

# Sustainability

## ANNUAL REPORT



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# About this report

## Overview of contents

This report for the 2023-24 academic year provides an update on the University of Strathclyde's progress towards implementing the sustainability commitments of its Vision 2025 Strategy and supporting actions plans.

In this report, we will share our key achievements in relation to sustainability and sustainable development:

- Detail our scope 1, 2 and 3 carbon emissions and progress towards our Net Zero target and wider sustainability performance indicators.
- Share progress on ongoing work towards a new Social and Environmental Sustainability Strategy, encompassing a broader view on sustainability.
- Give examples of ongoing work from across the University that contribute to the UN Sustainable Development Goals.

For the first time, it was co-authored by the Sustainability and Environmental Management Department - also known as Sustainable Strathclyde - and the Centre for Sustainable Development (CSD). This is in recognition of our continued and growing collaboration. This builds on work from both teams, to take a more holistic approach to reporting – covering operations, teaching and learning, research and knowledge exchange, and social sustainability.

## Governance and Sign Off

This report was presented to and approved by the University's Strategic Sustainability Steering Group, led by the University's Chief Finance Officer Lucy Noble. This group considers all strategic aspects affecting the delivery of the University's climate and sustainability targets and makes recommendations to the Executive Team for approval and endorsement.

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# Foreword

The University of Strathclyde has a long history of acting boldly to tackle the significant societal challenges of our time. This is reflected in our commitment to sustainability, where we remain steadfast in our ambition to contribute to a positive future for people and planet.

As such, I am pleased to share our Annual Sustainability Report for the 2023/24 Academic Year. This report comes at a key moment for both Strathclyde and wider society.



It provides an update on activities set out in our [Vision 2025 Strategic Plan](#), published in 2020. Our Net Zero milestone for 2025 is a 30% reduction in carbon emissions from scope 1, 2, and limited scope 3 emissions. Due to lack of progress to achieve emissions reductions on a large scale,

it is now unlikely that this milestone will be met. This underscores how critical the actions we take now are in getting us back on track. Our 2030 milestone of an 80% reduction is still in reach, but to get there we must act quickly. This report seeks to help us celebrate our wins and learn from our challenges, so that we continue to act boldly for people and planet.

We recognise the need to continually evolve our approach; as such, in January 2024, our ambitious new institutional strategy, [Strathclyde 2030](#), was published. This sets out a programme of progression, contribution and impact which we will deliver by 2030, with a particular emphasis on social and environmental sustainability.

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It reiterates and strengthens our commitment to embed sustainability into all aspects of University activity, with the notable expansion of our Net Zero target (KPI16) and the introduction of a new KPI 15 focused on embedding sustainability into our teaching, learning, research and innovation.

Our activities and achievements across 2023/24 stand us in good stead to continue working towards these heightened ambitions. We are blending our world leading academic prowess with our plans to transform our estate and ensure that we leave a lasting positive legacy for our community and the environment.

This year saw our hugely successful fourth annual Education for Sustainable Development Conference. Students and staff came together to showcase their many and varied contributions to the Sustainable Development Goals, highlighting that creating a better, fairer world truly requires everyone to get involved. On the operational side, the University launched its new Travel Policy, which places sustainability as a core principle of the way we do business.

You will find these and many more collaborative and innovative success stories from the year throughout this report. Personally, I have had the pleasure of taking up the role of Chair of the University's Sustainability Strategic Steering Group. I hope to continue working alongside colleagues in the coming years to address the challenges and embrace the opportunities we face in reaching our sustainability goals.

**Lucy Noble**

Chief Finance Officer (CFO) & Chair of Sustainability Strategic Steering Group (SSSG), University of Strathclyde



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# Sustainability at Strathclyde

## Introduction

### Our Vision for Sustainability

Sustainability was a vital part of our Vision 2025 and is now highlighted as a key priority in the University's new 2030 Strategic Plan. It cuts across all our strategic goals and KPIs, highlighting that embedding sustainability in everything we do is essential if Strathclyde is to continue making a positive contribution locally and globally.

We firmly believe that Education for Sustainable Development should be embedded across all areas of our curriculum, to deliver a sustainable future for all. Furthermore, we will make tangible real-world impacts through increasing our research and innovation which tackle the complex sustainability challenges we face. We are fully committed to becoming Net Zero for carbon emissions by 2040, and to create a greener and more climate-resilient campus.



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## Sustainability Milestones

The 2023/24 Academic Year was not without challenge. With the financial pressure that the University sector in Scotland has been under, activity has primarily focused on strategic planning, with fewer large scale decarbonisation projects. However, we have made significant progress on new strategic commitments, policies, and sustainability engagement across the whole University community. Our Sustainable Strathclyde team and Centre for Sustainable Development have both taken significant steps to support the University's mission to embed sustainability more fully into teaching and learning, research, and operational activity at Strathclyde.

Sustainability and circular economy principles are being more thoroughly embedded in our capital projects through collaboration between the sustainability team, estates, and procurement. The upcoming £30m refurbishment of the original Students Union building is working towards meeting the Scottish Net Zero Public Sector Building Standard – the first of our construction projects to target this.

We launched our Sustainability Learning Passport, an online learning platform for staff and students to increase awareness and understanding of sustainable development and climate change, and our Strategic Sustainability Steering Group is now chaired by the University's CFO, aligning sustainability and financial governance more closely.





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## Headline Successes and Challenges

### **Co-Designing our Sustainability Strategy**

Throughout the first half of 2024 we undertook a lengthy consultation process with staff and students to co-develop a new Social and Environmental Sustainability Strategy (SESS). This will update our previous Climate Change and Social Responsibility Plan (CCSR) and set out our strategic sustainability ambitions across four key themes:

- Active Citizenship;
- Education for Sustainability;
- Research and Innovation for a Better World; and
- Operational Sustainability.

We are developing implementation plans that define activities and success metrics to deliver the strategy.

The consultation process was well received and provided a good platform for shared ownership of ambition across Strathclyde. However, lots of work remains to be done to ensure continued and improved buy-in and successful implementation across the institution.





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## Mainstreaming Education for Sustainable Development in the Curriculum

In June 2023 it was agreed that the University would commit to embedding education for sustainable development across all of our undergraduate curricula, which now forms **KPI 15** of Strathclyde 2030. By 2027, our ambition is to ensure all courses have programme level learning outcomes (PLLOs) related to Education for Sustainable Development (ESD). These will encompass integration of the [UNESCO](#) Education for Sustainable Development skills and competencies, the [UN Sustainable Development Goals](#) and appropriate pedagogical methods.

This marks a significant step forward in realising Strathclyde's potential to empower our students with the knowledge, skills, values, and behaviours to live and work in a way that ensures the long-term security of the environment, economy, and society.

## Progress on Net Zero

In May 2024, our new [Travel Policy](#) was launched, putting safeguarding and sustainability at the forefront of business travel planning, with new policies on domestic travel and class of flights aimed at reducing emissions. Challenges remain around fair implementation of the policy and ensuring buy-in across all faculties.

We made good progress on building refurbishments, lab energy efficiency measures, and space utilisation projects to reduce energy consumption. Due to the large size of our estate, this area poses one of our greatest challenges and require consistent gradual changes to overcome the challenges over time. Our total emissions from energy consumption increased from the previous year, highlighting the scale of challenge we face – and the importance of investment in the coming years.





*Image of the University of Strathclyde's Technology and Innovation Centre (TIC)*

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# Education for Sustainable Development

## Introduction

At Strathclyde, we are committed to working with our students to ensure they are nurtured and developed to become active global citizens. Core to this is our commitment to mainstream Education for Sustainable Development (ESD) across all Teaching & Learning.

We recognise that it is not only necessary to ensure that our graduates understand the concepts of Sustainability and Sustainable Development, but to also develop the critical skills and competencies needed to tackle the wicked global challenges we face. Over this academic year we have been formalising plans to ensure that all areas of the curriculum are included in this ambitious plan.

## Mainstreaming ESD in the Curriculum

### A new Strategic Vision

In 2023, Strathclyde committed to formally placing ESD at the heart of our curricula. This signals our commitment to giving our students the necessary skills and competencies to think about the world around them and the implications of their personal and professional decisions on people and the planet.

Our commitment was further strengthened and made formal by its inclusion in the University Strategy Strathclyde 2030 as part a newly established Key Performance Indicator (KPI 15): To help deliver this ambition, the University's Education Strategic Committee approved a University wide action plan in December 2023.

### **KPI 15: Sustainable Development in Education**

“All education programmes have programme level learning outcomes related to Education for Sustainable Development (ESD). These should encompass integration of the [UNESCO Education for Sustainable Development](#) skills and competencies, the UN [Sustainable Development Goals](#) and appropriate pedagogical methods.”

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## Supporting the ESD Mainstreaming Plan

To help deliver our ESD ambition, the University's Education Strategic Committee approved a University wide action plan in December 2023. Our faculties are leading this ambitious plan with the support of Vice Deans Academic. This will ensure the approach is suitable for their specific needs, and that it integrates well with other aligned areas such as entrepreneurship, and equality, diversity and inclusion in the curricula. Departments across each faculty are helping deliver their tailored implementation plans and the Centre for Sustainable Development (CSD) is underpinning this with a range of support including training, resources, and an ESD audit tool.

## Mapping ESD in Our Curricula

Taking inspiration from the Education & Training Foundation ([ETF](#)) [tool for Green Skills](#), CSD worked with colleagues across faculties and [Strath Inspire](#) to develop a simple mapping tool to baseline how well ESD, Entrepreneurship & Enterprise, and Equality, Diversity and Inclusion (EDI), are embedded across our curricula. The tool was developed over 12 months with a series of pilots and consultations with colleagues across the University, which provided vital feedback to improve both the data quality and usability of the tool. The mapping tool will be launched at departmental level for all degree programmes in 2024/25 to help us understand where our curricula is already embedding ESD, and where there are opportunities to include this further.

"I'm pleased to have led the design and delivery of the ESD mapping tool at Strathclyde. By quantifying the three ESD pillars, the tool provides the University with evidence on complex ESD components to inform ESD mainstreaming plans across all programmes by 2027."

**Ali Bakhit**, Sustainability Business Analyst at the Centre for Sustainable Development, University of Strathclyde



## ESD Resource Hub & ESD Mapping Hub

The CSD developed an internal SharePoint Hub to accommodate training and support materials for mainstreaming ESD, with dedicated sub-pages showing how to access and effectively use the ESD mapping tool and providing case studies to facilitate embedding ESD in Teaching and Learning. The Hub provides a starting point for staff and students to engage with ESD through asynchronous, self-led support with videos, micro CPD series and resource links. In addition, Faculties and CSD staff have provided in-person training and support where requested.



