital skills development; and exploring international freight transport connectivity through the north-west of the island, including rail connectivity and the potential of Foyle Port.

Grants for Academic and Industry Collaborations

Five University of Galway researchers have secured funding as part of an initiative to support new academic and industry research collaborations on behalf of Science Foundation Ireland (SFI). The SFI Industry Research, Development & Innovation Fellowship Programme will support the temporary placement of academic researchers in companies to undertake research

projects across a variety of areas including orthopaedic implants, biomedical science, mechanical engineering, virtual reality (VR), and chatbots optimisation. The Fellowship programme is designed to help kick-start postdoctoral academic researchers' careers in industry and to maximise the impact of their training. The programme also supports academic faculty researchers who want to spend time in industry alongside their academic responsibilities. Simultaneously, the placement will allow industry partners to benefit from their research fellows' knowledge to collaborate on bringing innovative solutions to industry challenges.

The Global Challenges Programme

Through the University of **Galway Global Challenges programme**, our University community has committed to investing €5 million to enable research initiatives with genuine transformative potential. The Global Challenges Programme is a targeted research initiative to tackle six of the world's most pressing challenges. These global challenges are as follows: (1) Antimicrobial resistance - tackling the silent pandemic (2) Decarbonisation - Pathways for a just transition (3) Democracy - a world in question (4) Food Security - Transitions towards just, inclusive and resilient societies (4) Human-centred data - Digital transformations and the public realm (6) Ocean and coastal health- Marine resilience. The investment forms part of University of Galway's Research and Innovation Strategy 2021-2026. The initiative is designed to enable the University's research community to engage with colleagues in other institutions in Ireland and around the world on some of the most significant issues affecting humanity. The **Tidal Energy project** is the first project awarded funding under the Global Challenges Programme. This project will focus on solutions to secure transition to affordable and clean energy that also enhance the health and resilience of communities, wildlife and environment. The Tidal Energy project is supported under the theme of 'Decarbonisation'.

University of Galway is a partner of **Global Challenges University Alliance (GCUA) 2030**.

The objective of GCUA 2030 is to equip the next generation of researchers, teachers and academic leaders with knowledge, tools and networks that will strengthen their capacity to contribute to the SDGs through innovation and international collaboration.

Illuminate

Illuminate is a new funding initiative run by the Innovation Office that targets ground-breaking projects from the College of Arts, Social Science and Celtic Studies that addresses at least one of the 17 UN SDGs and have the potential to truly change society for the better. With funding from the University of Galway Strategic Research Fund, the Illuminate Programme call for proposals opened in Summer 2021. 5 projects were selected for funding from 9 applicants, and projects commenced in October 2021. The successful candidates emerged from wide ranging areas including Geography, Archaeology and Irish Studies, Psychology, English and Creative Arts, History and Philosophy. The projects target multiple SDGs. The Innovation Office is working with each of the projects to develop their innovation pathway and maximize the impact and dissemination of their project. Highlights of the research so far include government policy changes, publications in academic and trade publications and national media, new student modules related to health, public exhibitions and the creation of a new climate aware physical space. The call for Illuminate projects 2023 is currently **open**.

Aspect Network

Through the Innovation Office, University of Galway has become a partner in the **Aspect Network**. Aspect (A SHAPE Platform for Entrepreneurship, Commercialisation and Transformation) is a network for organisations looking to make the most of commercial and business opportunities from Social Sciences, Humanities and Arts research. Aspect provides a wealth of information, support and resources for researchers working in these areas that wishes to maximise the impact of their work through commercialisation, business collaboration and knowledge exchange.

Community Engagement

The Innovation Office

The **Innovation Office** at University of Galway engages with researchers, enterprise, Government and society to accelerate the impact of University of Galway research and innovation by enabling collaboration, knowledge transfer and research commercialisation. From developing and protecting new inventions and research breakthroughs, to encouraging entrepreneurs and mentoring spin out companies, the Innovation Office is playing a significant role in Galway and the wider regions start-up and innovation ecosystem. For example, our

Business Innovation Centre is home to over 35 companies. During AY 21-22, we secured 15 Licencing Deals, 45 Industry Deals, 37 Invention Disclosures and 7 Patents were filled. In the last 5 years, we have spun-out 16 companies, bringing our total number of spin-outs currently operating to 27. The creation of companies whose purpose is to turn research into societal impact is one of the core activities of the Innovation Office at University of Galway. Examples of spin-outs with a particular focus on solutions for a sustainable world include Bioprobe Diagnostics, NVP Energy and VorTech Water Solutions.

During AY 21-22, University of Galway secured **15 Licencing Deals, 45 Industry Deals, 37 Invention Disclosures and 7 Patents** were filled.

ENLIGHT RISE

The **ENLIGHT RISE** (Research and Innovation agenda with and for Society) project commenced in September 2021. The objective of ENLIGHT RISE is for the nine member universities to become more competitive and innovative together, leveraging and synergizing respective strengths and capitalizing on innovation potential and partnerships with our surrounding ecosystems to jointly promote a greener, healthier, more equitable and sustainable Europe. The construction of a European Innovation District will promote the collaboration between the academic and industrial sector in the regions of partner universities, while the Research and Innovation Observatory will bring the results and innovations from the projects into the public domain.

IdeasLab Summer Camp

University of Galway's IdeasLab delivered a highly successful **2nd level summer camp** on creativity, innovation and entrepreneurship on the topic of the Circular Economy. Student teams from across the city and region took part in the design-thinking sprint camp, which was supported by sustainability champions from across campus including the Sustainability Officer and An Mheitheal Rothar. Solution directions included the development of waterproof mattresses for the homeless created through up-cycling discarded tyres; a new pharmaceutical delivery device for diabetes patients that significantly reduces plastic and; a washing machine filter designed to reduce microplastics entering wastewater systems. IdeasLab will work with local schools during AY 22-23 to build on the success of the summer camp experience.

SDG 10

Reduced Inequalities

10 REDUCED INEQUALITIES



In AY 21-22, 7% of University of Galway students registered for Disability Support

Students and Learning

University of Sanctuary

University of Galway is a **University of Sanctuary**, a movement aimed at promoting the inclusion of International Protection Applicants, refugees and Irish Travellers within the community. As part of our University of Sanctuary initiative, University of Galway introduced a specific University of Sanctuary Scholarship Programme. The Scholarship Programme is designed to increase participation at University of Galway for International Protection Applicants, refugees, vulnerable immigrant groups, and Irish Travellers. The University of Sanctuary steering committee oversees the scholarship programme. For AY 21-22, 12 scholarships were filled, including 6 undergraduate and 6 postgraduate. The scholarship includes a full fee waiver and up to €3,000 annual stipend. In addition to the scholarship programme, the University of Sanctuary movement focused on supporting students experiencing technological inequalities resulting from the pandemic. In collaboration with the Insight Institute for Data Analytics, the Galway Chamber, Camara Education Ireland and Trinity Access, the University of Sanctuary Steering Committee provided 40 much-needed refurbished laptops to regional Irish Traveller and Roma support groups, and 12 desktops to a local direct provision centre through the Tech2Students initiative. Sanctuary Scholars who were not eligible for the Government's Laptop Loan Scheme also received laptops resulting from collaborative efforts between the Access Centre, Student Services, the Chaplaincy, and the Hardiman Library.

JAM Card©

The University has implemented **JAM Card©**, a support system to assist those who may find it difficult to communicate or get easily overwhelmed in busy public areas. JAM Card© supports those who, for example, have autism or a learning difficulty which may mean that they need "Just a Minute" to allow them to complete their business. JAM Card© is already used across Ireland in libraries, shops and banks and on public transport. Anytime a person needs some extra assistance or time, they can present their JAM Card©, and they will be met by a staff member who knows to give that person some extra time. The system was launched to mark the International Day of Persons with Disabilities 2021, and staff training was provided across the University.



280 Publications

(Scopus Publications 2017-2021)

Mincéirs Whiden Society

The **University of Galway Mincéirs Whiden Society** aims to provide a safe and welcoming environment for Irish Traveller students on campus. The society focuses on promoting Irish Traveller culture and identity within the University and offers a peer-to-peer support service. Mincéirs Whiden has been named as Best Cultural, Academic, and Social Society at the National Board of Irish College Societies (BICS) annual awards 2022. This marked the first time that a university society for Irish Travellers has won the prestigious award. The university celebrated Irish Traveller Ethnicity Day hosting the '**Travellers in Education: Building a Sense of Belonging**' event on Wednesday, 26th February. Irish Traveller Ethnicity Day marks the anniversary of Travellers gaining ethnic status, while celebrating Travellers culture and heritage including music, craft traditions and language. Parallel to the showcase, the Access Centre facilitated workshops to highlight pathways into university, specifically Medicine and law, while outlining the multiple supports available to potential students. The SU held an Irish Traveller Ethnicity Week for the first time this academic year.

EU-PASSWORLD

The University of Galway has joined forces with the UN Refugee Agency, on an initiative to create opportunities for refugee students to come to Ireland to study as part of the **EU-PASSWORLD project**. The initiative is focusing on developing a roadmap to create new, safe and legal routes for displaced people to secure education scholarships in Ireland. The aim is for the University of Galway to offer the first higher education scholarship to a refugee by the end of the year, and in doing so create a framework for other higher education institutions in the country to follow. The EU-PASSWORLD project runs from 2022-2024 and funding is by the EU's Asylum, Migration & Integration Fund. National coordination of the project is by UN Refugee Agency Ireland and the Migrant and Refugee Rights Centre.

The Cubbie Sensory Hub

The **Cubbie Sensory Hub** is a safe space on-campus for students and staff to balance sensory needs. The Cubbie Sensory Hub was opened to mark World Autism Day 2022, and forms part of University of Galway's wider efforts to break down barriers to inclusion by investing in facilities and supports to make the campus friendlier for autistic people. Located in Áras Uí Chathail, the Cubbie is a wheelchair accessible, multi-sensory, safe space, accessible by one person at a time. It delivers a bespoke sensory audio/visual programme, helping people who may feel overwhelmed to regulate their emotions. The space can pre-empt overloads and balance sensory needs by regulating, alerting or calming senses, and helping with anxiety.



At the opening of the Cubbie Sensory Hub at University of Galway were student Gad Muzinga with University of Galway President Professor Ciarán Ó hÓgartaigh, April 2022.

with children and many students, particularly international students and those with children, experienced significant difficulties in securing appropriate and affordable accommodation. Students reported a range of attitudinal barriers which affected their learning environment; largely arising from negative stereotypes and unfavourable attitudes linked to factors such as gender, race, sexual orientation and disability. The report makes a range of recommendations, including the development of an anti-racism policy and a reasonable accommodation policy for students with disabilities, and the gathering and monitoring of student diversity data.

Reducing inequality at the Migration, Climate Change and Social Protection Nexus

The Irish Research Council - COALESCE funded Migration, Climate Change and Social Protection project led by University of Galway (Discipline of Geography & Ryan Institute) is conducting research on social protection, migration and climate change, both of which feature prominently in the SDGs. The provision of social protection is deeply rooted in the SDGs, especially within SDG 1 and SDG 10; and has become an increasing policy priority within low- and middle-income countries. The SDG Target 1.3 is to implement nationally appropriate social protection systems and measures for all and by 2030 achieve substantial coverage of the poor and the vulnerable. SDG Target 10.4 expects policies, including social protection policies, to be adopted to progressively achieve greater equality.

Global Migration Media Academy

University of Galway is leading the development of a global project aimed at changing the narrative on migration. The **Global Migration Media Academy** (GMMA) is an €800,000, 18-month international project to improve media reporting standards on migration, to counter harmful misinformation, and to create alternative migrant centred narratives. The project is co-funded by the International Organisation for Migration (IOM) and Irish Aid. The GMMA was set up by the IOM in Ireland in 2020. University of Galway is the **lead academic partner** on the project, and we are working with universities in Serbia, Nigeria, Morocco, Philippines and Mexico to develop an e-learning foundation course on reporting migration for journalists; on media training including data, digital and media literacy aimed at countering mis- and disinformation; and on capacity building in partner universities. Additionally, University of Galway hosted 50 journalists, academics and journalism students in July 2022 for the first ever GMMA summer school. The project is directly linked target SDG 10.7 to facilitate orderly, safe,

regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.

Community Engagement

Let's Talk About Race in the Higher Education Sector

To coincide with International Day for the Elimination of Racial Discrimination 2022, the OVPEDI launched the new **Race Equality Awareness online module** *Let's Talk About Race in the Higher Education Sector*. This 30-minute, online module has been funded by the Irish Universities Association (IUA) Vice-Presidents for EDI. The module has the following aims: (1) To develop greater awareness of the nature of racism and in particular provide an understanding of how racism may take the form of inequality and bias (2) To provide staff with the insights to enable a conversation about racism and (3) To call us to action to take responsibility to reduce racism in our university. This programme for staff is an early step in raising awareness of racism in the Higher Education sector, including the prevalence of micro-aggressions, which may be much more prevalent issues than more overt forms of racism. We encourage widespread take up of this programme by staff to help us collectively understand and address the institutional policies, processes and practices which embed and reproduce inequalities between staff and students of different backgrounds.