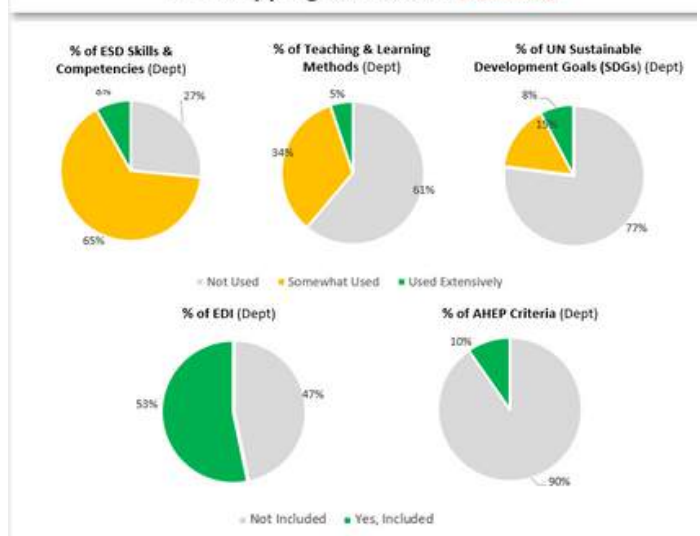
## Strathclyde's ESD Mapping Tool

Skills & Competencies (Entrepreneurial & UNESCO) you support students to apply and develop in your module(s)

Effective Communication	Resilient	Value Creator	Future (Forward) Thinking	Collaborative	Strategic Thinking	System Thinking	Critical Thinking	Integrated Problem Solving
0-Not Used	0-Not Used	0-Not Used	0-Not Used	0-Not Used	0-Not Used	0-Not Used	0-Not Used	0-Not Used
1-Fairly often	1-Fairly often	1-Fairly often	1-Fairly often	1-Fairly often	1-Fairly often	1-Fairly often	1-Fairly often	1-Fairly often
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Screenshot of a completed ESD Mapping Tool, an excel-based tool used to map the embeddedness of ESD principles in our curricula.

## ESD Mapping Dashboard (Department)



Screenshot of the ESD Mapping Tool's automated dashboard, presenting results of the mapping of curricula at department level.

## ESD Resource Hub

**ESD@STRATH**

Welcome to the Education for Sustainable Development (ESD) Resource Hub. Here you will find information about Strathclyde's existing ESD activity and how to get involved, as well as resources that outline the many ways ESD and the Sustainable Development Goals (SDGs) can be incorporated into teaching. You will also find information about upcoming events and training sessions related to ESD.

**ESD skills and competencies**

**HEAD**  
Critical Thinking  
Systems Thinking  
Anticipatory - future think  
Competencies

**HEART**  
Self Awareness  
Normative - purpose and  
Competencies

**HANDS**  
Strategic Action  
Collaboration  
Problem Solving

**ESD Resources**

**Teaching and learning methods & ESD**

**SDG Teach in 2025**

**What is Education for Sustainable Development?**

Education for Sustainable Development (ESD) is a pedagogical approach that aims to empower learners by imbuing them with the knowledge, skills, values and attitudes necessary to address the complex global challenges outlined by the United Nations Sustainable Development Goals (SDGs), including environmental degradation, loss of biodiversity, poverty and inequality (UNESCO). ESD presents a transformational approach to learning, distinct from traditional, subject based teaching practices and methods by emphasising experiential and problem or inquiry based approaches that contribute to the development of competencies such as complex problem solving and systems thinking.

**Strathclyde 2030**

Strathclyde has committed to "placing Education for Sustainable Development (ESD), aligned with the UN Sustainable Development Goals (SDGs), at the heart of our curricula" in its Strathclyde 2030 Strategic Plan. By doing so, "we will embrace change in teaching and learning processes" and "bring in new approaches that stimulate our students to ask questions, empathise, analyse, and think critically about the world around them and the positive impact they can have on it." By doing so, we hope to give our students the skills, knowledge and attributes needed to tackle the complex challenges outlined by the SDGs. "Knowledge and understanding of sustainable development is vital for the type of global citizen Strathclyde is committed to nurturing and producing."

**An Introduction to Education for Sustainable Development**

Watch this Micro-CPD on Education for Sustainable Development (ESD). In this short overview, you'll learn what ESD is, what's involved in applying ESD to your teaching practice, and why it matters. This 5-minute video is the first in a series...

Screenshot of the ESD Resource Hub, sharing resources with colleagues and examples.

## ESD Mapping Hub

### ESD Mapping Resources

**ESD Mapping General Resources**  
Instructions, Guides and Recorded Videos

**General Resources**

**Engineering Files**

**Science Files**

**Health Files**

**SBS Files**

### Motivations & Purposes

#### Motivation for ESD Mainstreaming?

UK QAA Subject Benchmark Statements incorporate

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## Applying ESD in Practice

In addition to mainstreaming ESD across our curricula, the University continues to offer credit bearing opportunities with a specific focus on sustainability to undergraduate, postgraduate and external candidates. Examples of these activities in 2023-24 include:

### Sustainability Policy and Practice – Spring School

Twenty-five postgraduate students came together from across Strathclyde Business School to gain a broader understanding of sustainability in relation to their programmes, and to explore specific sustainability challenges as interdisciplinary groups. Over this intensive one-week course (SU901) the cohort critically assessed how we can consider and practically implement sustainability in a business setting.

### Providing Upskilling Programmes to Support Sustainability

The University delivered the Introduction to Sustainable Development: Policy and Practice upskilling module through the Strathclyde Executive Education Department, with 20 learning posts secured through financial support from the Scottish Funding Council and the Scottish Government. The cohorts comprised of participants from diverse sectors and business activities, including energy electrification start-ups, sustainable housing, and new SMEs. The module revolved around a key understanding of the SDGs as a framework for progress relevant to business and policy activity.





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## Globex Summer School at Peking University

For the 4th year running, CSD delivered a three-week programme at the Peking University (School of Engineering) Globex summer school. The course welcomed over 80 students from China, Hong Kong, Australia and Canada, with backgrounds in Engineering, Science, Business and Social Sciences. As well as building their fundamental understanding of sustainability, this interdisciplinary cohort explored global challenges, and the complex considerations needed for the development of solutions.



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## Training and Upskilling Beyond the Curriculum

We offered several short courses for staff, students and external partners to improve their understanding and engagement with sustainability in their day-to-day roles. Examples of these offerings in 2023/24 include:

### Sustainability Learning Passport

In 2022 the Centre for Sustainable Development established the Introduction to Sustainability Development (SU501), a two-hour self-led course available to all staff and students in the University. In 2023/24 this was expanded to become the Strathclyde Sustainability Learning Passport (SU500), a platform which enables staff and students to engage in a variety of both credit and non-credit bearing opportunities related to sustainability.

The Passport includes an additional self-led introductory course with a specific focus on climate action (Climate Accelerator – SU502) and opportunities to sign up and engage with in person workshops (e.g. Climate Fresk, EnROADS) and credit bearing classes including ‘Multidisciplinary Perspectives for Sustainable Development’ and ‘Vertically Integrated Projects for Sustainable Development’.





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## Strath Inspire Pathways Programme

The Exploring Entrepreneurship Challenge (EEC) is a cross-University, team-based competition that supports students to develop entrepreneurial mindsets through tackling real-world problems. In 2023/24, CSD co-delivered a workshop in each semester, helping both cohorts of students to understand the UN Sustainable Development Goals (SDGs) and the Scottish context for each. This partnership ensured that all teams started the challenge with a strong grounding in sustainability and access to credible, up-to-date information relevant to their chosen SDG through signposted resources.

Students worked in interdisciplinary teams that brought together Undergraduates, Masters, and PhD students, combining diverse academic backgrounds and stages of study to create solutions with both social and commercial value. The EEC engaged a total of 156 students, with representation from all four Faculties: 86 in Business School, 35 in Engineering, 17 in Humanities & Social Sciences, and 18 in Science. The collaboration has strengthened the EEC's ability to connect learning through entrepreneurship with meaningful, sustainability-focused outcomes.



## Climate Justice Dilemma Game

Designed by Strathclyde colleagues, this game was delivered to Masters and Doctoral Research students. The game enabled students to actively reflect on climate change, specifically pollution and waste. Students mapped the positive and negative implications of their suggested decisions/course of action across the SDGs, and in groups presented their evidence to influence the decisions of others.

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## Contributing to research in ESD

Our academics are not only implementing ESD in their curricula but also contributing to the understanding and integration of ESD across educational settings. This research and knowledge exchange is shared through peer reviewed papers, professional articles and conference presentations.

### International Conference on Sustainable Development (Sept 2023)

Universities struggle to make sustainability education engaging and relevant to students entering from secondary education. Dr. Eirini Gallou from CSD demonstrated that place-based learning bridges this gap by transforming students' local environments into sustainability laboratories.

[Read the full report on 'Adding Relevance to ESD'](#) by Eirini Gallou and William Quirke.

### Student, staff and employer's perspectives on ESD in UK HEIs (2021-2024)

Despite policy support, ESD has not yet been fully embedded in UK universities, with students seeing it as content rather than transformative skills development. **Dr. Scott Strachan** and colleagues reviewed literature spanning 2021-2024 on stakeholder perceptions of ESD delivery in UK Higher Education Institutions, and theorised that it requires a "Whole Institution Approach".

They identified that traditional university structures - rigid curricula, siloed disciplines, institutional conservatism - are a key challenge and unsuited to sustainability's interdisciplinary demands.



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## Building a Climate Ambassador Community

Universities lack resources to develop high-quality climate education workshops from scratch, limiting their ability to scale up climate education across curricula. Strathclyde colleagues created a Climate Education Kick-Off ([StrathCEKO](#)) using "off-the-shelf" climate education tools - Climate Fresk and En-ROADS workshops - then evolved it into the Strathclyde Climate Ambassador Network (StrathCAN), a 50-member community of trained staff and student facilitators.

The content was successfully embedded in Education and Chemistry programs, with teacher training potentially reaching 18,000 young people. This peer-to-peer model breaks down teaching silos and enables rapid, cost-effective scaling.



## Co-creation of sustainability education: 'made by students'

Traditional top-down curriculum development often lacks student perspectives and may not reflect learner needs or integrate cutting-edge knowledge effectively. **Dr. Eirini Gallou** and **Dr. Damien Williams** developed a [co-creation model](#) where students become equal partners with faculty in designing curriculum content.

Through co-creation, students gained ownership, confidence, and pedagogical skills while faculty overcame biases and benefited from fresh perspectives. ESD competencies (systems thinking, critical thinking, problem-solving) were integrated naturally through the collaborative process.





Image of a Strathclyde student dressed in Banana costume and delivering the 'How Bad Are Bananas?' - an engaging learning game around decarbonisation - at a Strath Union's students fair.



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# Engagement for Sustainability

## Introduction

Everyone has a role to play in addressing environmental and societal challenges. We want our staff and students to be active citizens, taking informed, intentional and sustained actions to help address these challenges. Our sustainability engagement work is broad in scope, from providing opportunities to take action towards sustainable development, to sharing our expertise with others to ensure evidence informed decision making both here in Scotland and globally. Looking beyond Vision 2025 to our new Strathclyde 2030 strategy, we hope to accelerate our ambitions and action for engagement in this area, ensuring we are supporting our staff, students and local communities, motivating positive changes for a range of sectors and individuals, and encouraging people to be more active citizens in the drive towards a sustainable future. We will support them to make big or small changes in their life and work and provide wide ranging opportunities to share their expertise and know-how.

## Events and Campaigns

Throughout the year we ran a range of events for our staff, students, and wider stakeholders to encourage conversations, raise awareness of our research and SDG contributions, and get people actively involved in sustainability through their professional, academic and personal lives.

### Sustainability Month

In March 2024, we hosted our third annual Sustainability Month, bringing colleagues from across the University together to help increase understanding of the Sustainable Development Goals (SDGs), and their role in driving urgent action across the globe.

#### **ESD @ Strath Conference**

Over 70 students attended our fourth annual Education for Sustainable Development at Strath Conference (ESD@Strath) at the end of Sustainability Month. They heard a keynote address from Heidi Sevestre, a glaciologist working at the Arctic Monitoring and Assessment Programme (AMAP) and winner of the first Shackleton Medal for the Protection of the Polar Regions. Heidi gave a fascinating talk on the potential impacts of climate change on our cryosphere (portions of earths survey where water is frozen), and what will happen if we exceed the temperature rise of 1.5°C.

The conference showcased the work of the Vertically Integrated Projects for Sustainable Development students and other sustainability related modules from across the University. Student interns from our Management Development Programme gave a presentation about the work they had been doing with the Centre for Sustainable Development and Sustainable Strathclyde, including a video they produced showcasing the importance of the UN SDGs to University and Student Union leadership.

## Events

Sustainability Month featured a vibrant programme of **28 events**, covering a wide range of themes including circular economy, education for sustainable development, workshops in geophysics, culture and climate justice, and more.

A key highlight was the Sustainability Fair, organised with the Student Union, which attracted strong participation from both staff and students. The month not only showcased ongoing initiatives but also provided a valuable platform for students to share their views and suggest how we can better engage them in sustainability efforts. Sustainability Month 2024 reinforced the importance of interdisciplinary collaboration and student voice in driving meaningful change across the University.

[See our video for a short overview of the week.](#)



**Scott Bryson**  
Waste & Environmental  
Compliance Manager  
University of Strathclyde

**Stella Heath**  
Operations Manager  
(Maternity Cover), CSD  
University of Strathclyde

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## Earth Week

To mark Earth Day (22/April) and engage our community in sustainability, we delivered a programme of events during Earth Week, promoting environmental awareness, biodiversity, and community action.

### Wildlife Garden Volunteering

In partnership with Strath Union and The Conservation Volunteers, staff and students spent the day supporting biodiversity by helping build a wildlife garden at Ashton Secondary School.

### SOS-UK Visit: Sustainability in Halls

We welcomed Students Organising for Sustainability (SOS-UK) to the [ResLife](#) Hub for an interactive session with students living in halls, focused on sustainability in student accommodation. Students took part in games, won prizes, and learned how their behaviour contributes to energy and water conservation. This event forms part of the [Green Campus Revolution](#) campaign, a national competition to find the most sustainable student residence.



### Mend in Public Day: A Call to Repair and Reuse Clothing

As part of [Fashion Revolution Week](#), we hosted a Mend in Public Day encouraging students and staff to repair rather than discard clothing. Local expert tailor, Barbra, from Finnieston Alterations provided free mending support. The event promoted sustainable fashion and circular practices on campus.

#### Student participants shared with us what they enjoyed the most from the workshop:

“The sense of community of everyone in the workshop and getting expert help in mending”.

“Chatting with others to share experiences and tips around mending”.

## Engagement Programmes

### JUMP!

JUMP! is an engagement programme that rewards Strathclyde students and staff for taking part in a range of sustainability and well-being related actions. Since its launch in 2017, participation in the University's JUMP sustainability engagement platform has grown steadily. As of this reporting period, **595** users are actively involved, comprising **117** students and **478** staff members.



#### Platform Engagement

- 6,957 total sustainable actions recorded.
- The Well-being theme saw the highest level of engagement, with the Step Count Challenge being the most participated-in activity.
- The Travel theme followed closely, with 'Rethinking Your Commute' as the top activity in that category.

#### Environmental Impact

An estimated 29,630 kg of CO<sub>2</sub> emissions were avoided through participant actions on the platform.

#### Communication Reach

The JUMP newsletter achieved an average open rate of 39% and a click-through rate of 2.8%, reflecting strong user interest and engagement with sustainability content.

This data highlights the positive behavioural impact of **digital engagement** in advancing our sustainability engagement across the University community.



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## Students Organising for Sustainability (SOS-UK)

### Student Sustainability Campaigns

This year, we partnered with SOS UK to run a student sustainability campaign. **85** students engaged in our campaign, of which **51** students actively participated in online competitions, masterclasses, and webinars, in addition to full training to seven student volunteers. Through their involvement, the volunteers gained a deeper understanding of how everyday actions contribute to the climate crisis and developed the skills and confidence to drive positive change. These transferable skills will support their personal and professional development in the future.

The campaign also targeted students living in the private rented sector, offering advice, training, and offering them paid auditing opportunities to help reduce energy use and offered them support to manage the cost-of-living crisis. Students living in University halls took part in the national Halls Competition, competing with peers from other universities to adopt more sustainable habits and behaviours.



### SOS UK Sustainability Skills Survey

We undertook the SOS-UK sustainability skills survey for the second year in a row with the student body in December 2023. The report was published in June 2024. Similar to the 2022/23 report, the findings strongly support our plans and aspirations for ESD mainstreaming and the Social and Environmental Sustainability Strategy.

## HAZAAR Partnership

In Spring 2024, we launched a new partnership with Hazaar to support more sustainable options for students moving out of term-time accommodation. In collaboration with the Students' Association and the Accommodation Services Team, we set up multiple drop-off points across campus to encourage students to donate unwanted items rather than send them to landfill.

Key achievements of the project included:

- 2 paid student internships created
- 2,146 kg of waste diverted from landfill
- 1,517 items saved and reused

The project culminated in a Pre-loved Pop-Up Market during Freshers Week in September, where incoming students had the opportunity to purchase donated items at a fraction of the cost of buying new, alleviating the cost of living and reducing consumption. Further activities are planned for the 2024/25 academic year, building on the success of this circular-economy initiative.



# Student Climate Emergency Action Group

The Climate Emergency Action Group have been supported by interns from the business schools' Management Development Programme (MDP) course this year. Their role included helping in developing a student-led Climate Assembly. The Climate Assembly was agreed as a policy at Student Parliament, and work has been ongoing to design and operationalise the Assembly.

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## Staff Engagement

Alongside engagement programmes for students, our staff play a leading role in putting our sustainability vision into action at Strathclyde. This is achieved through bottom-up and top-down approaches, across faculties, departments, and teams – both in direct relation to job roles at Strathclyde and through extracurricular activities.

As a research-intensive University, Strathclyde is home to a wide range of experts in diverse fields. These experts are highly involved in internal networks such as research centres and groups across all four faculties. Additionally, colleagues are also engaged in external executive and advisory boards with industry, governmental, public, private and third sectors. These engagements have dual benefits of connecting Strathclyde's ecosystem with external opportunities while contributing to impactful social and societal projects with the host organizations.

### Internal & University-Related Networks

Internal staff engagement cuts across research, education, and operational sustainability initiatives. It includes engagement with University research centres and sustainability committees, various lab efficiency programs, and infrastructure projects around active mobility and smart grid research. For example, the Strath Living Lab ([StrathLab](#)) is an inclusive co-design ecosystem that identifies and prioritises co-creation of solutions that solve real-world problems, and generate evidence of impact in an inclusive and socially progressive way by focusing on what matters to the people of Glasgow and beyond.

### External Networks

Externally, staff are also involved in professional engineering bodies (such as IET, IEEE) and environmental NGOs (Greenpeace, WWF, Friends of the Earth). Additional engagement happens in transport advocacy through cycling campaigns and active travel groups, alongside sustainability education networks like Women in Sustainability and Engineers Without Borders. Community-focused organizations such as Repair Cafe Glasgow and employment support charities also feature prominently, demonstrating engagement spanning professional, environmental, and social sectors.





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## Board and Advisory Positions

Our staff are involved in board and advisory positions, contributing to high-level policy and grassroots community leadership roles. These positions span advisory and board roles in Scottish Government committees, UK Committee for Climate Change, Scottish Enterprise, international policy organizations (IEA, UNEP, Science-Based Targets Initiative), and healthcare research groups. Positions in community organizations include employability trusts, housing associations, and educational charities, as well as environmental sustainability boards.

In May 2024, **Professor Elisa Morgera** from the School of Law was appointed the UN Special Rapporteur ([UNSR](#)) on Climate Change and Human Rights. Prof Morgera works with states and businesses to adopt human rights approaches following the UN Guiding Principles to mitigate adverse effects of climate-related activities and investments.



### **Main duties of the UN SR on Climate Change and Human Rights:**

- Studies how climate change disasters affect human rights enjoyment and recommends ways to integrate human rights concerns into climate legislation.
- Identifies challenges, including financial barriers, that states face when protecting human rights while addressing climate impacts, and provide recommendations for rights-based mitigation and adaptation policies.
- Synthesising knowledge, including indigenous wisdom, to identify good practices for integrating human rights into climate policies that promote rights protection and poverty reduction.
- Promoting best practices for human rights-based, inclusive climate approaches that support the Paris Agreement and contribute to achieving SDGs 13 and 14.
- Raising awareness about climate-related human rights impacts on vulnerable developing countries and encouraging increased international cooperation.
- Facilitating technical assistance, capacity-building, and international cooperation to help countries address climate change's adverse effects on human rights through collaboration with various stakeholders and digital technologies.
- Integrating gender-responsive, age-sensitive, disability-inclusive, and socially inclusive perspectives.

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## Industry and Government Partnerships

### Power Networks Demonstration Centre

The Power Networks Demonstration Centre ([PNDC](#)) is a leading example of Strathclyde's enabling ecosystem of public-industry partnerships. Established in 2013 by Strathclyde, the Scottish Funding Council, Scottish Enterprise, Scottish Power and Scottish and Southern Energy. It is a whole energy systems research, test and demonstration facility with a focus on the de-risking and acceleration of novel electricity, heat and transport systems that have the potential to make a material contribution to the realisation of net zero emissions. It brings together academics, industrial organisations, and technologists to define and execute pre-commercial research, development, testing and demonstration projects to shape energy system innovation. Some of the projects of PNDC include:

### **FASTER – Facilitating a Sustainable Transition to EVs in the Region**

As part of the €6.4 million [Interreg VA-funded](#) initiative, staff in PNDC supported the deployment of 23 EV journey charge points across rural Western Scotland. Delivered in collaboration with East Border Region Ltd, other colleagues from the University, and The Highlands and Islands Transport Partnership (HITRANS), the project identified optimal charge point locations to improve EV accessibility in underserved areas.

### **Cable End of Life Assessment**

PNDC collaborated with SP Energy Networks, Scottish & Southern Electricity Networks and UK Power Networks to address the [limited observability of underground cables](#), a significant class of assets for network operators. The team developed a cable health assessment framework using multiple data sources to estimate remaining useful life and support more proactive maintenance strategies.