Assisted Decision-Making (Capacity) Amendment Bill 2022

The Centre for Disability Law and Policy is co-ordinating a group of over 20 civil society organisations who advocate for human rights-based reform of the **Assisted Decision-Making (Capacity) Amendment Bill 2022**. Alongside other members of the group, CDLP has given evidence to the Oireachtas Committee for Children, Disability, Equality, Integration and Youth as part of the Pre-Legislative Scrutiny on the Bill on the need for urgent reform. Areas of concern highlighted by CDLP included the Bill's continued discrimination against people detained in the mental health system and pregnant people, the need to prohibit all forms of restraint, access to justice for those subject to the Bill, the exclusion of disabled people from jury service, and the role of IHREC in monitoring the UN Convention. The CDLP organised an Oireachtas briefing for TDs and Senators before the Bill went to second stage in the Dáil, and worked with opposition TDs to draft amendments to the Bill. CDLP will continue to work with Senators to draft amendments to the Bill when it moves to the Seanad in Autumn 2022.

University of Galway has a number of active staff networks including University Women's Network, International Staff Network and LGBT and Staff Network. Our staff networks are a core part of our commitment to promote an inclusive environment.

University of Galway Stands in Solidarity with Ukraine and its people

The University of Galway is deeply shocked and outraged by the invasion of Ukraine by Russia and condemn this unprovoked violence in the strongest possible terms. We view these actions as an assault on democracy and on the values of freedom, autonomy and respect. We are undertaking a number of initiatives to demonstrate our support for Ukraine. Our Quadrangle is lit nightly in the colours of the Ukrainian flag and a demonstration of solidarity with the Ukrainian was held in the quadrangle on the March 24th marking one month since the invasion began. Research collaborations with Russia and Belarus have been cancelled and no new collaboration or financial transactions will be initiated. We have a University Management Team subgroup dedicated to co-ordinating our response to the Ukraine crisis and to supporting Ukrainian students and scholars who have had to flee their country. Ukrainian students are treated as European students in terms of fees and the government are organising a scholarship to assist with living costs. Our International Student Hardship Fund is available to our current and future students as needed and pastoral care and counselling supports are offered as an essential part of our response. The University of Galway hosted a 'Supporting Ukraine' event on May 18th, during which we launched our fundraising appeal to support Ukraine and an online portal allowing staff to donate household items, time, or a skill, to support the Ukrainian refugee community. We housed over 150 refugees in campus accommodation during the Summer months and many have remained in the Galway area.

Our University Management Team have approved the signing of a memorandum of agreement with the **Ukrainian Global University**. This partnership is symbolic of our desire to join efforts to help rebuild Ukraine and support students and scholars during this time of unrest.

Research

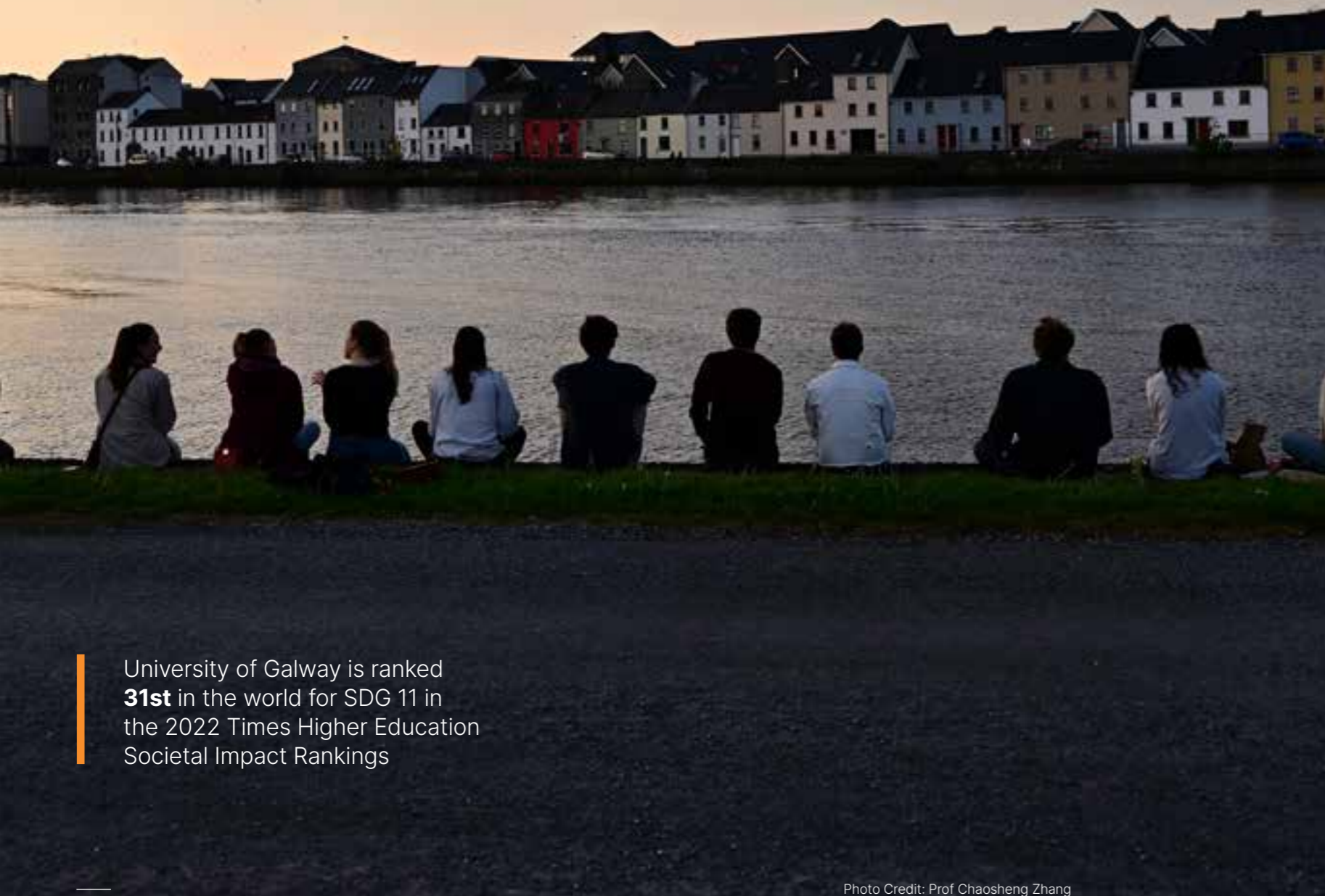
Inclusive Learning

Members of the *Inclusive Learning at University of Galway* project published a **report** examining barriers to inclusion experienced by University of Galway postgraduate students. The study sought to enhance inclusive teaching and learning practice at the university for postgraduate students, particularly those from diverse backgrounds. It found that students generally regarded pre-COVID teaching arrangements as inclusive but viewed remote learning as less inclusive. However, some students found remote learning more inclusive, e.g. some students with disabilities found their courses more accessible. Students with disabilities raised various issues regarding accessibility, but significant positive supports were noted, particularly from the University's Disability Support Service. The lack of affordable childcare was a major barrier to learning for many postgraduate students

SDG 11

Sustainable Cities and Communities

11 SUSTAINABLE CITIES AND COMMUNITIES



University of Galway is ranked **31st** in the world for SDG 11 in the 2022 Times Higher Education Societal Impact Rankings

Photo Credit: Prof Chaosheng Zhang

Students and Learning

Education Partnership with Galway International Arts Festival

University of Galway's long standing education partnership with Galway International Arts Festival (GIAF) has led to a three-year Government funding package, announced in August 2022, for a new programme focusing on creative arts management. Delivered in collaboration with GIAF, Druid Theatre and other creative arts partners, the **Postgraduate Certificate in Creative Arts Management** will provide graduate with skills in design thinking, production, curation, business and management, while also offering an accredited work placement with a creative arts business. The investment through the Springboard+ initiative comes as the University and the Festival mark 11 years of the partnership. The success of the partnership is further acknowledged with a shortlisting in the **Best Long-Term Partnership** category of the Business to Arts Awards, 2022. The shortlisting acknowledges the long-standing partnership between the two bodies, which sees the parties collaborate across education, culture and vision. The partners have also collaborated on the **SELECTED** internship programme, which educates the next generation of arts professionals. The partnership covers GIAF's very successful volunteer programme, which, with a recruitment of 1,000 volunteers (many University of Galway students) in a 'normal' year, is integral to the delivery of the festival. GIAF and University of Galway collaborate by playing a central role in re-imagining Galway, defining the landscape in which University of Galway graduates operate by supporting new career pathways, and pursuing a creative industries development strategy.

Galway City Climathon - Innovations for Climate Mitigation and Resilience at City Scale

In October 2021, the University of Galway Ryan Institute ran the Galway City **Climathon** in partnership with the Galway Chamber of Commerce and the **PorterShed Entrepreneurship Incubator**, which is a co-working and collaborative space for technology-focused innovation driven enterprises within the Galway City Innovation District. **Competing teams engaged in a hackathon (along with sister teams globally)**, to identify innovations and scalable business models for climate mitigation and resilience at city scale. Ahead of the COP26 in Glasgow, the 2021 Galway Climathon built from the energy and dynamism of many University of Galway students and researchers, seeking to develop and scale innovations towards a zero-carbon footprint horizon-point for Galway City



University of Galway Energy Society together with community partners host Galway Environmental Festival in Terryland Forest Park, April 2022.

Research

Crowd4Access – Mapping the Accessibility of Urban Footpaths

Crowd4Access is a Citizen Science project founded by staff at the University of Galway Insight SFI Research Centre for Data Analytics. It is a partnership between citizens and professional technology researchers who have come together to map the accessibility of footpaths of Irish cities. Everyone has challenges when navigating the footpaths of a city or a university campus. The wheelchair user and the parent pushing a buggy may need access ramps, the runner may need an even surface, the user of crutches may need shorter street crossings, the person with low eyesight may need a good contrast between footpath and the street, whereas the blind may need tactile pavement. Through the project, the public is invited to participate in experience sharing workshops, to share experiences using the footpaths in Irish cities and to learn how others use footpaths in different ways. In June 2022, a group of over 20 University of Galway staff and students, including our University President, Professor Ciarán Ó hÓgartaigh, came together to map the accessibility of footpaths on the University of Galway campus. Most importantly, the group included some of our students with disabilities, whose insights and experience are invaluable in ensuring that our University Campus is accessible for all. The focus of the project is to heighten awareness of the need for a safe, accessible-to-all walking infrastructure and when implemented this can lead to a viable alternative to fossil-fuel motorised transport. A workshop on Crowd4Access took place as part of Science Week, in November 2021.

EMERGREEN (Emerging Technologies for Greener Communities)

The **EMERGREEN project** is an interregional project funded under the Northern Periphery and Artic Programme 2104-2020 with a budget of €1.6 million. The project centres on finding ways to overcome the common territorial challenge of how to deliver quality and sustainable public services in remote areas by combating factors such as long distances, high service delivery costs due to low demand, shortages in human and material resources, and lack of access to the latest innovations. University of Galway Insight SFI Research Centre for Data Analytics is providing expert research and development capacity to the project, in the domain of digital public services innovation.

Social Capital and Community Development: Where Do We Go from Here?

A professor at the University of Galway School of Political Science and Sociology co-authored a paper on social capital for the **Journal of the Community Development Society**. The paper builds on an interdisciplinary foundation for a more inclusive approach to social capital research. The use of social capital as a development tool is examined; ways to move forward towards a more interdisciplinary framework is considered. The paper explores how communities have created and evaluated social capital and offers three examples of interplay between social capital and community development: the built environment, migration, and entrepreneurship.

Connemara Dark Skies Project

While artificial light at night keeps growing worldwide, spilling a pall of light pollution from urban areas into their rural hinterlands, western Connemara has some of the last remaining pristine dark skies left in Europe. This is both a national cultural asset, and a sustainable astro-tourism resource for the local community, which needs to be measured, protected and promoted. Researchers from University of Galway's School of Natural Sciences (Physics unit) are using a car-mounted apparatus, logging high-quality photometric measurements along with GPS coordinates, to conduct a survey of night sky brightness along the road network of Galway City and Connemara. Analysis of this data is allowing the sky brightness geographical trends to be discerned, and compared as "ground truth" with approximately 100-metre resolution against predictions from satellite measurements propagated through an atmospheric scattering model. Results from this University of Galway project are also

feeding into the work of the **Connemara Dark Skies** group - a mix of scientists, tourism and wellbeing entrepreneurs, amateur astronomers and environmental activists, who share the goal of establishing an **International Dark Sky Park** within Connemara. Dark Sky tourism helps to sustain remote communities, by extending the season for visitors into the winter half of the year.