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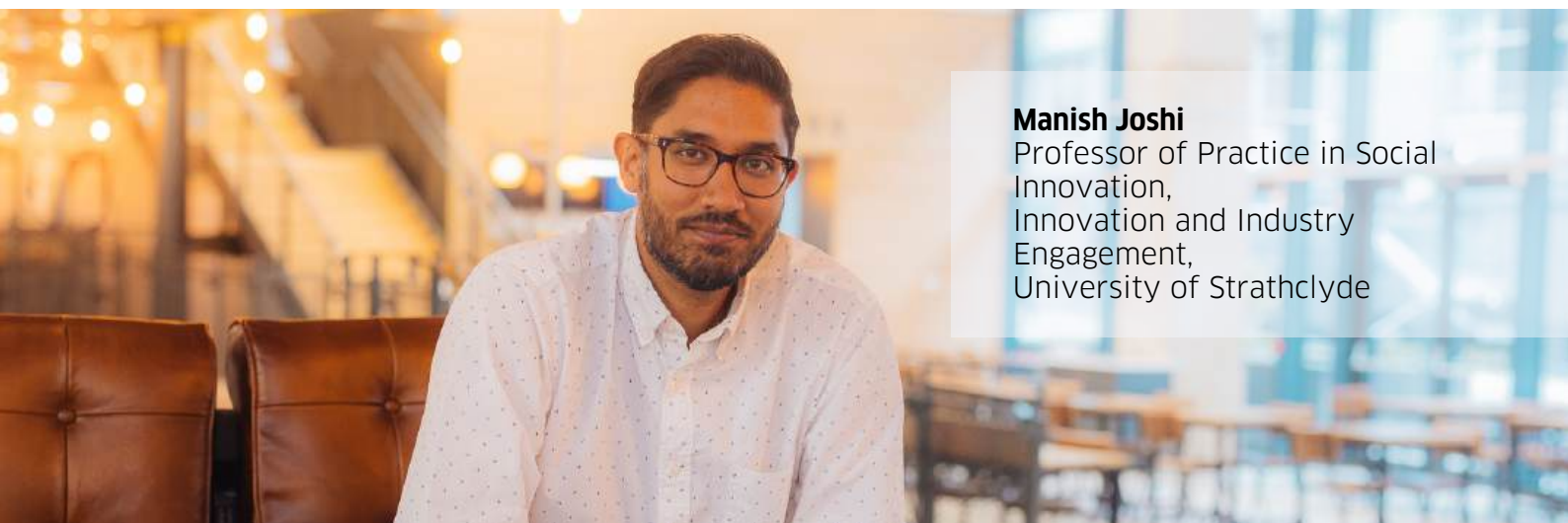
## Communities and Public Partnerships

### **Strathclyde Institute for Sustainable Communities**

In May 2024, the new Strathclyde Institute for Sustainable Communities (SISC) was launched. SISC aims to explore the wide and varied roles and experiences of communities in the transition to a sustainable future. Communities will be at the heart of the transition to Net Zero and it is vital that their lived experiences are properly integrated into decision making. The Institute brings together academic staff from both the Business School and Civil and Environmental Engineering to promote and enhance citizen involvement in sustainable development initiatives, reaping benefits for the University community and wider society.

### **Social Innovation Cluster**

The University established a new Social Innovation Cluster within its Technology and Innovation Zone, located in the Glasgow City Innovation District. This cluster brings together researchers, commercial partners, and communities to tackle pressing social challenges through collaborative innovation, focusing on three key areas: inequalities and human rights, mental health and well-being, and communities and citizens. The cluster develops innovative solutions to reduce disparities in poverty, education, and health while advancing research to improve mental health services and empowering communities through participatory approaches that foster active citizenship. Building on Strathclyde's successful industry-led cluster model, it serves as a central hub providing access to academic and commercial expertise, leveraging interdisciplinary research and strategic partnerships with Social Mission Partners. By connecting research excellence with real-world application, the Social Innovation Cluster drives social change and contributes to inclusive economic growth, transforming academic research into practical solutions that address society's most pressing challenges.



**Manish Joshi**

Professor of Practice in Social Innovation,  
Innovation and Industry Engagement,  
University of Strathclyde



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## Festival of Social Science

The 2023 ESRC Festival of Social Science took place from October 21 to November 17, featuring events across the UK. It highlighted the importance of social science research in informing policy, services, and innovation, with a focus on "lifelong wellbeing" and the 75th anniversary of the NHS. Strathclyde hosted seven events, ranging from 'fair work and job crafting to promote engagement and well-being', to "Perspectives of Care" allowing exploration of experiences of care in creative design-led activities.



## Staff-led Student Opportunities

The CSD has had a series of interns working across our activities:

- Masters students studying International Project Management developed a road map for supporting ESD mainstreaming.
- MSc students in Sustainability and Environmental Studies developed a climate justice game for class-based learning.
- Two PhD students developed content for a Nature Based Solutions module, for upskilling or CPD delivery.
- Seven Management Development Programme (MDP) interns during the 2023-24 academic year. Supported by the members of staff within Sustainable Strathclyde and CSD, these interns helped with work in a range of areas including Sustainability Skills Survey promotion and data analysis; social media communications; follow-up support for conference outputs; and development of a Student Climate Assembly. They also provided extensive support for events during the 2024 Sustainability Month including the Sustainability Fair, and the Education for Sustainable Development (ESD@Strath) Conference.
- Sustainability Conversations: regular webinars with internal external private and third sector partners who share their personal and professional experiences of working in sustainability.





*Image of Rottenrow Gardens at the heart of the University of Strathclyde's Glasgow campus.*



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# Estates, Operations & Net Zero

## Net Zero: a Strategic Vision

Our 2025 Strategic Vision sets out the importance of delivering Net Zero and embedding sustainability across the whole organisation. This means moving beyond carbon, and considering a whole system, climate neutral approach to reducing emissions, adapting to climate change, and contributing to the sustainability of our local environment. Strategic Aim 5.2 in the University's Vision 2025 strategy commits to delivering high quality, sustainable infrastructure by:

- Delivering a step-change in our response to climate change: as a community; as an institution; and as a thought leader of 21st century solutions to global issues.
- Delivering planned infrastructure developments with a focus on Net Zero.
- Capitalising on our investment in information systems to enable a digital-first approach, with a focus on simplification and automation of business processes.

## Our Net Zero Target

The University has committed to achieving Net Zero emissions for scope 1 and 2, and limited scope 3 emissions by 2040 at the latest – **KPI 16** of our strategic plan. To help drive near-term reductions and limit our total emissions over this period, we have set interim milestones for each five-year strategic cycle.

- 30% reduction against the 2018-19 baseline by the end of 2024-25.
- 80% reduction against the 2018-19 baseline by the end of 2029-30.

- **Scope 1:** direct emissions from sources we own and control, such as combustion of fuel for heating or in University operated vehicles.
- **Scope 2:** indirect emissions from our use of grid electricity.
- **Scope 3:** indirect emissions up and down our value chain. For example, water use, waste disposal, business travel and staff commuting.

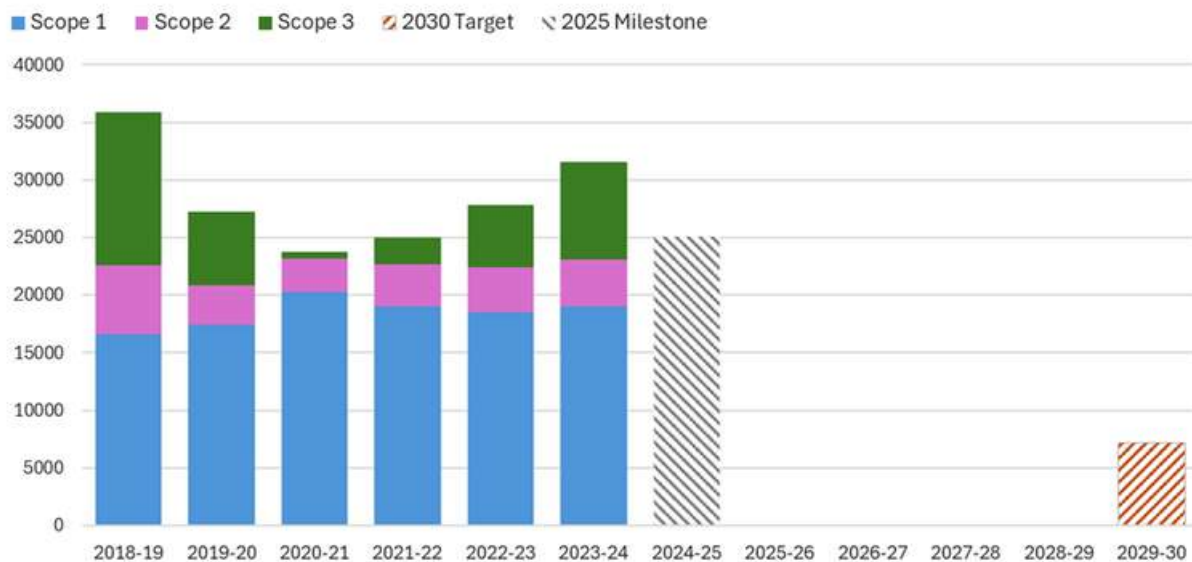


## Our Carbon Footprint 2023-24

In 2023-24, University greenhouse gas emissions within our KPI 16 boundary\* were 31,571 tonnes carbon dioxide equivalent (tCO<sub>2</sub>e). Emissions went up by 3714 tCO<sub>2</sub>e compared to 2022-23, an increase of 13.3%.

- 31,571 tCO<sub>2</sub>e for 2023-24
- 12% reduction from 2018-19 (base year)
- Up 13% from 2022-23

This increase in emissions for the third year in a row makes it likely that we will miss our 2025 milestone to achieve a 30% reduction in carbon emissions and highlights the challenges of tackling our scope 1 emissions.



**Figure Caption:** KPI 16 Carbon Emissions (tCO<sub>2</sub>e) 2018-19 to 2023-24.

University GHG emissions rose across all three scopes compared to the previous year. The increase in scopes 1 and 2 were relatively low at 2.3% and 6.3% respectively, while scope 3 emissions increased substantially, by 55%.

Most of this scope 3 increase was from staff commuting emissions, but we believe this was mainly due to under-reporting in the previous year. Our 2024 travel survey provided us with a more accurate and up to date picture of flexible working patterns post-covid, which was a significant increase on the previous assumptions.

\* This includes all scope 1 and 2 emissions, scope 3 business travel, waste disposal, water use, grid electricity losses, and staff commuting.

## Drivers of Change in Emissions

Carbon emissions rose compared to last year across most categories. Some minor reductions were seen from reduced fuel consumption in standby generators and reduced emissions from waste disposal and recycling. The most significant increases in carbon emissions in 2023-24 were from business travel, natural gas, and grid electricity consumption. There was also a large increase in staff commuting as we updated previous estimates with more accurate travel survey data. This may have exaggerated the year-on-year increase.