University of Galway is an active member of the Environmental Association of Universities and Colleges (EAUC). 3 No. University of Galway sustainability case studies featured in international **EAUC SDG Accord Report 2022**.

The EcoFoodSystems Project

The University of Galway led **EcoFoodSystems project** within the Ryan Institute is funded by the International Fund for Agricultural Development and focuses on developing systems-based approaches for agroecological transitions of urban and peri-urban food systems for improved health and climate resilience. The EcoFoodSystems project is a collaborative project between University of Galway, **CIAT-Bioversity Alliance**, **Wageningen University and Research (WUR)**, and **RIKOLTO (International)**. The EcoFoodSystems project is focused on urban and peri-urban regions in Vietnam, Ethiopia and Colombia. Amongst other topics, Ecofoodsystem's researchers have been investigating **Food Mapping for City Regional Food System Transformations** and **Food systems analysis of transformative impact pathways for sustainable and nutritious diets in the Eastern Cape of South Africa**.

Community Engagement

ENLIGHT: European Dialogue: Sustainable Urban Development

ENLIGHT is a pan-European teaching, learning and research initiative that gives universities the platform to create a new type of "campus" where students and staff have increased opportunities for international study, training, teaching, research and sharing of services. The ENLIGHT alliance includes University of Galway, Comenius University, University of Groningen, University of Bordeaux, Gent University, University of Tartu, University of Gottingen, University of the Basque Country and Uppsala University. ENLIGHT aims to collaboratively transform higher education, by addressing societal challenges and

promoting equitable quality of life, sustainability and external engagement with the communities of the partner universities. In May 2022, University of Galway co-led a **European Dialogue conference** on the theme of Sustainable Urban Development as part of its role in the in the European ENLIGHT University Alliance. The event brought together ENLIGHT external partners, academics, students and project related staff from the nine ENLIGHT regions to reflect on novel approaches to the pressing challenges facing our European regions. The planned regeneration of Nun's Island in Galway City featured as part of the event. The conference included representatives from Galway City Council, the Western Development Commission and Galway Chamber as stakeholders in the development of the west of Ireland and Galway region. In February 2022, University of Galway **secured funding of almost €445,000** from the Higher Education Authority (HEA) to further progress ENLIGHT over the next two and half years.

Galway National Park City

Galway National Park City (GNPC) endeavours to achieve the goal of integrating the rest of nature into the fabric of the city and in the lives of its inhabitants in order to tackle at a local level the global climate and biodiversity crises as well as to promote sustainability. The multi-sectoral GNPC initiative, supported by a number of champions from the University of Galway, undertook a programme of actions in 2021/22. Actions included the mapping of 18 nature trails within the city's boundaries and making the

maps publically available on the **GNPC website**. The setting up of an educational committee of teachers, educationalists and representative from Youth Work Ireland Galway to organise Ireland's first-ever local Youth Climate Assembly that will take place during the Galway Science and Technology Festival in November 2022. Other examples of actions include supporting its champion Galway Community College in the rewilding of Lough Atalia and co-funding the first ever off-campus outdoor students eco festival. GNPC organised a **webinar** in September 2021 entitled Impact of a National Park City designation on Urban Development and featured presentations from major developers and local government officials from cities across the world to show-case how a National Park City designation can benefit urban infrastructure. Inspired by the GNPC, two of its champions established a social enterprise engineering innovation business to look at producing low cost weather stations to monitor gases and other atmospheric matter. The GNPC initiative featured on two episodes of *Faoi Bhláth*, RTE's latest biodiversity series, with three of its champions interviewed as part of the series. At a **United Nations workshop in March** attended by over 300 academics from across the world, the GNPC founding champion and University of Galway staff member highlighted GNPC as a prime example of how the university proactively collaborates with civil society in order to advance the SDGs.



Galway International Arts Festival 2022
Photo Credit: Prof Chaosheng Zhang

SDG 12

Responsible Consumption and Production



Photo Credit: Galway City Council

Students and Learning

New Masters in Consumer Psychology

Sustainable consumption is a core focus of the new MSc in Consumer Psychology, launched in 2021/2022 in the College of Arts Social Science and Celtic Studies. This is an interdisciplinary programme based in the School of Psychology at University of Galway with inputs from the School of Psychology, University of Galway **IdeasLab** student innovation hub, the **Irish Centre for High Performance Computing**, and the J.E. Cairnes School of Business & Economics. In addition, all students take part in international business projects, supported by X-Culture, working with students from all over the world on global virtual teams. The Masters in Consumer Psychology complements our existing postgraduate course in **Social Marketing and Sustainability** that focuses on the area of sustainable consumption.

University of Galway Students win big in National Sustainability Awards

In April 2022, University of Galway Energy Society was announced the winner of the **Best Green Initiative** in the Board of the Irish Colleges Societies (BICS) Awards 2022 for its Anti Fast Fashion Week. **Anti Fast Fashion Week** was a collaborative effort involving a mend/make your own clothes workshop, a documentary on garment workers' rights abuses in the U.S., an **anti-fast fashion show**, a clothing swap, and more. The purpose of the BICS National Awards is to recognise the effort and dedication of individuals who run college societies across Ireland and to celebrate the importance and value that societies contribute to college life. In September 2021, the SU distributed 7,000 reusable tote bags and 3,000 reusable coffee cups to students, in an effort to discourage the use of single-use plastics. Re-usable facemasks were also distributed to tackle the increase in waste observed due to COVID-19. The SU was announced the winner of the Environmental and Sustainability Activism of the year award at the **2022 Student Achievement Awards Ireland** (SAAI) 2022 for their **Sustainable Mondays** campaign; This award recognises the contribution our SU is making to advancing the causes of environmentalism and sustainability and recognises and acknowledges our growing body of student activism.

With experts in political science, sociology, economics, geography, and law, the University of Galway Environment, Development and Sustainability (EDS) cluster is a **research leader** in the area of sustainable consumption and production and everyday sustainable practices.

Research

CAMPAIGNers

Understanding how low-carbon lifestyles can be fostered by municipal/regional policy is a crucial challenge for behavioural science. This requires an understanding of the factors driving decisions of millions of people, yet many have little experience with the low-carbon lifestyle choices available to them. The University of Galway is the lead social science partner on the new **CAMPAIGNers** (Citizens Acting on Mitigation Pathways through Active Implementation of a Goal-setting Network) project. This is a 3-year international study, which aims to develop a ground-breaking approach that enables citizens to gain real-life experiences with low-carbon behaviours in various consumption domains (e.g. mobility, energy, water, waste, food, clothing, etc.). Over the past 12 months CAMPAIGNers' innovative approach developed an app-based 'goal-setting network', which will be implemented from September 2022 onwards with over 100,000 residents across 15+ cities over 5 continents who will receive challenges to change their daily consumption behaviours and lifestyles. The Climate Campaigners app offers diverse Challenges that can help residents to live more sustainably. Users can choose #CCchallenges that matter for them and their community, from reducing waste to greener mobility. The app also offers tips and inspiration, tracks and analyses users carbon dioxide savings, and has a community function so you can compare and compete with friends, family, and community groups.

The Applied Systems Thinking Cluster

The **Applied Systems Thinking** cluster researches pressing societal problems like climate action, sustainable consumption, sustainable tourism, antibiotic resistance and renewable energy. The group looks for community and collective initiatives that bring about positive social change. It combines policy insight, stakeholder engagement and private sector expertise to develop innovative every day solutions, improved governance systems, and the capacity of the public to influence those who make decisions affecting their lives and well-being. The research and teaching agenda of the Applied Systems Thinking cluster is wide ranging. A combination of academic and practical methods,

5th

University of Galway is ranked **5th** in the world for SDG 12 in the 2022 Times Higher Education Societal Impact Rankings 2022

an understanding of provisioning systems, behavioural sciences, participatory processes and social movements, and use of community intervention and knowledge partnerships, has enabled the cluster to develop participant-led expertise on society-wide problems relevant to UN SDG 12. A key project led by this group during AY 21-22 is designing *IrelandNetZero simulator*, a digital simulator for Irish companies and organisations to use when working through their strategies to move towards net zero. As part of the **Peatlands and People** project, the Applied Systems Thinking cluster has responsibility for a **Peoples Discovery Attraction**, a large-scale sustainable visitor attraction to highlight the importance of climate action, peatlands and behaviour change.

Using Microbes to Discover new ways to convert Organic and Inorganic waste into Bioenergy

Agriculture, distillery, agro-industrial, marine and mining are key industries in Ireland that produce waste which disrupts the earth's natural cycle. University of Galway's Innovative Energy Technologies for Biofuels, Bioenergy and a Sustainable Irish Bioeconomy (IETS BIO³) Research Group, an SFI Research Professorship group is working to uncover the potential of these wastes as a feedstock to generate bioenergy. Using anaerobic digestion technology, the organic matter is broken down and converted into biogas and bio-fertiliser. This is achieved by employing microbes in the absence of oxygen. These emerging technologies will play an important role in delivering Ireland's **National Development Plan** as well as the **Climate Action Plan**. To make anaerobic digestion technology economically efficient and kind to the environment, the group is progressing several optimisation strategies in the lab to develop an industrially relevant process. Along with bioenergy, the wastewater or industrial waste is also processed and bio-fertiliser extracted from it, creating a closed-loop, zero-waste strategy fit to support the circular economy. Another central feature of a circular economy are biobased materials, renewable materials derived from living matter, rather than depleting fossil fuel reserves. IETS BIO³ is working on several biorefinery models that offer a sustainable and green option to produce marketable bio-based products, a viable substitute for petroleum-based products. Volatile fatty acids, biopolymers, and hydrogels are a few of the bioproducts worked on. Examples

of work during AY 21-22 include: IETS BIO³ hosted their annual **Trends in Biotechnology seminar** featuring emerging technologies in algal research; published a **policy brief** on the integration of different wastewater treatment technologies to boost the circular bio-economy in Ireland; and developed novel biorefinery concepts for treating food waste, brewery spent grain and confectionary industry waste.

Community Engagement

Galway Green Labs

The rollout of green lab certification across campus has gathered pace during the last 12 months. First to be awarded 'My Green Lab' certification (MGLC) at the highest 'green' banding, was the Molecular Parasitology lab, based in the Orbsen Building. Among many actions taken by the 10-member green team, was the energy-saving 'up-chilling' of low-temperature freezers from -80°C to 70°C (saving 72 Kwh/day), reduction in single-use lab plastics, diverting 5 kg from landfill/incineration, and substitution of distilled water with tap water in a protein gel destaining protocol. The Carbohydrate Signalling group was the next to achieve a 'green' MGLC, citing the re-use of foil and tubes used in desiccating protein samples and excess chemical inventory given to neighboring lab, as key changes that saved time and money. The Earth & Ocean Sciences team achieved an impressive 'green' MGLC of four labs and platinum-level in two. Entering the International Freezer Challenge, also run by MGL, helped to reduce energy draw by 49 Kwh/day. July and August saw the awarding of 'gold' GLC to the Microbial Ecology Lab, and 'platinum' to the Pharmacology labs and the Mass Spectrometry Core Facility. News of the above achievements has been disseminated via Irish **Green Labs website**, currently chaired by Galway Green Labs founder and University of Galway academic and launched on 'Earth Day', April 22nd, 2022. For more, see. Since May 2022, University of Galway has been collaborating with Novelplast Teoranta Ltd, TUS, Envotec Ltd, and the Waste Resource Office for Connaught and Ulster, in an eight-month **CirculÉire Innovation funded project** that aims to circularise single-use lab plastics on the island. Between March and July, researchers based in the biomedical sciences building collected 80 Kg of discarded polypropylene (PP) tubes, pipette tip box lids and PCR plates. This demonstrator

project aims to show that decontaminated single-use PP resin can be flaked, pelletised and remolded into recycled PP lab product.

The Sharepair Project

University of Galway is partner of the **Sharepair project**, a project of the Interreg North-West Europe programme that is running from 2019 to 2023 with €4.7 EU funding. The project addresses the increasing amount of waste from electrical and electronic equipment (WEEE). WEEE is one of the fastest-growing waste streams in the EU, growing at 3-5% a year. The project aims to decrease WEEE from consumer products by scaling up citizen repair initiatives via digital tools; digital tools that stimulate and facilitate citizen repair by collecting repair solutions and making them easily accessible to citizens. The digital tools guide citizens towards the best repair solutions in their area and assemble, with the help of designers, a database of 3D-printing designs (open-source) for printing replacement parts. The objective is to decrease WEEE by 13,5 tonne per year in pilot repair cafés and by 175 tonne per year in the pilot cities.