**Table:** Annual Emissions (tCO<sub>2</sub>e) by Category.

Scope	Emission Category	2022-23 (tCO <sub>2</sub> e)	2023-24 (tCO <sub>2</sub> e)	Change vs previous year
1	Natural gas	17,929	18,347	▲ 418 (+2%)
	Other fuels*	268	262	▼ 5 (-2%)
	Refrigerants	316	375	▲ 58 (+18%)
2	Grid electricity	3,893	4,137	▲ 244 (+6%)
3	Business travel	4609	5080	▲ 472 (+10%)
	Staff commuting	432	2962	▲ 2530 **
	Water use, waste, and grid losses	410	408	▼ 2 (-0.5%)
<b>Total</b>		<b>27,857</b>	<b>31,571</b>	<b>▲ 3714 (+13%)</b>

### Natural Gas

The bulk of our scope 1 emissions continue to be from the consumption of natural gas in our John Anderson Campus energy centre. The average energy efficiency of the energy centre fell by 3% compared to the previous year – driving a slight increase in gas use. Building fabric improvement measures have helped counteract this trend, such as upgrades to the Curran building (completed late 2022-23), saving an estimated 283 tCO<sub>2</sub>e from reduced heat demand over this past year. Design work is underway to retrofit insulation to the John Anderson building and further reduce campus energy use.

\* Includes vehicle and equipment fuel, other (non-gas) heating fuels, and standby generator diesel.

\*\* Increase due in part to more on-site working, and suspected under-estimation of 2022-23 figure

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## Grid Electricity

Our total grid electricity consumption rose by 6.3% vs the previous year, most notably in the first quarter of the year by 24% (Aug-Oct). Snagging challenges around grid connections and heat pump efficiency in the newly constructed National Manufacturing Institute Scotland (NMIS) meant a greater than anticipated reliance on grid electricity in the first 6 months of operation, driving up our total grid electricity consumption.

## Business Travel

Business travel emissions have continued to increase post-covid, rising by 472 tCO<sub>2</sub>e (10%) from 2022-23. This is the third year in a row that business travel emissions have risen – reflecting a gradual return to pre-covid travel patterns, but they remain lower than our base year (2018/19). A new travel policy was launched in May 2024 which promotes more sustainable travel planning and reduces reliance on air travel, but this has not yet had time for effects to be seen in 2023-24 annual figures.

## Staff Commuting

Emissions from staff commuting were estimated at 2962 tCO<sub>2</sub>e using data from our 2024 travel survey, an increase of 2,530 tCO<sub>2</sub>e compared to 2022-23. This increase was expected to some degree as flexible working patterns levelled out post-covid. However, data from our travel survey and related HR data on flexible working arrangements suggest that commuting emissions reported in 2022-23 were likely underestimated, therefore exaggerating the year-on year change.





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## Government Carbon Conversion Factors

There were no significant changes\* to the government carbon conversion factors from the previous year for our major sources of emissions. Meaning changes in activity levels and consumption can be considered the main drivers for any changes in emissions.

## Revisions to Carbon Emissions Statistics

As part of this report release, previously estimated emissions have been revised and our KPI 16 reporting boundary has been reviewed. This resulted in estimated base year figures (2018-19) for student commuting being removed. Figures for previous years published in older reports will provide incorrect year-on-year change and should not be used\*\*.



\* Variance of more than 20% vs the previous year is considered significant

\*\* Figures may differ from those given in our annual accounts due to estimated data at the time of publishing.

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## Building Staff Capacity

Sustainability at Strathclyde has been getting increasing recognition as a vital component of wider University success. Despite challenging economic times for Universities, Strathclyde has remained committed to ensuring resourcing to this critical issue.

### Sustainability and Environmental Management Team

The Sustainability and Environmental Management Team, “Sustainable Strathclyde”, has expanded significantly since early 2023, with three new posts being created and vacancies being filled with new full-time roles. Our new Executive Lead Sustainability Rufus Logan joined the University in early 2024, bringing experience from the Building Research Establishment and the Scottish Funding Council.



Members of Sustainable Strathclyde, from left to right: **David Charles, Amy Ritchie, Ana Mercedes Hernandez & Liam Singleton**

## A Low Carbon, Climate Resilient Estate

### Retrofitting the Library

Our program of works to enhance the Curran buildings Andersonian Library was completed in early 2023-24 with further improvements to internal spaces, and external building fabric. Internal refurbishment provided a new study space, family zone, and meeting spaces, while high performance insulation and roofing systems improved thermal efficiency.

These improvements, including external wall cladding, triple glazed windows, and replacement of lighting to LEDs have reduced the energy demand of the Curran building, saving an estimated 280 tCO<sub>2</sub>e per year.



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## National Manufacturing Institute Scotland

Construction of the £57M National Manufacturing Institute Scotland (NMIS) was completed in Spring 2023 and this year was its first full year of operation. It is the first operational 'energy carbon neutral' building in the University's estate and was designed with sustainability at its core.

- Low carbon materials used, saving around 700tCO<sub>2</sub>e compared to steel frame
- Green roof, indoor green wall & active travel infrastructure
- Key anchor load for a 3.5km ambient district heating scheme
- 600kW of installed solar PV capacity on the roof

NMIS provides a space for cutting edge research into digital manufacturing, with a focus on sustainability, re-manufacture for circular economy, and new technologies that will support a net-zero economy.





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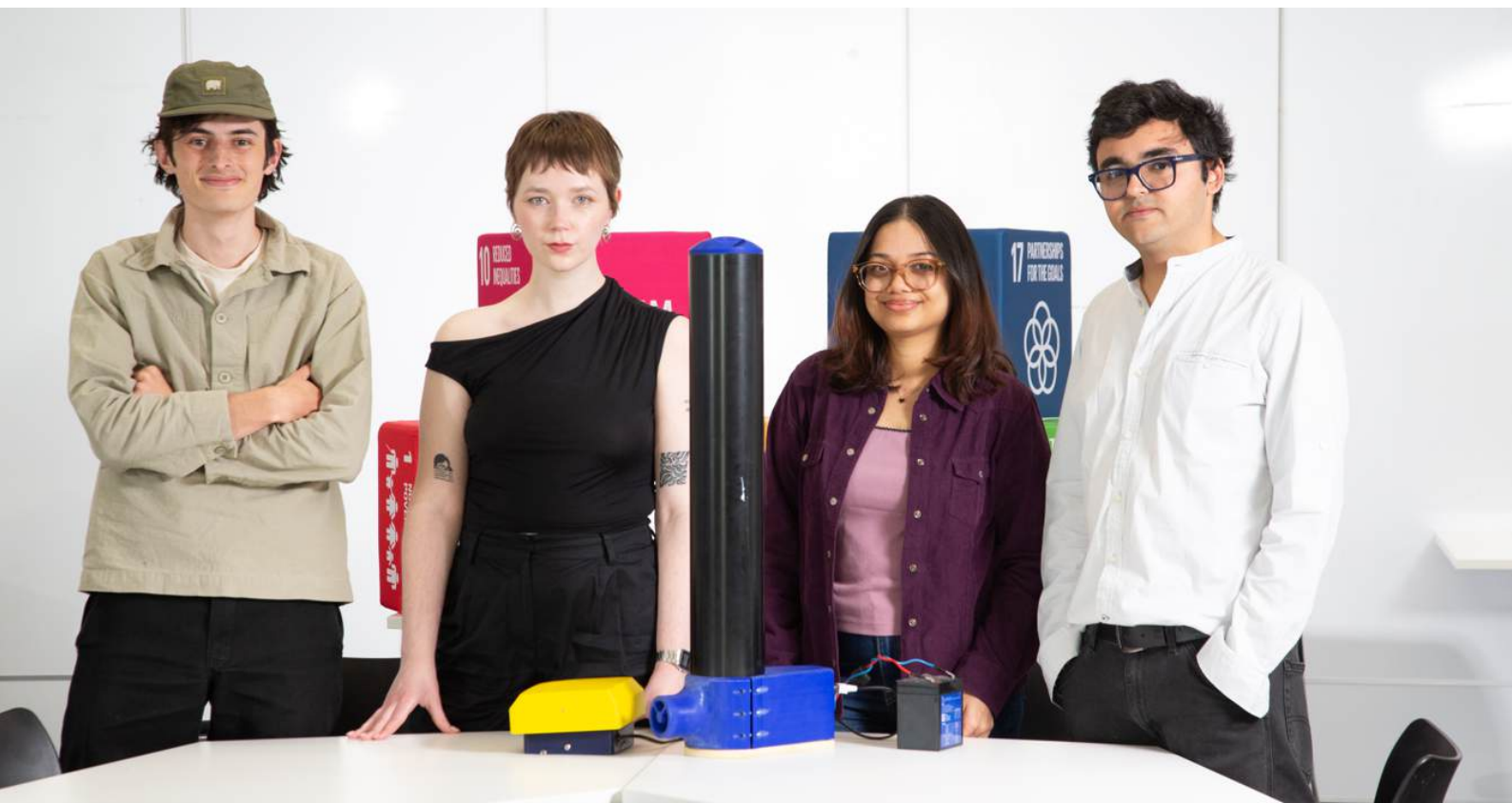
## Climate Risk, Adaptation and Resilience

Over the course of 2023/24, we developed a Climate Risk Register, to better embed sustainability and climate change in governance and management processes across the University. This was informed by best practice from other UK HE institutions, examples from the private sector, and the EAUC's Climate Risk Tool. The register has been approved by the SSSG, and consultation is ongoing with the University's Risk Management Group to ensure that it aligns with Corporate Risk Management processes.

We intend to publish the Climate Risk Register in the coming year and embed it as a tool to support governance and investment decisions. It will serve to highlight the risks of not acting to address the impacts of climate change and ensure that actions and risk owners are assigned

## Procurement, Supply Chain, and Circular Economy

The University's supply chain and laboratories constitute some of its largest areas of environmental impact. We have been working closely with our procurement teams and labs to identify areas of activity with a high carbon footprint and exploring opportunities to reduce waste and resource use through a more efficient and circular approach to procuring and using goods and equipment.



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## Embedding Sustainability in Procurement

Sustainable Strathclyde continue to work closely with the University's Procurement Team to embed sustainability into purchasing decisions. We expanded sustainability questions for potential suppliers to ensure that the University can make more informed decisions about where we source our goods and services from, and helped evaluate sustainability information from prospective suppliers on strategic contracts.

### **Sustainability in Building Refurbishment**

Our construction and building refurbishment activity has high potential to reduce embodied carbon. As part of the main architecture contract for the CHATIC project - a £30m refurbishment of the original Strathclyde Student's Union building - sustainability was embedded early on in the procurement process.

Suppliers were asked to provide extensive information about their sustainability and social impact policies as part of selection, and the project is working towards achieving enhanced building standards through employing the Scottish Net Zero Public Sector Building Standard.

### **Furniture Re-use and Re-manufacturing**

Furniture procurement at Strathclyde is an area of high spending and high embodied carbon that generates a lot of potentially avoidable waste. To tackle this, we collaborated with our portering and procurement teams to trial re-use and refurbishment of existing stock over buying new. Through engaging with local suppliers and diverting internal requests for new furniture we re-furbished 143 items - mostly chairs and tables - that would have otherwise been disposed of and replaced with new items.

We estimate that this investment in local re-manufacturing saved around 3 tonnes of waste, and 14 tCO<sub>2</sub>e compared to buying new items. The trial projects also reduced costs - helping to challenge the assumption that sustainable choices often cost more. In the next year we plan to build on these trials through more supplier and user engagement to change the default approach to furniture procurement and space fit-out across the university and unlock further resource, cost, and carbon savings.