Campus Living, Reuse and the Circular Economy

All campus caterers are committed to implementing waste prevention systems. One example is their shared objective to phase out the use of disposable coffee cups. University of Galway is working in collaboration with campus caterers and Galway City Council to implement the **2GoCup** deposit and return scheme. University of Galway is the first university in Ireland taking part in this scheme, which involves paying a €1 deposit for the 2GoCup, which will be returned to the customer once the cup is brought back to any of the participating campus catering outlets. Alternatively, there is the option to return the cup to any of the cafés and restaurants in Galway city that are participating in the scheme. Linked to this initiative, University of Galway is supporting the Galway City Council awareness campaign to reuse your mug. A recent survey completed by Galway City Council revealed that four out of five people in Galway city have a reusable cup but only one out of five use them regularly.

Our Building and Estates team in conjunction with a student undertaking the Masters degree programme in Environmental Leadership, is leading a community engagement initiative on a new organic waste circular economy process. Organic waste, composed of food waste arising from catering services and green waste arising from plant trimmings and grass cuttings, is segregated. The waste is sent to Barna Recycling where it enters a controlled industrial scale

composting process. The resultant compost is returned to the University, where it is used as a fertiliser on the campus grounds. A **promotional video and web page** have been developed to engage the wider campus community on the benefits of the circular economy.



University of Galway Students' Union win Environmental and Sustainability Activism of the Year category in the Student Achievement Awards Ireland 2022.



183 Publications

(Scopus Publications 2017-2021)



An Mheitheal Rothar providing a bike repair workshop at their community workshop in Block R, University of Galway, as part of Energy Awareness Week 2022. Photo Credit: Malena Thren

SDG 13

Climate Action



Photo Credit: Prof Chaosheng Zhang



191 Publications

(Scopus Publications 2017-2021)

Students and Learning

Climate Action themed Courses

University of Galway has introduced a new Masters on **Ocean, Atmosphere and Climate** in collaboration with The Surface Ocean-Lower Atmosphere (**SOLAS**) project. The Masters programme bridges the boundaries between ocean and atmosphere, and provides graduates with a broad understanding of how this coupled system works and is affected by climate and human activities. Examples of key topic areas include primary productivity and global change; earth and ocean sciences, atmospheric physics; and climate and ocean-atmosphere-climate interactions. The research aspect of the Masters is developed in collaboration with SOLAS. SOLAS provides international science coordination and capacity building in quantitative understanding of the key interactions and feedbacks between the ocean, atmosphere, and climate. Our new **Masters in International Development Practice** encourages students to consider how climate change relates to disasters and displacement. Climate change disproportionately puts a burden the poorest and the most vulnerable. Apart from internal displacement from climate change, forced displacement related to disasters, including the adverse effects of climate change, is a reality and among the biggest humanitarian challenges facing states and the international community. There are many other examples of courses offered across our colleges that focus on equipping graduates with the knowledge, skills and experience to take climate action. For example: the Masters in **Coastal & Marine Environment; Physical Processes Policy & Practice** by the College of Arts, Social Science and Celtic Studies; Masters in **Global Environmental Economics** by the College of Business Public Policy and Law and Masters in **Energy Systems Engineering** by the College of Science and Engineering. Our **Bachelor of Science in Geography and Geosystems** equips graduates with the skill-sets to become experts in human-environment relationships and the sustainable management of our natural resources.

Our Graduates are Agents of Change Globally for Climate Action

The Masters degree program in Climate Change, Agriculture and Food Security (MSc CCAFS) was established in the University of Galway in 2014, with the explicit goal of providing cutting-edge education and skills to a cohort of motivated national and international students each year in relation to climate change, agriculture, and food security. The programme was founded by the University of Galway's Ryan Institute, in partnership with the CGIAR global climate change, agriculture and food security programme. The programme has graduated 140 students from more than 30 countries, including international students from sub-Saharan Africa, Asia, Latin America and Small Island Developing States. Graduates are now working in leading & influential positions on climate mitigation, adaptation and food security topics across a wide range of organisations globally, including in the UN system, national Ministries, research organisations and companies. Each year students combine taught modules, skills and network training with a 3-month research project, typically in partnership with a national or international partner organisation, company or research institute.

Research

The Ryan Institute

The **Ryan Institute** is University of Galway's largest Research Institute with 500 researchers and over 100 research groups advancing sustainability research and innovation that contribute to the majority of the 17 SDGs. The Ryan Institute focuses on four thematic research areas, namely: (1) Marine & Coastal, (2) Energy & Climate Change, (3) Agriculture & BioEconomy, and (4) Environment & Health. The Ryan Institute is responsible for over 350 funded research projects comprising circa. 20% of the overall research income of University of Galway. A major thrust of the Ryan Institute's research and innovation focuses on addressing key sustainability challenges relating to energy and climate change. The Ryan Institute's **Energy Research Centre (ERC)** and **SFI MaREI Centre in University of Galway** are at the forefront of research efforts to transition to more sustainable energy systems. The Ryan Institute's **Centre for Climate and Air Pollution Studies (C-CAPS)** conducts research in the area of atmospheric composition climate change and air quality impact on ecosystems. The Ryan Institute's **Biodiversity and Bioresources** research cluster conducts research to mitigate the global loss of biodiversity and degradation of natural capital that continues at a rapid pace with global warming accelerating the loss of biodiversity.



Climate Strike in Galway city organised by Students' Union Class Rep and CUSP Sustainability Intern Malena Thren. March 2022.

Shared Green Deal

University of Galway has joined a new European project to investigate how local initiatives can help meet climate change targets. Under **Shared Green Deal**, 22 partner institutions across Europe will work together to examine the role social sciences can play in helping countries, communities and neighbourhoods to dramatically reduce carbon emissions. This five-year project, funded through the EU's Horizon2020 scheme, is structured around lessons from a set of 24 social experiments around six priority Green Deal topics - Clean Energy, Circular Economy, Efficient Renovations, Sustainable Mobility, Sustainable Food and Preserving Biodiversity. Researchers in Geography at University of Galway are leading the Clean Energy strand of the research, working with communities in four locations across the continent to develop community visions for desirable energy futures, looking at how organisations and individuals can work together to make daily lives more sustainable. The research is intended to assist the EU in reaching the target of carbon neutrality by 2050 and to create change at the local level. Issues of inclusivity and diversity are at the heart of the project to particularly account for disadvantaged and vulnerable social groups to ensure they are supported with the changes.



Photo Credit: Prof Frances Fahy

Sensing Air

Sensing Air is a citizen science project involving scientists and the Education and Public Engagement Manager from the Insight SFI Research Centre for Data Analytics working together with the local community to install a network of sensors in local schools, community health facilities and workplaces. The sensors will read, store and analyse CO2 emissions data. This will form a multisite data network as a first step in developing a bundle of sensors to target other gases and pollutants such as nitrous dioxide, sulphur dioxide, carbon monoxide and particulate matter. Later, external CO2 sensors will be installed in Terryland Forest Park, and a Mobile Sensor Lab (Sensors on the Go) will be brought to different sites across the city and Ireland. This project is critical to the health of the planet, as carbon dioxide is recognised as a major contributor to climate change. Key partners in the project include the Centre for Climate and Air Pollution Studies, Galway City Partnership, HSE, Community Café, Croí na Gaillimhe, Galway Volunteer Centre and a number of city schools.

Global Sea Levels are Rising-Kelp Forest Offers Protection

Coastal resilience is a common term in climate policy; it describes the capacity for social-ecological systems to cope with rising sea levels, extreme weather events and commercial activities. Key to coastal resilience are nature-based solutions (NbS) like beach, dune, oyster reef and kelp restoration. For example, research

from University of Galway on native oyster reefs in Galway Bay tells us that native reef restoration can dampen the impact of storm surges, offering a benefit-cost ratio multiple times larger than the grey infrastructure alternative (revetment/seawall). Ocean NbS's use kelp forests, seagrass meadows, oyster reefs and mussel beds to dampen waves. Ecosystem engineers reduce current velocities and dampen waves with species such as eelgrass, mussel and oyster beds, corals and mangroves. Off the coast of Ireland, kelp forests develop in a similar ecospace. There are currently too many critical knowledge gaps (financial and scientific) to predict precisely if, or how, large kelp forests in Irish waters can provide a feasible **nature-based solution for coastal protection**. With support from Marine Institute, a multidisciplinary research team in University of Galway based in Geography, Civil Engineering and Earth & Ocean Sciences is conducting a four-year study to measure the ecological and socioeconomic impacts of NbS, investigating what blocks or supports their implementation. This work is contributing to the **European Marine Board Working Group** on coastal resilience to promote science-based decision making within EU policy and legislation for coastal conservation, restoration, and habitat and biodiversity management. On a national scale, the project contributes to Ireland's Programme for Government that recognises the enormous Blue Carbon potential that the ocean has to offer in tackling climate change as detailed in the 2021 synthesis **report** co-authored by University of Galway staff in the School of Natural Sciences.

CoastSnap Community Beach Monitoring Programme Photo Credit: Dr Eugene Farrell



Centre for Climate and Air Pollution Studies

University of Galway's [Centre for Climate and Air Pollution Studies](#) (C-CAPS) has developed a smartphone app to provide real-time weather forecasting combined with air quality indications, including risk of air pollution. The app known as StreamAir also provides indication of key drivers of air pollution and climate disruption. The [C-CAPS's Mace Head research centre](#) in Connemara is one of the most important facilities for atmospheric composition observations globally. The StreamAIR app is an extension of the Mace Head real-time data system, designed to fuse together real-time observation and forecast data on multiple platforms including mobile devices. Mace Head is a member of a number of regional to global networks, contributing data and analysis to a wide range of atmospheric problems. In particular, it is a World Meteorological Organisation Global Atmosphere Watch atmospheric composition and climate research station and a European Monitoring and Evaluation Programme supersite aiming to solve transboundary air-pollution problems, as part of the United Nations Convention on Long-range Transboundary Air Pollution.

Climate Change, Migration and Social Protection in Ethiopia

An international development expert from the School of Geography, Archaeology and Celtic Studies and the University's Ryan Institute, has been awarded €338,000 for a three-year research [project on climate change and migration in Sub-Saharan Africa](#). In partnership with the Organization for Social Science Research in Eastern and Southern Africa, at Addis Ababa University, the project is examining the effects of climate change on human migration and the role policy instruments such as social protection can play to support the most vulnerable to climate change disasters. The project is among 21 projects that secured investment from the IRC COALESCE programme, run in partnership with the Department of Foreign Affairs.

net-zero

Community Engagement

EU LIFE Peatlands and People Project

University of Galway is the leading academic partner for the [EU LIFE Integrated Project \(IP\) Peatlands and People](#); the project is Ireland's only EU LIFE climate change award. EU LIFE IP Peatlands and People, Ireland's Climate Change catalyst, supports the realisation of a carbon-neutral, climate-resilient and environmentally sustainable country by 2050. Why Peatlands? Ireland has a high proportion of Europe's remaining peatlands that have immense value – they combat climate change, protect nature and biodiversity, maintain water quality and provide spaces for wellbeing. Restored and intact bogs store excess carbon dioxide they have removed from the atmosphere. Three powerful catalysts 1) working together to restore and rehabilitate peatlands across Ireland's midlands as well as 2) establish a business accelerator programme and 3) design an immersive sustainable visitor experience, a 7.5-year LIFE Integrated Project, Peatlands and People collaborates with communities and other stakeholders to generate and share solutions and knowledge for a better future. Improvements across upwards of 9,900ha of peatlands will be supported within the project itself (with complementary action over circa 28,100ha of peatlands and 40,000ha of grasslands). Over 400 university of Galway students participated in projects directly related to the EU LIFE Peatlands and People project, during AY 21-22. This research follows on from Galway's Interreg CARE Peat project, which demonstrates climate action by involving community and regional stakeholders and using innovative technologies for new restoration and carbon measurement techniques.

Our new **Climate Action and Sustainability Policy** (QA205) aims to embed carbon management into all University operations and processes with a view to achieving **net-zero emissions by 2050** in line with global efforts to limit warming to 1.5°C.

University of Galway is a partner of the United Nations Framework Convention on Climate Change (UNFCCC) [Adaptation Knowledge Portal](#) (AKP). The AKP, a product of the [Nairobi Work Programme](#) (NWP), is a knowledge-for-action hub for climate adaptation and resilience.