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## Sustainable Labs

We continued to run our successful Strathclyde Labs 50% Incentive fund that helps researchers upgrade old equipment with more energy and water efficient ones. Throughout 2023-24 we helped seven research and teaching labs upgrade ovens, freezers and plastic reducing equipment by providing £29k of match funding.

- We used £245K from our Salix Recycling Fund to upgrade 26 ultra-low temperature freezers in the Strathclyde Institute of Pharmacy & Biomedical Sciences to units with significantly lower Global Warming Potential refrigerants and reducing electricity consumption by almost 79MWh.
- We provided three labs across the University with the opportunity to take part in the My Green Lab behavioural change programme, who are working towards Bronze level.
- By the end of 2023-24 we had a total of 52 labs enrolled in the Laboratory Efficiency Assessment Framework (LEAF).

To help monitor our impact more effectively, our Sustainable Labs team have been reviewing the application process and monitoring systems for our incentive funds to collect better pre-evaluation data, so we can more effectively monitor the impact of this program.





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## Sustainable Travel

### New Travel Policy

Throughout the academic years 2022-23 and 23-24 colleagues across Sustainability, Safety and Well-being, Finance, and Procurement, collaborated to develop a new Travel Policy. The working group undertook extensive engagement with staff across the academic faculties, professional services, and student recruitment to understand the current risks around travel, and the needs of staff when booking and managing their travel.

The policy was formally approved in October 2023 and launched in May 2024 with a new online hub to promote the policy and provide guidance for travelers and bookers. It puts staff and student safety, wellbeing, and sustainability at its core with some key changes being implemented to booking routes and travel permissions:

- Appointed a Travel Management Company which most air travel should be booked through, to improve safeguarding and reporting information.
- Limitations on the class of air travel to help shift to lower per passenger emissions.
- Domestic mainland travel to be done mostly by rail to limit domestic flights.

### Campus OVO bike membership

Starting in August 2022, the University gave staff and students free membership to the Glasgow OVO bike network. This resulted in over 3000 users joining the scheme, and over 75,000 rides in the first year. With a change in membership to £20 for the year to cover increased operating costs, we saw a drop in rides over 2023-24 to 38,600 but still brought in 570 new members to the scheme, benefiting staff and students.

As part of our efforts to link operational and research objectives, in late 2023 the Sustainability teams contributed funding to an interdisciplinary [PhD project](#) on designing interventions to get more people cycling.

### Electric Pool Cars

This year we digitized the process for staff joining our electric pool car scheme and promoted it through our business travel SharePoint pages. This made it much quicker for staff from across the University to sign up and get access to the cars and increased our capacity to add new members. This more than doubled the number of staff using the cars, and the distance they traveled, saving around 3 tCO<sub>2</sub>e compared to travel in a standard petrol car.





Image of the University of Strathclyde's Mascot Strathosaurus riding the OVO bike in Glasgow.

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# Research & Innovation

## Introduction

Research is of central importance in everything we do at Strathclyde. It informs our teaching and helps us make a difference to business, industry, and society. We strive for excellent research that is impactful, with Sustainability principles embedded in all areas of our work.

Strathclyde is home to a significant number of research groups focused on reducing environmental impact and managing a just transition towards a fairer and greener future. Our role as Scotland Hub lead for the UK Sustainable Development Solutions Network (SDSN) allows us to lead from the front lines of sustainability focused work and build connections between academia and industry.

## Research Culture and Enabling Environment

Our approach to our research environment extends beyond our institution including being signatories to multiple Concordats including the Concordat for the Environmental Sustainability of Research and Innovation Practice. We participate in national and international peer groups (academic and non-academic), networks and communities of practice. Our work with industry and our role in connecting industry and academia beyond Strathclyde is evidenced by our involvement in multiple Innovation Centres and Districts.

To facilitate inclusive research and innovation culture with industry, public and third sector, Strathclyde received close to £1m from Wellcome Trust as part of their “**Cultures of Collaborative Research in a Socially Progressive Technological University**” project.

In addition to this, Strathclyde has developed a programme for researchers entitled Responsible Research and Innovation (RRI), funded through our EPSRC and ESRC Impact Acceleration Accounts. This ensures that aspects of innovation are explored through two-way engagement with all stakeholders, including funders, researchers, potential users and community groups. Through this interaction, our researchers can identify and consider different motivations, perspectives, benefits and features, to shape research and its potential impact on society, policy and the economy.



## Research Integrity and Culture Week

Research Integrity and Culture (RIC) Week (March 2024) provided a focussed week of events aimed at promoting research integrity and a positive research culture. The week gave staff an important opportunity to sit down together as a community and explore best practices, challenges and new developments around how we conduct and contribute to research. All staff and PGR students involved in leading, conducting and supporting research at the University were invited and encouraged to participate in the events, such as Embedding Responsible Research and Innovation, Sustainability and Me, and an SDG cafe with other Scottish Universities.

### Tracy Morse

Professor of Environmental Health & Head of Centre for Sustainable Development  
University of Strathclyde



### Eirini Gallou

Teaching Fellow at Centre for Sustainable Development  
University of Strathclyde

## Networks & Partnerships

To support our engagement and partnerships both locally and globally, the University is an active member of multiple networks. In 2023/24 we participated in a range of activities across to support research and innovation collaborations.

### The Sustainable Development Solutions Network (SDSN) UK

The Sustainability and Resilience Institute at the University of Southampton, in partnership with the UCL Institute for Innovation and Public Purpose (IIPP), current host institution of SDSN UK, and the University of Strathclyde Centre for Sustainable Development hosted the 'Going Green: Debating the socio-economic impacts of achieving Net Zero' conference at the University of Southampton in January 2024. It brought together researchers - both established and early career, policy makers and industry professionals with the aim to mobilise collective knowledge and experience to identify the most pressing, cross-sector research questions surrounding a net-zero future. Six Strathclyde early career researchers and PhDs were supported to attend, alongside Professor Keith Bell, who delivered a thought-provoking keynote highlighting the importance of policy direction and delivery, and Professor Tracy Morse, who facilitated a breakout session for participants to explore questions about the techno-socio-economic barriers to achieving Net Zero and solutions to accelerate efforts.



SDSN Scotland group meeting hosted at Strathclyde

## Research Workshops with KTH

In December 2023, the University held research workshops with KTH Royal Institute of Technology in Sweden to build collaborative projects around the areas of education for sustainable development, green infrastructure, health care futures and power systems. The workshop supported 12 colleagues from Strathclyde to meet face to face with their counterparts from KTH for two days which culminated in three funded research projects which started in June 2024.

## Scotland Beyond Net Zero

Strathclyde, alongside other Scottish universities supported the launch of the Scotland Beyond Net Zero network. All member institutions have made significant commitments in recent years to support Scotland's drive to net zero, and the network aims to work together will help drive results. The coalition is designed to catalyse research collaboration across all our academic disciplines, empower communities and inform the policymaking and action Scotland needs to reach its ambitious targets.

## Research Contributions to the SDGs

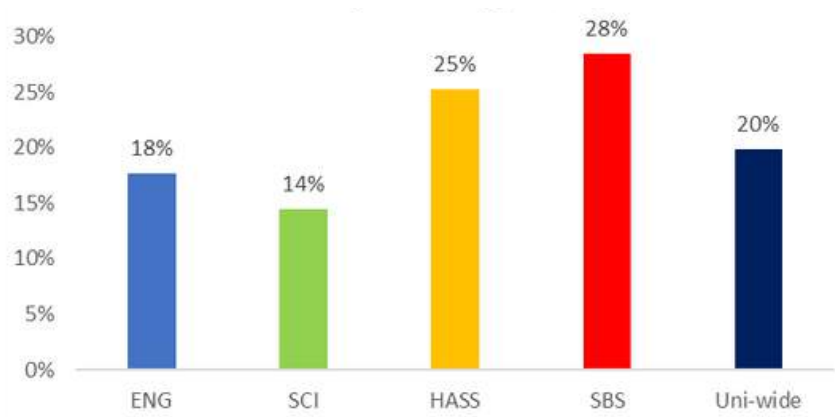
The University uses the UN Sustainable Development Goals (SDGs) as a blueprint by which to measure our impact across our research and innovation. By exploring quantitative data extracted from our internal records system (Pure) we are able to understand how our research impact is shaped across multiple annual periods. Our data shows steady yearly progress in placing SDGs at the heart of what we do since the implementation of Vision 2025. This is a reflection of our significant investments in sustainability and capabilities as well as collaborative work between internal teams and external stakeholders.



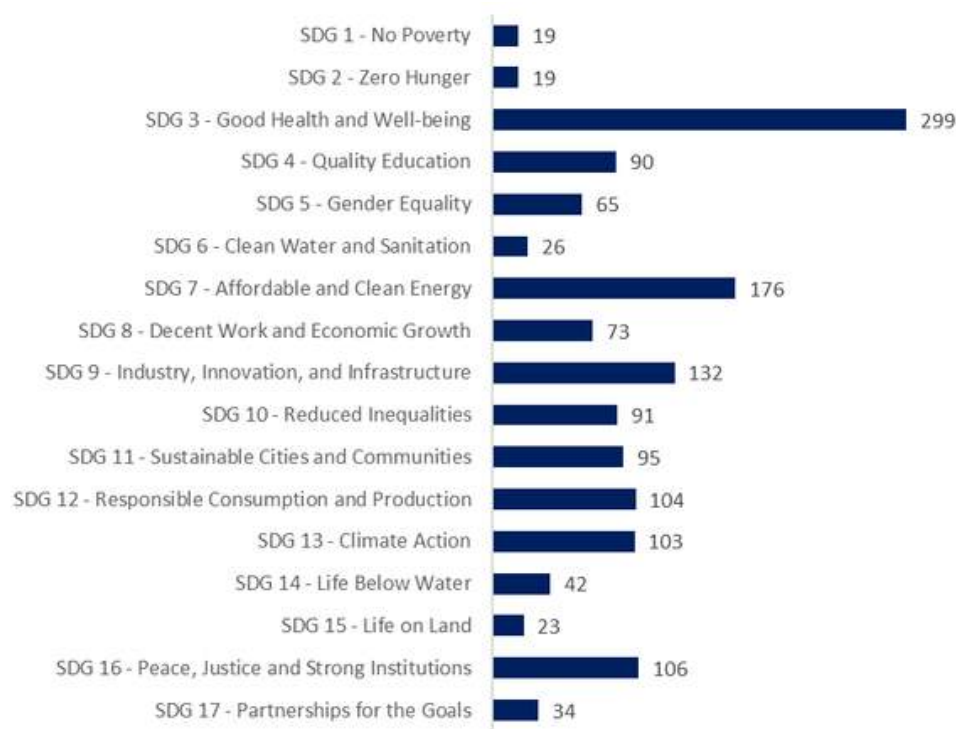


# Research Profiles

As of December 2023\*, 2944 registered staff profiles\*\* were found in Pure across the four faculties\*\*\*. Of these, 20% of staff have their profiles linked to at least one SDG or more. The Business School (28%) and Humanities (25%) faculties had the highest percentage across faculties of SDGs linkage while Engineering (18%) and Science had the lowest rates (14%).