Stories of the Air- the Samhail Collective

The [Samhail Collective](#) is an art and science initiative exploring histories, politics and social practices of the air and atmosphere with communities. Samhail is part of SFI Discover funded Stories of the Air/Spéirscéalta. The Samhail collective applies storytelling techniques to entangle scientific knowledge with local knowledge, developing new methods of storytelling that entwine atmospheric science history, data and expertise with stories of the air across diverse communities. The work is carried out by a team consisting of a University of Galway climate scientist, science communication expert and two artists. The team conduct workshops, tours and events with various city and community partners across Galway city and in Connemara, to co-create new stories of the air that draw from different histories, reflect current experiences, and imagine sustainable futures. During the events, scientific stories from the Ryan Institute Mace Head Atmospheric Research Centre in Carna weave with local community stories from Connemara and from Galway City, and during the process, communities are linked virtually, exploring the atmosphere, engaging with atmospheric measurements to articulate stories related to our changing atmosphere. These facilitated workshops create space for participants to share stories related to weather and climate, exploring our relationship with the air. These stories will yield a collaborative, co-created bilingual book; Stories of the Air, comprising texts, photographs, and maps that will document scientific, cultural, and personally

imagined narratives related to the atmosphere. The book will include youth voices as well as adults across generations. Alongside text stories, the book will combine photographs, drawings, maps, and scientific diagrams as well as poems, and songs developed throughout the project. The team have opened the state of the art research facility at Mace Head to the public and are looking forward to multi-generational creative workshops to bring the globally leading atmospheric science of Mace Head to diverse communities.

Cois Coiribe - Sustainability and Climate Action Edition

Cois Coiribe is the University of Galway's online publication for views and opinions from our top academics and researchers – a window into the ground-breaking research and cutting-edge innovation driven by our University community. Over AY 21-22, the Cois Coiribe in-house team prepared a special edition on the topic of sustainability and climate action to highlight the ground-breaking work our experts, researchers & industry-leading alumni are doing to fight climate change. With articles covering a range of topics from energy consumption to agricultural sustainability, from waste-to-energy transformation to youth empowerment in the face of the climate crisis. The [Sustainability Summer 2022 Edition](#) received excellent engagement locally and internationally, attracting 14,179 page views and 10,305 social media engagements from audiences throughout Europe, and as far as the US and India.

RACE TO ZERO

University of Galway is a signatory to **Race to Zero**, a global campaign to rally leadership and support from amongst others, the higher and further education sector, for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth.

SDG 14

Life Below Water



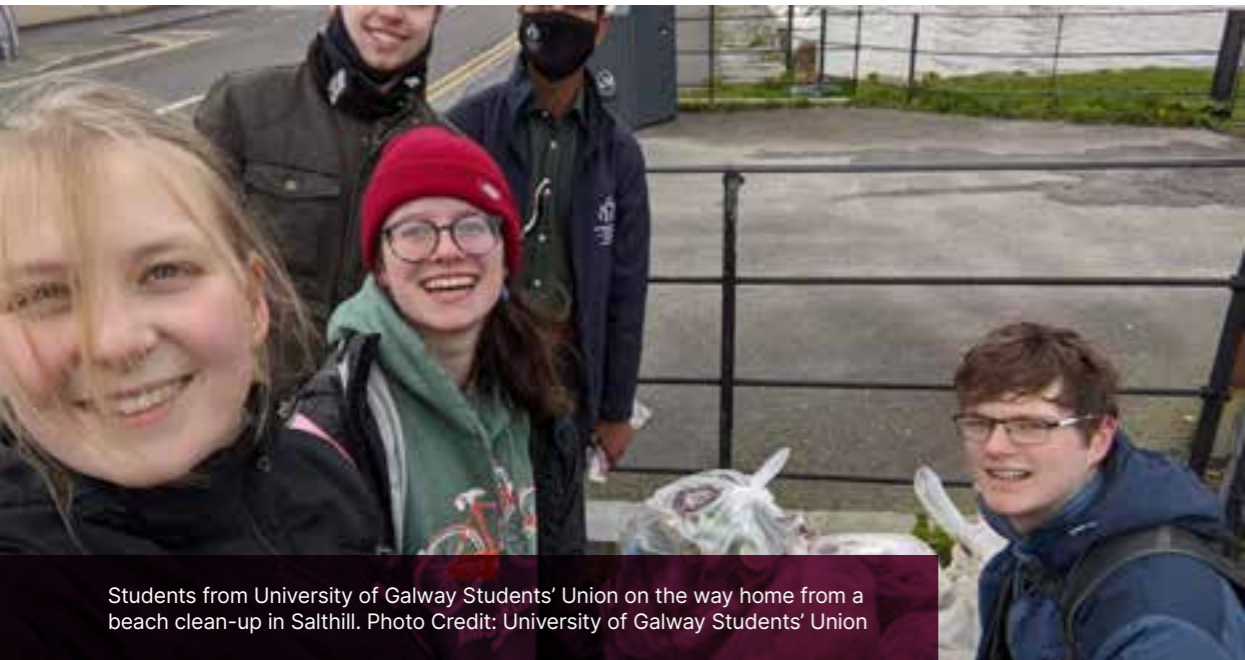
265 Publications

(Scopus Publications 2017-2021)

Student and Learning

Programmes and initiatives

Our **Masters in Coastal & Marine Environments: Physical Processes, Policy and Practice** examines discourses surrounding the long term health use and management of coastal and marine systems. The programme challenges students to develop competencies, gain experience, and develop transferable and problem-solving skills that are key to advancing our understanding of marine and coastal environment and progressing SDG 14. University of Galway has introduced a new Masters on **Ocean, Atmosphere and Climate** in collaboration with The Surface Ocean-Lower Atmosphere (**SOLAS**) project. The Masters programme bridges the boundaries between ocean and atmosphere, and provides graduates with a broad understanding of how this coupled system is affected by climate and human activities. Examples of key topic areas include primary productivity and global change; earth and ocean sciences, atmospheric physics; and climate and ocean-atmosphere-climate interactions. The research aspect of the Masters is developed in collaboration with SOLAS. SOLAS provides international science coordination and capacity building in quantitative understanding of the key interactions and feedbacks between the ocean, atmosphere, and climate. Coastal and marine environments are critical to local and national economies, support diverse habitats and communities, and provide a suite of ecosystem services. SDG 14 recognises the need to conserve and sustainably use resources from oceans, seas, and marine environments. With modules in Research Methods and Mapping, Dynamics of Climate Change, Coastal Processes and Landforms, Reconstructing Marine Environments, Biodiversity and Coastal Change, and Marine Spatial Planning and Policy.



Students from University of Galway Students' Union on the way home from a beach clean-up in Salthill. Photo Credit: University of Galway Students' Union

Student Led Beach Clean-ups

University of Galway's Marine Society aims to promote the awareness of marine issues in the university and in the surrounding Galway area by uniting people with similar interests and goals. Marine Society advances the knowledge of zoological, botanical and environmental matters in fun, inspirational and active ways, allowing us all understand the impact we have on our oceans. Marine Society hosted a Beach Clean-up with CuriOcean as part of Marine Awareness Week (21-25th March 2022). Fundraising for Galway Royal National Lifeboat Institution (RNLI) and Seal Rescue Ireland took place throughout the week. The SU organised beach cleans every month throughout AY 21-22, adopting a different spot each time to try to make Galway a cleaner, greener place. As well as benefiting the environment and marine life, this monthly event also served as a social event a chance to meet like-minded students.

Research

Assessing the Conservation Status of Deep-Sea Habitats

Over the past year, a University of Galway professor based in the School of Natural Sciences and the Ryan Institute **Centre for Ocean Research & Exploration** (COREx) chaired an international group of researchers who came together to assess the conservation status of six deep-sea habitats for the OSPAR Commission. The PSPAR Commission is a forum through which the EU and fifteen national governments, including Ireland,

co-operate to protect the North East Atlantic. The assessments, (which covered Lophelia Reef, Carbonate Mounds, Seamounts, Coral Gardens, Oceanic Ridges & Hydrothermal Vents, and Deep-sea Sponge Aggregations) have been submitted to the Commission and will influence conservation policy over the next decade. 3 researchers from the School of Natural Sciences are offering further support to OSPAR for the implementation of new offshore Marine Protected Areas (MPAs).

Special journal issue on the Sustainable Development of Ocean Economies

In January 2022 a **special issue** of *The Journal of Ocean and Coastal Economics* was published that featured eleven papers drawn from the **International Symposium on the Oceans in National Income Accounts** hosted by the Whitaker Institute in March 2021. A University of Galway professor, based in the Socio-Economic Marine Research Unit (SEMUR), was co-editor of the special issue. In line with the presentations at the symposium, the papers in the special issue cover the status of defining the ocean economy within national accounts; the expansion of ocean accounting to include environmental economic values; and methodological tools to assist with the integration. The introductory paper to the special issue, entitled *From Monterey to Galway: Evolution of the Oceans in National Income Accounts*, and authored by the co-editors; reviews the evolution of thinking on ocean economy and environment accounting since the first symposium held back in 2015 and also provides an overview of the selected 11 papers.

Solving Long Standing Enigma of Ocean Squids

Scientists at University of Galway identified family relationships among lineages of oceanic squids, which have been puzzling researchers for more than a century. A team from the Ryan Institute achieved the breakthrough; the team comprehensively named the different groups and provided important information on how squid evolved. The research team used genome skimming to reveal the full sequence of DNA and identify relationships among squid. The findings have been **published** in the *Zoological Journal of the Linnean Society*. Oceanic squids are a hugely important part of the marine food web. They are voracious predators and the main meal of toothed whales and other endangered megafauna. They include the largest group of commercially fished cephalopods, the flying squids. This research could be useful in understanding how our oceans will respond to ever-increasing pressures from human activities. The Irish Research Council, through the Government of Ireland Postdoctoral Fellowship Awards programme, funded the study.

Deep Sea Coral with Novel Drug Potential

Researchers from the School of Natural Science and Ryan Institute, University of Galway have discovered a coral in the Atlantic Ocean, which contains a potential wonder drug chemical compound that acts against the virus responsible for COVID-19. The cauliflower coral, so named due to its colour, shape and structure, was found on the seabed about half a mile below the surface, on the edge of Ireland's continental shelf. The chemical, named Tuaimenal A, blocks the major enzyme of the COVID-19 virus (Main Protease) which is responsible for the manufacture of virus particles inside the infected cell. The research has been carried out in collaboration with the South Florida University, US. The complete work has been published in the *Journal of Natural Products* and can be accessed here

Aquaculture

A diversity of approaches in aquaculture is important to address challenges in sustainability and from climate change. Lobster rearing offers opportunities to rebuild natural stocks and support high value aquaculture. Work at the **Ryan Institute Carna Research Station** is advancing knowledge of rearing conditions and diets.

Concerns about the sustainability of relying on protein from caught fish has stimulated research into alternative protein sources for aquaculture. One potential route is to use invertebrates to supplement fish diets in aquaculture. An IRC-funded PhD project at University of Galway is

looking at the integration of several different invertebrates into aquaculture. Part of this research highlighted gaps in knowledge about the biology of king ragworm, *Alitta virens*. *KingSearch*, a **citizen science project**, to map populations of king ragworm (*Alitta virens*) around the Irish coast was set up to address these gaps and raise awareness about this species, which is sometimes harvested for bait.

Oyster Reefs and Nature-Based solutions to Coastal Damage

An article based on research carried out by University of Galway's Socio-Economic Marine Research Unit (SEMUR) has recently been published in **Afloat**. The article highlights the findings of a study on the costs and benefits of natural-based solutions versus grey infrastructures to protect coastal amenities from climate change-related events. The study was based on the Rinville coastal trail (Co. Galway) that is subject to coastal flooding. By analysing the recreational value of the coastal trail and the costs of green and grey infrastructures, the research found that oyster reefs, as a nature-based solution, are cost-effective and provide additional benefits in terms of biodiversity and marine habitat restoration.

Socio-Economic aspects of the Artisanal Fisheries and Aquaculture

In July 2022, a University of Galway professor based in SEMUR was part of a panel discussion at the Directorate-General for Maritime Affairs and Fisheries of the European Commission Policy Day held in Vigo, Spain. The event was held in collaboration with the 20th Biennial International Institute of Fisheries and Economic Trade (IIFET) conference. The theme of the Policy Day was *Socio-economic aspects of the artisanal fisheries and aquaculture, challenges and opportunities for sustainable policies*. The professor was invited by the Commission to be part of a high-level panel discussing challenges and opportunities for sustainable policies in artisanal fisheries and aquaculture.

SEMUR at University of Galway researches interdisciplinary issues on marine socio-economics and coastal development. It is the foremost marine economic analysis centre in Ireland. In AY 21-22, 9 research papers were published by SEMUR relating to the sustainable development of ocean resources

Community Engagement

Changing Ocean Ireland (CÓIR): Forecasting Biodiversity & Ecosystems Response

The **CÓIR project** brings together an interdisciplinary group of University of Galway marine scientists, to work on an integrative national climate change project with colleagues at the Marine Institute and throughout Ireland, via existing networks of marine researchers within the SFI centres iCRAG and MAREI. The programme utilises the experience of researchers in marine and climate related aspects of the physical and social sciences, to develop an integrative program for assessing climate change in the marine environment in Ireland and the impacts this has on biodiversity, ecosystem services and food webs. This project is designed to provide the link between current climate change research, on international and national scales, with the need to provide operational advice and support to key stakeholders including the Department of Agriculture, Food and the Marine (DAFM), European Commission and international organisations (e.g. EuroGOOS, ICES, OSPAR). The work supports Ireland's contribution to the UN SDG 14 and activities undertaken in the course of the UN Decade of Ocean Science for Sustainable Development (2021-2030).