**Figure Caption:** Proportion of Staff linked to at least one SDG or more of all staff per faculty and Uni-wide.



**Figure Caption:** Number of active staff profiles linked to each SDG (as of Dec/23).

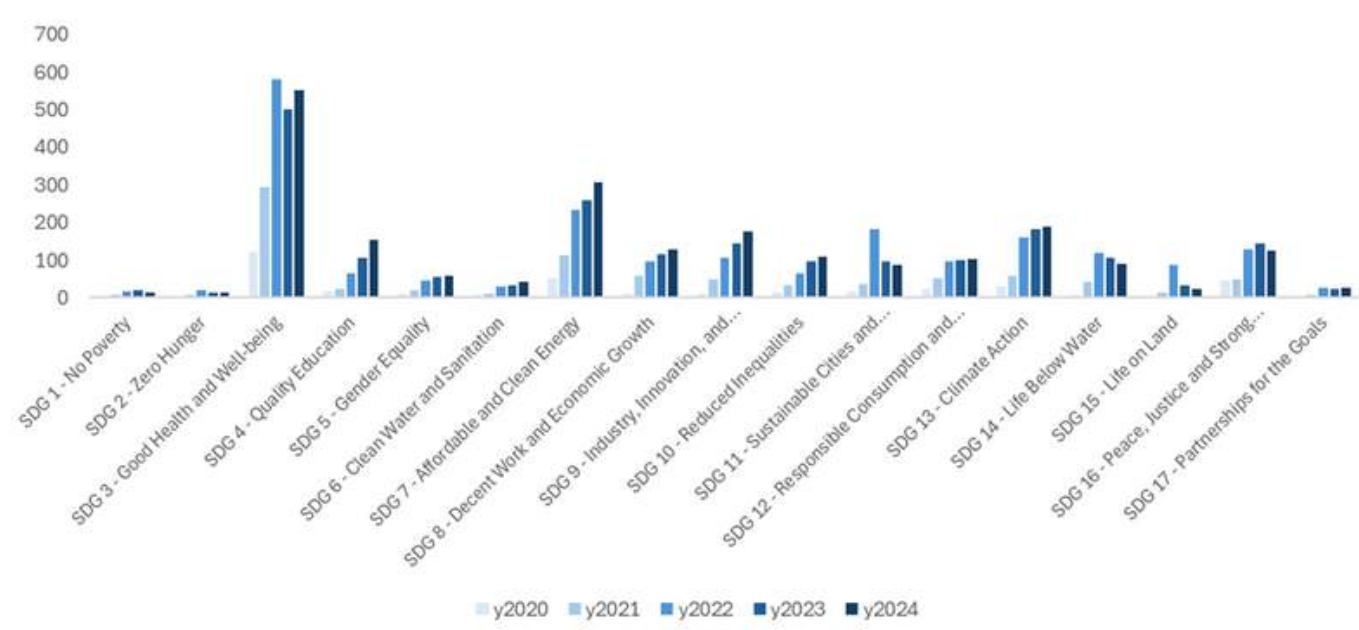
\* Staff profiles data in Pure has identified limitations. It may include duplicate counting due to staff involvement in multiple depts, and does not include historical data. These figures should be seen as representative but not conclusive, and are a snapshot at the time of reporting.

\*\* Not all staff have active profiles on Pure, there tends to be a concentration of academic roles as opposed to operational roles.

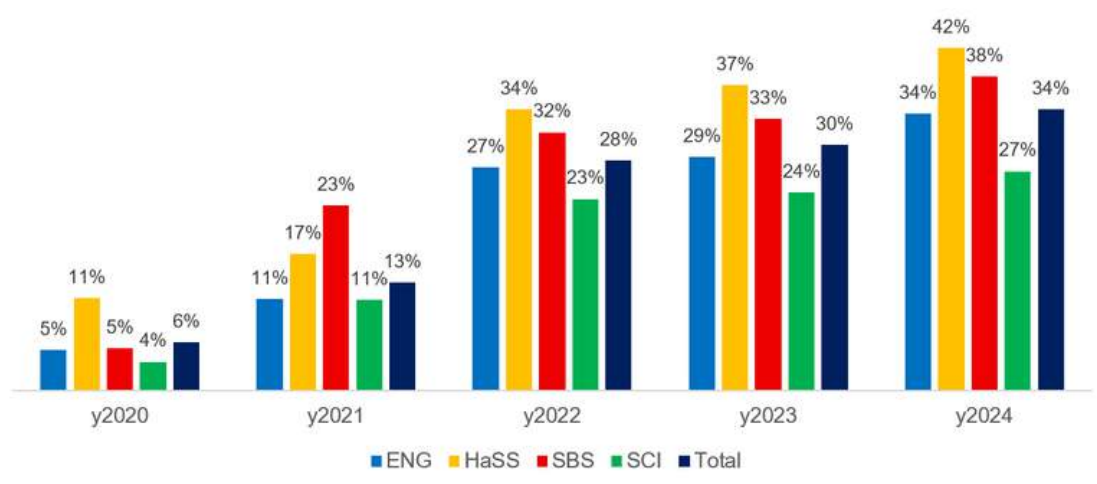
\*\*\* Excluding PhD students and staff profiles with 0 FTE hours in their profile.

# Research Outputs

Research outputs include peer reviewed articles, books and book chapters, conference papers and posters, commissioned reports, keynotes, and so on. Through the period 2020-2024, **22,889** outputs\* were recorded in our Pure records at Strathclyde, around half of which are peer reviewed articles. Of these outputs, a quarter (22%) were linked to at least one SDG (n=5047). The Business School had the highest faculty proportion of SDGs (39%) followed by Humanities and Social Science (32%).



**Figure Caption:** Number of research outputs aligned with each SDG (2020-2024 CY).



**Figure Caption:** Proportion of research outputs tagged to at least one SDG per Faculty and University Wide (2020-2024 CY)\*\*.

\* Pure lists outputs per organizational unit (dept). Faculty data is a sum of SDGs-linked to depts within each faculty. Therefore, faculty data will include duplications if any one output is shared by multiple depts within the same faculty. However, data is aggregated across faculties and can be considered representative.

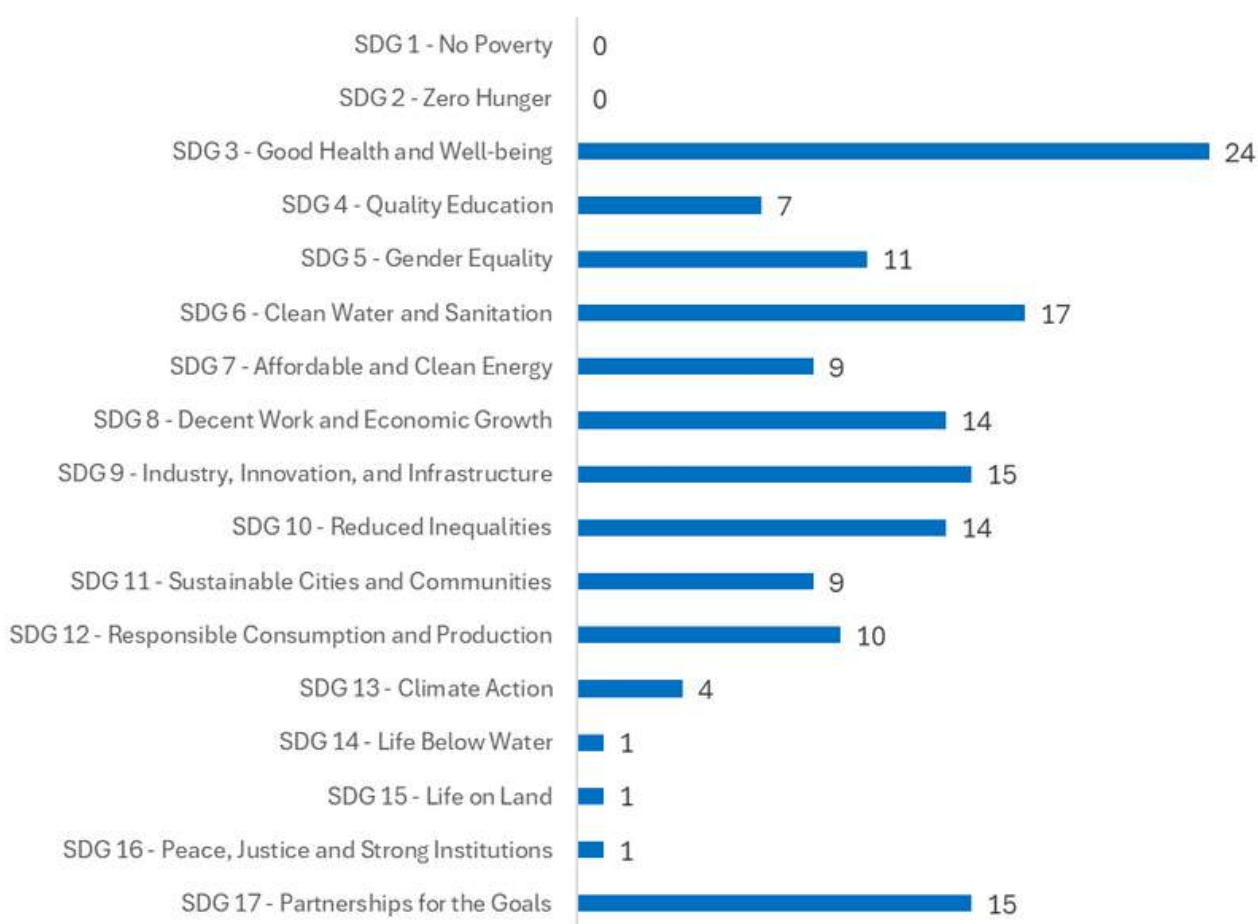
\*\* SDGs count per faculty and SDGs overall count followed different methodologies to ensure double counting is limited as a workaround due to data limitations.

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## Research Awards & Projects

There were 35 active projects during 2023/24, these have a start date before or during the academic year, or an end date during or after the academic year. All active projects were found to align to at least one of the 17 SDGs. On average, each project was aligned with four SDGs and across all active projects, there were a total of 152 SDG links.

Different SDGs were supported to varying degrees, and 15 out of the 17 SDGs were supported by at least one project this year. 'SDG 3 Good health and wellbeing' was supported by the greatest number of projects (n=24), followed by 'SDG 6 - Clean Water and Sanitation' (n=17). Only 'SDG 1 - No Poverty' and 'SDG 2 - Zero Hunger' were not linked to any project this year.



**Figure Caption:** Number of active projects linked to each SDG (2023-24 AY, projects may be linked to multiple SDGs).

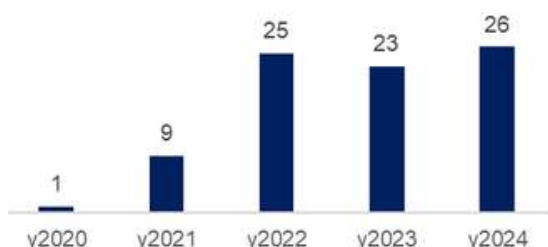




Image of the Hope Triptych sculpture at Rottenrow Gardens sits at the heart of Strathclyde's Glasgow campus as part of COP26 legacy gift from over 50 companies.