CoastSnap

CoastSnap is an innovative community beach monitoring program that enables citizens to help researchers monitor change on beaches. CoastSnap Ireland, based out of University of Galway, is using this technique to develop a coastal monitoring program for Irish beaches. The first station became operational in Derrynane, Co. Kerry with support from the Office of Public Works. CoastSnap has developed smart-phone cradles, so all members of the public need to do is take a snap at one of its locations, and share the image with the programme. By controlling the position and angle of the phone camera, the programme can measure the changing beach width and shape, and movement of the shoreline, to discover how each beach responds to changing ocean conditions. By sharing photos from iconic beaches this will help researchers better understand our dynamic coast.

University of Galway ranked **31st in the world** for SDG 14 in the 2022 Times Higher Education Societal Impact Rankings.

University of Galway lecturer sharing insights on biodiversity along the River Corrib. Photo Credit: Gary Tyrell



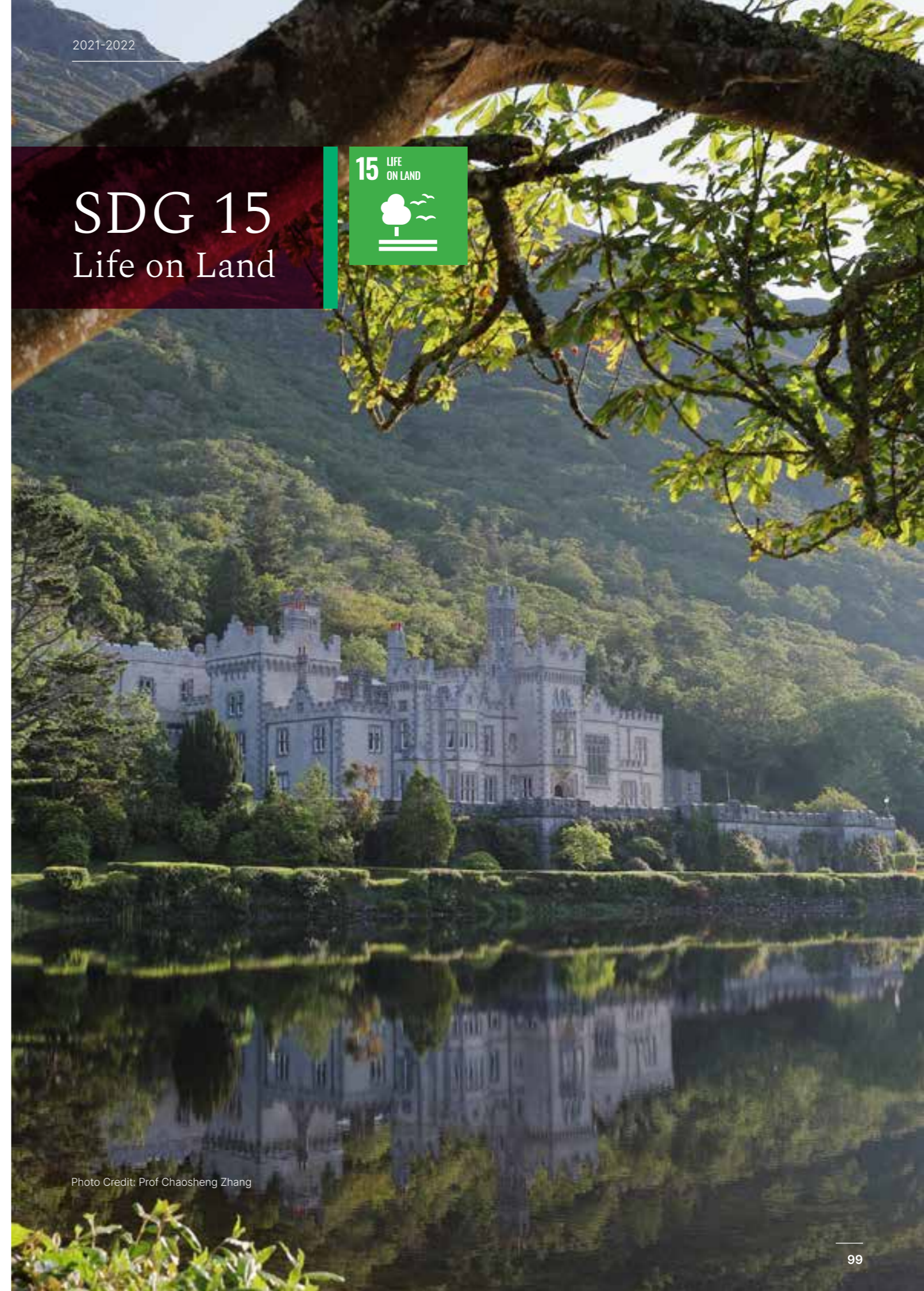
Ireland's Ocean Economy Survey 2022

The Marine Institute and SEMRU at University of Galway, are conducting a **survey** of marine and marine-related businesses as part of the regular reporting on Ireland's Ocean Economy. Although the Central Statistics Office (CSO) and other State organisations provide some data on marine related economic activity, there is a need to supplement this data with company surveys across a number of sectors (advanced marine technology products and services, offshore renewable energy, marine commerce and legal services, marine manufacturing, construction and engineering). In addition to general economic figures collected, this year's survey includes a section on the impact of COVID-19 and other external factors affecting marine businesses. The survey data will be used to provide a detailed analysis of Ireland's ocean economy over time and to observe progress on the targets set out in the Government's Integrated Marine Plan for Ireland.

Ryan Institute Delegates attend the UN Ocean Conference (2022)

In 2022, the Ryan Institute obtained official observer status for the UN Ocean Conference and sent its first delegates to the inter-governmental conference in Portugal in June 2022. **A professor from the Ryan Institute's Centre for Ocean Research and Exploration (COREx) attended the UN Ocean Conference representing the Ryan Institute.** The theme of the Conference was Scaling up ocean action based on science and innovation for the implementation of Goal 14: Stocktaking, partnerships and solutions and delegates discussed and planned for actions to address the growing ocean crisis.

SDG 15 Life on Land



Students and Learning

Philosophy in the Wild

Funded by an Illuminate grant (AY 21-22) awarded by the Innovation Office, the 'Philosophy in the Wild' garden project centres around the cultivation of a small garden space beside the Philosophy department on campus. The project aims to encourage both our own Philosophy students, and all other members of the campus community, to engage with a natural area on campus in a reflective manner connected to the broader idea of a shared place. To that end, garden projects include habitat restoration (the installation of bird-boxes, feeders and shelters, an insect hotel, a hedgehog box, a wildflower patch, etc.), food and herb growing, and knowledge exchange in the form of a 'little free library box.' In addition, the project has collaborated with a third-year Environmental Ethics module, in which the students wrote summaries of prominent environmental philosophers and ideas, some of which can be accessed via QR code from the garden. The overall idea, then, is that the space facilitates a sense of community between humans and non-humans and encourages critical thinking about the human relationship with the natural world in more general terms. Illuminate is a new funding initiative by the University's Innovation Office to support ground-breaking research that directly addresses the UNSDGs. Each ambitious project has the potential to change society for the better, including in the fields of Geography, Psychology, English and Creative Arts and Philosophy.



Photo Credit: Dr Nora Ward

Biodiversity Focused Teaching and Learning Initiatives

Our [Masters in Biodiversity and Land Use Planning](#) provides students with the crucial skills and knowledge needed to manage biodiversity resources sustainably. The programme aims to integrate an international perspective and new research findings into a biodiversity and land use approach and provide research-led opportunities that will help find solutions for conservation and planning conflicts

Home to a mixture of important habitats, the University of Galway campus is recognised as one of the most biodiverse, university campuses in Ireland. You can now experience the most biodiverse campus in Ireland through sound with our recently published podcast, featured in the [Sustainability Edition of Cois Coiribe 2022](#). Our Biodiversity Trail serves as an outdoor classroom for students and staff, a living lab for our biodiversity related research and a walking trail for the campus community and general public to experience a mosaic of very important green and blue habitats. Students can join the [Mountaineering Club](#) or the [Organic Gardening Society](#) to spend time in nature and connect with life on land.

Research

Jurassic Patents: Patent Law and the Value of Species in the Age of De-extinction

A University of Galway Zoology lecturer and researcher in the Ryan Institute has received funding to investigate how to decide which species to bring back from extinction and whether a de-extinct species could be legally "owned" through patents. The project will examine how different factors might drive which species are ultimately restored from extinction and whether the species resulting from the de-extinction process will fall under international protection laws or are open to being patented. The research will look at questions for example, how do ecological considerations such as the impact a de-extinct species would have on the environment, or the level of interest from the general public affect these decisions? Will the species we bring back from extinction simply reflect technological and ecological limitations or will financial factors be the main de-extinction selection criteria? The project received funding of €191 K from the IRC COALESCE programme, run in partnership with the Department of Foreign Affairs.

Urban Squirrel Survey

The [Urban Squirrel Survey](#) aims to gather information about squirrel populations in towns, cities and urban parks. The research is focusing on the seven largest urban areas on the island of Ireland - Dublin, Belfast, Cork, Derry, Limerick, Galway and Waterford. The Urban Squirrel Survey is a collaborative project between researchers in the School of Natural Sciences, University of Galway and the National Biodiversity Data Centre. Researching red squirrel populations in, and around, urban landscapes will teach us more about the importance of green spaces and ecological corridors in protecting our recovering native species. In addition to this, recent studies have shown that urban parks may act as a refuge for the invasive grey squirrel from predation by the pine marten. Therefore, knowledge of squirrel populations in urban areas is an essential element of protecting our native red squirrel species.

Smaller Scorpions are Deadlier

Scorpionism is a global health concern, with an estimated 1 million annual envenomation cases each year. Despite this, there is little known about the drivers of scorpion venom potency. One widely held view is that smaller scorpions with less-developed chelae possess the most potent venoms. While this perception is often used as a guide for medical intervention, it has yet to be tested in a formal comparative framework. Scientist from the School of Natural Sciences, Ryan Institute, University of Galway, have shown for the first time, that smaller species of scorpions with smaller pincers, have more potent venom as compared to larger species with robust claws. The scientists tested the theory from Indiana Jones and the Kingdom of the Crystal Skull, which warned of the dangers of small scorpions and concluded that 'when it comes to scorpions, the bigger the better'. The research has been published in the international journal *Toxins*. Read more [here](#)

Irish Hedgehog Survey

The Irish Hedgehog Survey is a citizen science project led by researchers in the Zoology Department University of Galway in collaboration with the National Biodiversity Data Centre. The aim of the survey is to learn more about where hedgehogs live in Ireland and how they use

University of Galway's Ryan Institute is a member of the [All-Island Climate and Biodiversity Research Network](#) that brings together researchers from a wide range of disciplines across the island of Ireland who are undertaking research in climate and biodiversity topics.

Experience the most biodiverse campus in Ireland through sound with our recently published [podcast](#)

our urban and rural habitats. Members of the public are asked to take part in the project in one of three ways: by recording hedgehogs wherever you see them; by surveying your gardens for hedgehogs; or by undertaking a larger survey in your local area. To date more than 5,000 hedgehog sightings have been recorded across the island of Ireland, with the small mammals turning up more often in the town and city surveys. Early results indicated that urban and rural gardens are a very important habitat for hedgehogs.

Care-Peat – Restoring the Carbon Storage Capacity of Peatlands

University of Galway is a partner of the [Care-Peat](#) project. Care-Peat is an Interreg North-West Europe (NWE) project with 12 partners working together to reduce carbon emissions and restore the carbon storage capacity of different types of peatlands in North-West Europe. The main partnership consists of 7 knowledge institutes and 5 nature organisations from Belgium, France, Ireland, the Netherlands and the United Kingdom. Together with 7 sub-partners and 41 associated partners, the projects aims to develop and test new techniques and socio-economic strategies for carbon reduction. By the end of the project in 2023, Care-Peat expects over 8,000 tonnes of carbon emissions per year to be prevented from losses and stored in the 7 pilot sites.

Supporting Bee Friendly Agriculture in Argentina

With a grant from the National Geographic Explorers programme, this [project](#) aims to study sustainable agriculture practices that can benefit pollinators, especially bees. The project is led by a researcher from the University of Galway Insight SFI Centre for Data Analytics, and explores the use of Artificial Intelligence and satellite imagery for land use classification. The project also has a citizen science component for ground-truth data collection and bee abundance mapping.

Understanding the spread of Antimicrobial Resistance (AMR) Genes across Ecosystem Barriers in Rural Settings

The de Menezes research group, affiliated with the University of Galway School of Biological and Chemical Sciences is developing research in several areas related to UN SDG15. For example, together with colleagues from the [FED-AMR consortium](#), funded by the EU One Health Joint Programme, the de Menezes research group is investigating the spread of antimicrobial resistance (AMR) genes across ecosystem barriers in rural settings. The vision is that through this research, better antimicrobial resistance mitigation measures will be developed, to mitigate the spread of concerning AMR genes in natural and rural ecosystems. Together with UK and Ukrainian colleagues, the de Menezes' research group is investigating how the soil microbiome responds to the disturbance associated with the 1986 explosion of the Chernobyl nuclear power plant, and what the subsequent ecological recovery can teach us about nature's natural healing properties after major ecological catastrophes. This research received funding from the British Ecological Society and the EU ERASMUS-Plus programme. Through a collaboration with researchers in the Technical University of Crete, the de Menezes research group is exploring how the deep-sea microbiome responds to oil spills, with the aim of developing better bioremediation

strategies. This research group is also developing novel sensors to track microbial activity in soil with the aim of reducing fertiliser usage and greenhouse gas emissions from agriculture.

Community Engagement

Farming Rathcroghan Project (2019-2023)

[The Farming Rathcroghan Project: sustainable farming in the Rathcroghan archaeological landscape](#) was awarded approx. €1million by the Department of Agriculture, Food, and the Marine as part of the European Innovation Partnership (EIP) scheme in 2019. This project is actively engaging with landowners to implement the development of innovative and sustainable farming practices in the culturally sensitive archaeological landscape of Rathcroghan, Co. Roscommon. It provides guidance, advocacy and proactive support to local farmers towards maintaining, restoring and enhancing the archaeological landscape, while providing co-benefits for a range of services including environmental protection, carbon sequestration and improvement in water quality. The project also engages with education programmes through the University of Galway and Fáilte Ireland, towards developing its tourism potential. This project is directly aligned to SDG 15. One of the key tenets of the Farming Rathcroghan

EIP is to protect, restore and highlight the sensitive natural environment upon which the cultural landscape is placed and to promote its successes to a wider community who may have an interest initiating similar initiatives.

University of Galway Green Shoots

At University of Galway, we want to recognise our sustainability journey. Our #GalwayGreenShoots photo caption competition reached out to the campus and wider communities inviting people to submit a photo & caption on social media using the hashtag [#GalwayGreenShoots](#). The aim of the competition is to highlight nature and biodiversity on our campus grounds and beyond. The competition offers the chance to win some great, locally sourced, sustainability themed prizes. Since the launch of the competition, we have received 370 entries. The competition reached more than 150,000 people and garnered 265,593 impressions, 7k video views, and delivered 1,793 clicks. Photos received as part of #GalwayGreenShoots feature in this report.



113 Publications

(Scopus Publications 2017-2021)

LIFE MULTI PEAT

[LIFE MULTI PEAT](#) (Multi-stakeholder Landscape and Technical Innovation leading to Peatland Ecosystem Restoration) is a project that aims to optimise the hydrological system of degraded peatlands of a wide range of types in Poland, Germany, Belgium, Netherlands and Ireland. This will lead to reduced greenhouse gas emissions (GHGs) and recover the optimal conditions to restart their sequestering functions, under the precondition of overcoming obstacles in multi-stakeholder landscapes. As part of the project, the team will assess the climate impact of the restoration measures by quantifying the GHGs, calculating the current annual GHG budgets and potential savings in the future. University of Galway is a LIFE MULTI PEAT project partner.

New Summer School in Ecology

Our new summer school in [Ecology](#) offers attendees practical experience of the natural environment in the West of Ireland. [Ecology: Living Landscapes in the West of Ireland](#), aims to develop students' skills in evaluating the sustainable use and conservation of Ireland's ecological resources. It provides students with survey skills to identify natural resources, and develops their skills to evaluate the sustainable use and conservation of Ireland's ecological resources. This course is largely field-based, and students will visit a variety of landscapes to learn about the environment, habitats and species of the region. The course adopts a multi-disciplinary approach to studying ecology. Learners engage with all aspects of how our ecological resources are created and maintained, for example through natural processes and anthropogenic activity. The course also considers conservation and sustainability issues and how a sound understanding of these ecological processes is needed to combat the challenges facing the environment.

University of Galway Biodiversity Trail
Photo Credit: Prof Chaosheng Zhang



The University of Galway campus is an [An Taisce Green Flag Award winning park in 2021](#). This Green Flag Award programme acknowledges Ireland's best public parks and gardens.

SDG 16

Peace, Justice and Strong Institutions

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

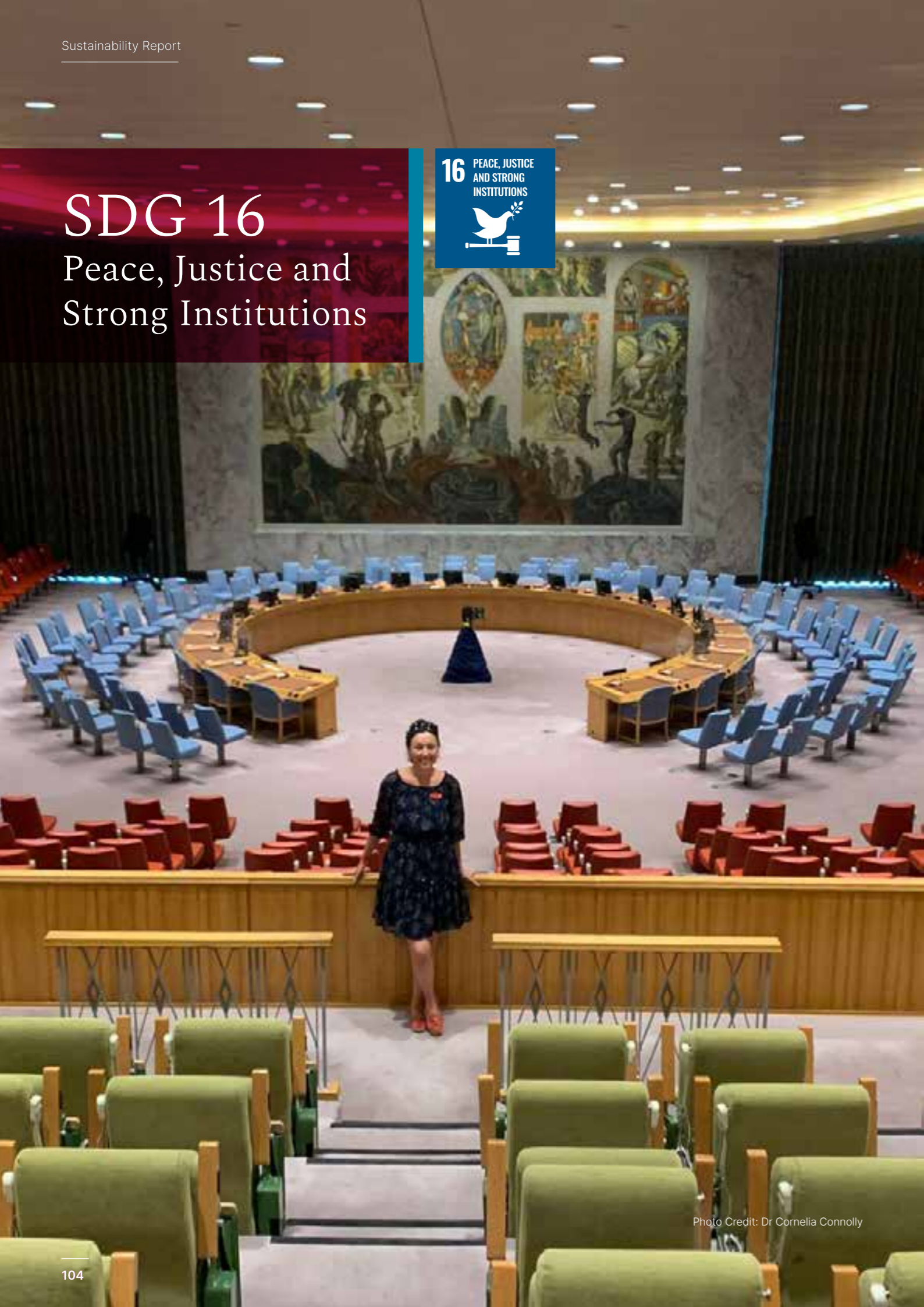


Photo Credit: Dr Cornelia Connolly

Students and Learning

Our **Masters in Public Policy** introduces students to the SDGs and frames subsequent discussion and analysis of global, European and national policy in relation to the SDGs. The SDGs are integral to our approach to Public Policy and are an important element in both of our core modules, Policy Challenges; and Public Policy and Politics. The specialised modules offered to students in specific policy areas directly address a wide range of the SDGs. In addition to core policy and research training modules, the MA offers specialised modules on topics that address the SDGs including: Advocacy and Development; Gender; Peace and Conflict; Disability; Ageing; Child and Family; Urban Policy; and Negotiation. At a time when policy formulation and implementation is increasingly subject to political scrutiny and negotiation, the course emphasises the political contexts in which policy is made and implemented. It emphasises the importance of the SDGs as global policy goals that play a crucial role in orienting and informing national and regional policy initiatives and goals.

The School of Law and its internationally renowned research centres, including the Irish Centre for Human Rights and Centre for Disability Law & Policy, offer a range of **undergraduate** and **postgraduate** student programmes. For example, the Irish Centre for Human Rights (ICHR) offer Masters of Law (LL.M) Master's programmes in specialised human rights areas including; peace-building, international criminal justice, international disability law, refugee and migration law, business and human rights, gender and climate justice. In conjunction with the Centre for Disability Law, the LL.M in International and Comparative Disability Law and Policy is unique in the world as an innovative and internationally focused LL.M dealing with the process of law reform in the field of disability.

University of Galway Tax Clinic

The **University of Galway Tax Clinic** represents an innovative work integrated learning environment to enhance student experience and achievement. Tax students, supported by locally based, pro-bono tax advisors, provide tax support to students and to people in the wider community who experience marginalisation. Following SDG 16, Target 16.6, which calls for effective, accountable, and transparent institutions to promote peaceful and inclusive societies, the clinic emphasises how tax education and support can assist in the equal standing of citizens. Significant emphasis is placed on imparting lifelong skills. University of Galway's Tax Clinic is Ireland's first free tax clinic. It enables students to apply their learning to make a positive impact on local communities. The clinic recently successfully completed a pilot community clinic, involving students, tax

professionals and community partners who are keen to develop the relationships into the future. The clinic will be extended for these groups and will over time be offered to other regional groups. In doing so, the clinic harnesses the potential of strong local cultures to support SDGs. Although they are global goals, the success of the SDGs lies in the involvement of partners at all levels, and at a regional level, this can include the Tax Clinic.

Our SDGs, Sharing, Discussing and Grappling with Big Issues

This project focuses on how place, context and collaboration, influence the achievement of the SDGs. Centred around a series of 5 virtual seminars, it utilises inquiry-based teaching and learning methodologies and authentic assessment strategies. Based in the Schools of Education and Geography and developed using funding provided by the International Office and College of Arts, Social Sciences, & Celtic Studies, this project spans three universities and is embedded in three different Masters programmes. These programmes include; University of Galway & Charles University- Initial Teacher Education programmes; University of Galway - Masters in Rural Futures Planning and Innovation and; Depaul University - Masters in Sustainable Urban Development. The project: facilitates stakeholder (learner, university tutor, community) sharing, exploration and critique of a selected SDG in the 'local' and 'other' contexts; highlights how place and context-related knowledge, experiences and beliefs influence one's response to the SDGs; investigates global/intercultural citizenship and; advances the development of geography student/student-teachers' professional identity, agency and communities of practice. Working collaboratively, students contribute to the interrogation of SDG related issues, while simultaneously developing as global citizens with the capacity for critical thinking and thoughtful action. The initial project focuses on SDG 16: Peace, Justice and Strong Institutions.

Research

The Global Challenges Programme

Through the University of **Galway Global Challenges programme**, our University community has committed to investing €5 million to enable research initiatives with genuine transformative potential. The Global Challenges Programme is a targeted research initiative to tackle six of the world's most pressing challenges. These global challenges are as follows: (1) Antimicrobial resistance - tackling the silent pandemic (2) Decarbonisation - Pathways for a just transition (3) Democracy - a world in question (4) Food Security - Transitions towards just, inclusive and resilient societies (4)

Human-centred data - Digital transformations and the public realm (6) Ocean and coastal health- Marine resilience. The investment forms part of University of Galway's Research and Innovation Strategy 2021-2026. The initiative enables the University's research community to engage with colleagues in other institutions in Ireland and around the world on some of the most significant issues affecting humanity.

UN Special Report on Human Security. Addressing the SDGs in unison

A Geography professor at University of Galway was one of the contributing authors to the newly published UN special report on human security, **New Threats to Human Security in the Anthropocene: Demanding Greater Solidarity**, which was launched in February 2022. The new report was covered widely in the media across the globe as a landmark vision on the post-COVID-19 need to address all of the UN SDGs in unison – in an interlinked, integrated and holistic manner. The report sets out the overlapping threats of human and environmental security the world is facing, and the urgent need for global solidarity in the Anthropocene. In seeking to reimagine, reframe and re-resource strategies of conjoined human-environmental security, the report sets out the task of moving beyond a concern for human precarity to a concern for a broader sense of planetary precarity that requires a 'more-than-human' sense of security for the future of the planet.

Digital Technologies in Tax Administration

The digitalisation of public administrations supports the development of effective, accountable, and inclusive institutions that in turn promote peaceful and inclusive societies. There is increasing evidence that some of the emerging (disruptive) digital technologies can significantly support the transformations required in public institutions to tackle societal challenges like those associated with the SDGs. An IRC COALESCE funded research project, recently completed by the University of Galway Discipline of Accounting and Finance, examined the implementation of disruptive digital technologies in multiple European tax administrations (national contexts) and explored the way in which such technological adoption strengthens public administrations within the adopting nation. The multi-disciplinary research required a diverse team to collaborate including tax experts, computer scientists, data analysts and social scientists; analysis resulted in determining the mechanisms associated with the beneficial use of digital technology in tax administration. The identification of mechanisms is important as they operationalise successful adoption and beneficial use of digital technology.

Unearthing the mechanisms enables us to form a holistic picture of the intangible processes and systemic shifts at play when a public administration rolls-out a nationwide technology initiative.

Empowering Tenants: Protecting Human Rights

The Centre for Housing Law, Rights & Policy completed a research project on building effective tenant participation in the management of local authority housing in Ireland. The report entitled **Protecting Human Rights: Effective Tenant Participation in the Management of Local Authority Housing** was published in April 2022. This project was funded by the Housing Agency Research Support Programme 2020 and undertaken in collaboration with Community Action Network and the University Of Southampton Law School. The research examines how structured tenant participation in the Irish Local Authority sector is developed. It reviewed policy and practice on tenant participation in other jurisdictions, as well as an assessment of the current practice in Ireland. A key feature of the project was the holding of 'Dialogue Events' involving a variety of stakeholders; tenants, local representatives and local authority staff, exploring the opportunities and challenges of developing a proposal for tenant participation which would be inclusive, rights based and innovative.

University of Galway Tax Clinic

The University of Galway Tax clinic involves two research dimensions, participatory citizenship and innovative pedagogy. Data collected from the initial phases of the Clinic shows that although they are motivated to be compliant with their taxes, taxpayers often struggle to understand the tax system. The clinic is now embarking on an interdisciplinary investigation of the strategies and benefits of equipping marginalised taxpayers to manage their own tax affairs, hand in hand with a student-centred teaching and learning experience. This research will have social and pedagogical impact, and the potential to influence tax policy and administration. Effective and fair tax policy, matched with efficient and accessible administration is critical to social inclusivity and effective institutions.

University of Galway is a member of the **Scholars at Risk Network**; an international network of institutions and individuals whose mission it is to protect scholars and promote academic freedom.

Community Engagement

Examining Human Trafficking

A University of Galway professor and UN Special Rapporteur spent 10 days assessing the issue of trafficking in persons in the Central Asian state Tajikistan. The **official visit** ran from December 7th to 16th, and focused on assessing the risks of trafficking for purposes of sexual exploitation, as well as gender equality and the gender dimension of trafficking. Child rights and concerns in relation to child trafficking were examined. Exploring methods of prevention for all forms of trafficking and access to effective remedies was a central focus of the visit.

Disability Law Summer School focuses on UN Convention on the Rights of Persons with Disabilities

The **Centre for Disability Law and Policy** hosted the world's largest **Disability Law Summer School** focusing on the United Nations Convention on the Rights of Persons with Disabilities in June 2022. The Summer School focused on Article 11 of the UN Convention on the Rights of Persons with Disabilities in Situations of Risk and Humanitarian Emergencies. Over 100 delegates, both speakers and attendees from 35 countries participated either in person in Galway or online. Director of Centre for Disability Law and Policy and Co-Director of the Summer School, said, "As COVID-19 continues and the climate crisis and other global conflicts intensify, it is really timely for us to centre the experiences of disabled people internationally and the additional barriers they experience to safety and enjoyment of basic human rights during these crises. The summer school brings together those who are leading in advocating for inclusion of rights for people with disabilities in national and international crises responses."

Navigating the Future: A Compass for Youth Policy and Practice

The UNESCO Child and Family Research Centre, 10th Biennial International Conference **Navigating the Future: A Compass for Youth Policy and Practice** took place in the University of Galway Institute for Lifecourse and Society in June 2022. The conference brought together more than 200 policy makers, practitioners, academics and young people from around the world to reflect on trends, challenges and options for the current and future experiences of young people. The core question addressed by the conference was 'how can we strengthen youth agency, inclusion and development in a rapidly changing world?' To reflect University of Galway's commitment to transition to a sustainable future, a virtual event platform was used to enhance



the sustainability and impact of the in-person conference, digitizing, thus eliminating the need for printing conference information. The platform also provided additional networking opportunities for attendees and stakeholders via the virtual platform through direct messaging, group discussions and social media activity.

My Country is My Prison

University of Galway LLM students working in our **Human Rights Law Clinic** have recently launched a 5 episode-series' podcast titled **My Country is My Prison**. The podcasts aim to promote awareness of human rights violations perpetrated against women and children in Ireland's institutions in the 20th century. The students said, "We have developed this podcast to consolidate information regarding Ireland's so-called 'historical' institutional abuses. We aim to explore these ongoing human rights violations in simple terms to help educate young people or those who are not familiar with these institutions. Our goal is to inform younger generations why this issue is relevant today and why we must keep working for justice." The podcasts "highlight the continuing human rights abuses currently being experienced by survivors of the institutions, namely those of the Mother and Baby Institutions, the Industrial Schools, and the Magdalene Laundries." The episodes discuss the following issues: Adoption and the Right to Identity, Industrial Schools and Children's Rights, the Abuse of Women's Rights in Ireland's institutions, as well as Ireland's Continuing Obligations Today and Moving Forward. The students interviewed the Special Rapporteur on Child Protection to the Government of Ireland, Dr Connor O'Mahony, for the fifth episode on Ireland's continuing human rights obligations. They also released a bonus episode consisting of an interview with Elizabeth Coppin, survivor of Magdalene Laundries, who has brought her case before the United Nations' Committee Against Torture.



307 Publications

(Scopus Publications 2017-2021)

SDG 17 Partnerships for the Goals



Ni neart go cur le chéile
There is no strength without unity

At University of Galway, we recognise the power of partnerships in achieving the SDGs; partnerships support the implementation of every one of the SDGs, as well as the framework itself. We are collaborating across cities, regions, countries and continents as part of a collective international response working towards the achievement of the SDGs. Examples of University of Galway partnerships that are seeking to progress the SDGs at the local, regional, national and global levels feature throughout this report, with some key examples highlighted in the section below.

University of Galway is a member of the Association for the Advancement of Sustainability in Higher Education (AASHE) and in November 2021 the university received a **STARS gold rating** for its sustainability achievements. University of Galway is listed as a top performer in the **AASHE 2022 Sustainable Campus Index**. University of Galway is an **An Taisce Green Camps Ireland awarded site**. The green campus award is the result of many years of hard work undertaken to promote best practice in sustainability across five themes, which include energy, water, waste, transport and biodiversity. University of Galway is a signatory to the **SDG Accord** and

a number of our sustainability case studies are feature in the international **EAUC SDG Accord Report 2022**. The University's approach for progressing the SDGs is featured as a case study in Ireland's **Second National Implementation Plan for the Sustainable Development Goals 2022 – 2024- Draft for public consultation**. University of Galway is featured in the 2022 Report from the Sulitest Movement, **Raising and Mapping Awareness of the Global Goals**. University of Galway is an active member of UN Academic Impact; a University of Galway staff member presented at a **UN Academic Impact workshop in March** attended by over 300 academics from across the world. In December 2021, ENLIGHT Presidents, including University of Galway President Prof Ciarán Ó hÓgartaigh, endorsed a joint **sustainability engagement**, committing our nine partner universities to being key contributors of sustainable development and to lead by example with concrete actions in governance, education and research.



University of Galway continuing on its journey towards a more sustainable future...

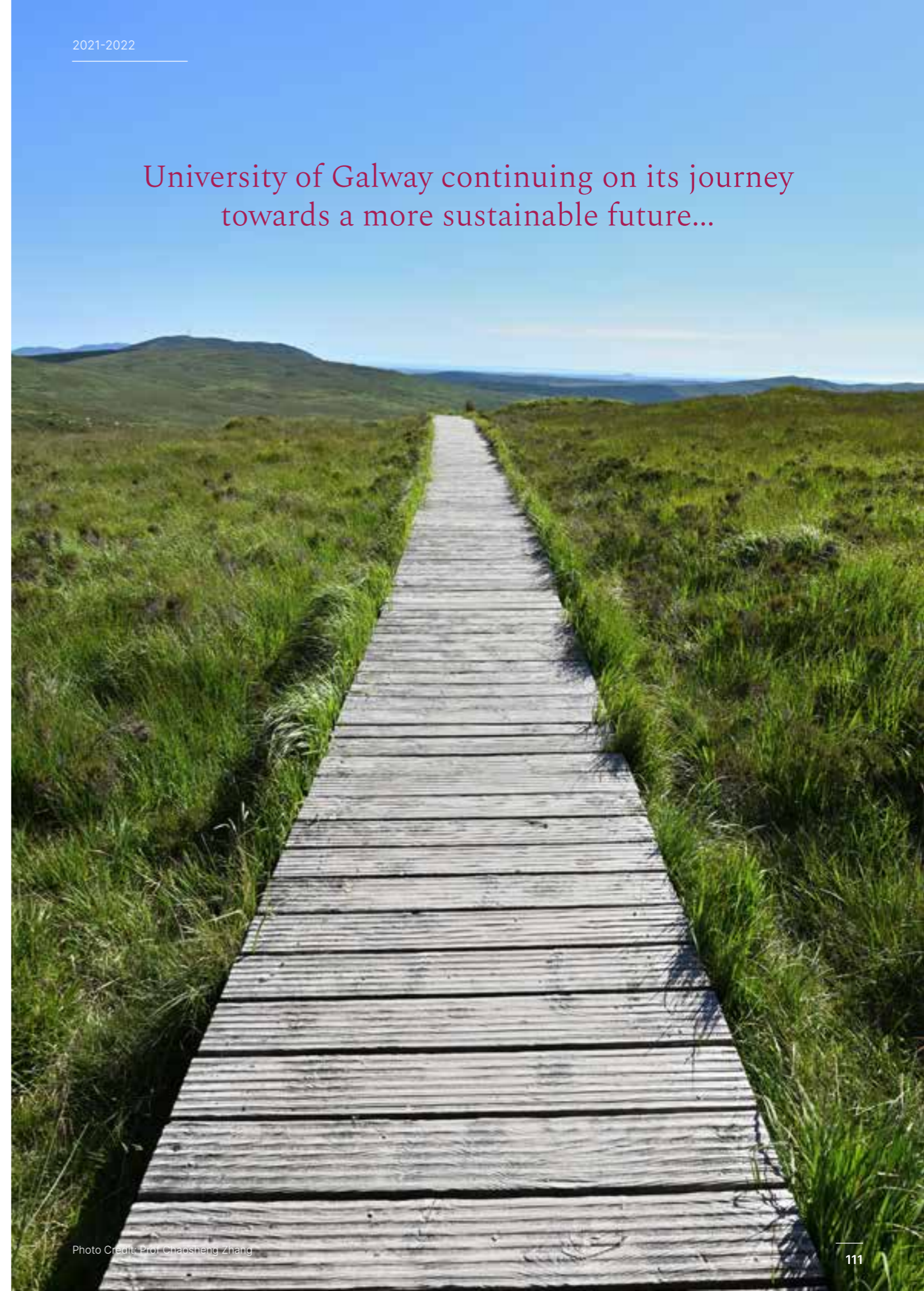


Photo Credit: Prof. Chaosheng Zhang



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OF GALWAY

University of Galway Sustainability Report

Academic Year 2021-2022