# SDG 17: Partnerships



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 17 per year (2020-24).

Collaborative partnerships underpin all projects and activities at Strathclyde, and Collaboration is one of our five institutional values. Furthermore, as a research-intensive institution, most of our research is done in partnership with internal and external partners. However, SDG 17 acknowledgement in our data remains a challenge and a missed opportunity, with a slight increase between 2022 into 2024.

## Community Partnerships for Inclusive Education

Using Asset-based Approaches to Teacher Education in Scotland, colleagues at the Institute of Education (IoT) delivered engaging workshops with persons who experienced exclusion in early years. Working weekly from within an area of multiple deprivation informed the research of the space and circumstances where people live. In partnership with local supporters, their stories and ideas were developed into resources for use in training teachers across Scotland. The partnership was based on trust, positive relationships and a common focus on empowering transformation, allowing Strathclyde to work within the local community in new ways to make a difference.

Contact: **Amanda Corrigan**  
Read more [here](#)

## Union-Strath Strategic Alliance Framework

The University of Strathclyde and the Students' Union have reaffirmed their Strategic Alliance for the 2023-24 academic year. The Alliance identifies the common objectives of Strath Union and the University and commits both organisations to work together to meet the changing opportunities, challenges and needs of an ever-evolving student body. First signed in 2022, the latest iteration of the Alliance agreement sets new agreed deliverables for the year ahead under the key themes of Wellbeing, Sustainability, Student Community, and Inclusion, Diversity, Equality and Accessibility.

Contact: **Katie Bharaj**  
Read more [here](#)

## Strath-SME Partnerships in Tajikistan

Strathclyde Business School (SBS) researchers are exploring opportunities for environmental upgrading among small and medium enterprises across regions. The main aim of this project is to cultivate a strong network of connections and partnerships with key stakeholders in Tajikistan that will provide a support base for research work, dissemination and capability building activities at the intersection of entrepreneurship and environmental sustainability.

Contact: **Dilshod Makhmadshoev**  
Read more [here](#)



## Institute of Education's Engaged Scholarship Hub

"One of the best things about working at the University of Strathclyde is that you're able to jump out your bed in the morning with a new idea then spend time seeing if it works." - **Amanda Corrigan**, Principal Teaching Fellow at Strathclyde's Institute of Education, Humanities and Social Sciences (HaSS) faculty, delivering workshops with young children and adults around social exclusion in schools.



17 PARTNERSHIPS  
FOR THE GOALS



4 QUALITY  
EDUCATION



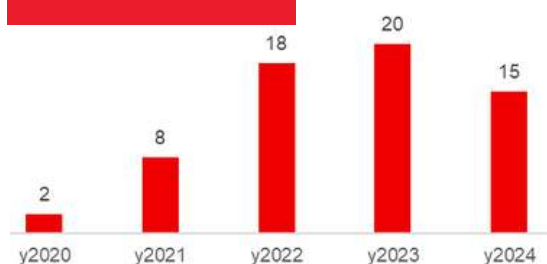
10 REDUCED  
INEQUALITIES







# SDG 1: No Poverty



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 1 per year (2020-24).

Poverty eradication is at the core of the UN SDGs framework. Much of our research and education at Strathclyde explore socio-economic issues, however, specific focus on tackling poverty remains under-reported and requires special attention to improve our visibility and impact beyond the walls of Strathclyde. This is observed in SDGs-linked research outputs that continue to be lowest for SDG 1 in comparison to other SDGs.

## Digital Lending & Food Deprivation in Kenya

Vulnerable communities in developing states lack access to regular income sources, leading to exclusion from traditional financial support. Recent financial technology advancements enabled micro-credit delivered via digital platforms, however, despite its promises, little is known on its contribution to the welfare of under-served communities. This study examines how local digital lending impacts deprivation, particularly on rural inhabitants. The results show a negative association between local digital lending development and food deprivation on one hand and health deprivation on the other. Our findings show rural communities benefit more from digital lending as a form of decentralized and inclusive financial tools, encouraging targeted policies to promote digital lending at the local level.

Contact: **Godsway Korku Tetteh**  
Read more [here](#)

## Minimum Income Guarantee in England

The Minimum Income Guarantee (MIG) is a financial support amount set by local authorities to ensure that individuals receiving care and support in their own homes can cover their everyday expenses. MIG can ensure people have a minimum income for essentials such as healthy food, housing, health care, social and digital networks to support health and well-being, and can therefore reduce inequalities, if eligible individuals make use of it. The aim of this paper is to explore how individual characteristics were associated with take-up of a MIG for pensioners in England. A better understanding of take-up variation with gender, age, and disability, will help authorities to align policy implications with support needs of individuals.

Contact: **Fiona McHardy**  
Read more [here](#) & [here](#)

## Net Zero Impact on Low Paid Jobs in Scotland

The specific remit of this work is to look at where wider impacts of Net Zero intersect with low paid jobs in Scotland. As the Scottish government is focused on poverty reduction, ensuring that low paid workers are within the sights of Scotland's Just Transition strategy is of clear strategic importance. This paper provides an overview of two experimental approaches that could be further developed to provide this insight. Findings show both; potential for disruption to low paid workers from the net zero transition, and opportunities in emerging higher paid sectors that Policy Makers need to fully understand to support low paid workers in benefiting from these novel areas.

Contact: **Emma Congreve**  
Read more [here](#)



## Strathclyde Students' Union Pantry

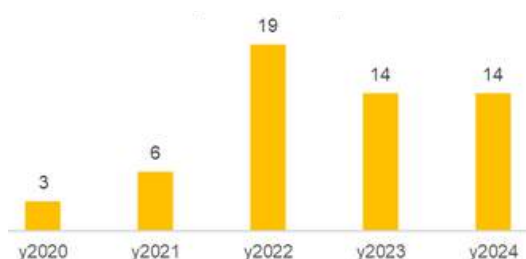
The Strathclyde Students' Union Pantry - now called the Jamie's Pantry - is a physical space that provides students with food and basic needs to help counter the living cost crisis they're faced with. Students users of the service can choose a time slot to visit the Pantry and pick up items they need.

It was founded by **Jamie Campbell**, Strath Union Sabbatical Officer (Vice-President Community), who said: "Taking a simple crate in a kitchenette to a fully kitted pantry, that runs regularly by student volunteers and has a steady source of funding! a lot of work has gone into this project and is one I'm most proud of!"





# SDG 2: Zero Hunger



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 2 per year (2020-24).

Eradicating hunger (SDG 2) is closely linked to eradicating poverty (SDG 1). Food security is a matter of concern both globally and closer to home. At Strathclyde, our student population is affected as well, and so it is no surprise multiple initiatives were initiated and led by our students through the Union such as the Pantry project, sustainable food policy. Our research outputs remain to be under-reported for SDGs 1 and 2, although the numbers have been stable since 2022.

## Child Payment and Food Banks in Scotland

The Scottish Government introduced the Scottish Child Payment (SCP) in February 2021 as part of efforts to meet Scotland's child poverty targets. SCP is also a key part of the current Scottish Government strategy to end the need for food banks in Scotland. There has been significant interest in the effects of SCP on poverty and related outcomes from policymakers, third sector organisations and the general public. This report presents an evaluation of the impact of SCP on food bank usage, which is closely tied to levels of deep poverty. We provide new evidence on the effects of SCP on outcomes for different types of households.

Contact: **Hannah Randolph**  
Read more [here](#)

## Paid Family-leave & Hunger in New York, US

New York's paid family leave (PFL) policy was introduced in January 2018. Previous research focused on PFL's effects on employment and health outcomes, we compliment that by focusing on potential impacts on food security and its pivotal influence on health and well-being of mothers and new-borns during the postnatal months. By analysing two primary data sets, our research shows New York's PFL reduced low food security by 36% in both datasets, especially for households with low-educated heads and families with incomes under the Federal Poverty Line.

Contact: **Otto Lenhart**  
Read more [here](#)

## Future-proofing Crop Health in the Global South

Smallholder farmers in the Global South rely on legumes to meet the protein requirement in their diets and to improve their soil quality. However, a changing climate is leading to an upsurge in crop losses due to abiotic (drought) and biotic (pest and disease) stresses. In collaboration with ICRISAT India, we develop climate-resilient and disease-resistant varieties essential for improving food security. Results show elevated CO<sub>2</sub> concentrations differentially affect the growth of pigeon-pea varieties and their resistance to mosaic virus.

Contact: **Adam Kleczkowski**  
Read more [here](#)





## World's First Pigeon-pea Speed Breeding Protocol

Dr **Kleczkowski** and Strathclyde researchers collaborated with ICRISAT to cut the breeding cycle of Pigeon-peas to just 2-4 years, instead of the conventional seven years. Paving the way for self-reliance in pulse production and meeting the dietary necessities of nations such as India, Myanmar, Kenya, Tanzania, and Mozambique.

2 ZERO HUNGER



1 NO POVERTY



17 PARTNERSHIPS FOR THE GOALS





# SDG 3: Health & Well-being



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 3 per year (2020-24).

Through partnerships with healthcare providers such as the NHS, SDG 3 remains Strathclyde's strongest contributing area for the SDGs in 2023/24. With COVID19 pandemic now behind us, our research contributions to SDG 3 remained high in numbers across all faculties. Many of our SDG3-related research outputs come from across all faculties with a particular focus in the Science faculty.

## Non-Animal Cancer Treatment

Growing cancer cells from patients in the lab takes a lot of work to keep them alive. To study glioblastomas, scientists need special substances the cells release, specific nutrients, and a gel-like material called Matrigel, which is made using mice. In collaboration with a company that designs and produces synthetic proteins, Strathclyde student-researcher Grace Houston tested an alternative form of extracellular matrix called GrowDex to test its potential to replace Matrigel in 3D models of glioblastoma. Grace used two types of cells grown from patients' tumour tissue and compared how they grew in different concentrations of Growdex and Matrigel and using a combination of the two using light microscopy.

Contact: **Natividad Gomez-Roman & Grace Houston**  
Read more [here](#)

## Behavioural Theories & Simulation in Healthcare

This research aims to develop an innovative framework that integrates health behaviour into simulation models used for health systems management. Simulation models are powerful tools for supporting decision-making, allowing for the design, construction, and manipulation of a representation of real-world systems to analyse their dynamic behaviours. In collaboration with HSCP Dumfries and Galloway and the Social Marketing Gateway, the project will refine these models to create a practical framework that can guide decision-making in health systems management and healthcare policy.

Contact: **Le Khanh Ngan Nguyen**  
Read more [here](#) & [here](#)

## Designing Cycle Health

Research on physical activity and health provides continuing, consistent, and increasingly specific evidence to support the importance of physical activity for public health. Inactivity is costly, socially, and economically. In contrast, cycling is healthy, community-building, and environmentally friendly. This interdisciplinary project aims to design health behaviour change taking a whole systems approach. It is co-supervised between Design Manufacturing & Engineering Management (DMEM), Physical Activity for Health, and supported by a collaborative funding from Strathclyde and external funds.

Contact: **Deirdre Harrington & Mia Shepherd**  
Read more [here](#)



## The Scottish Health Equity Research Unit (SHERU)

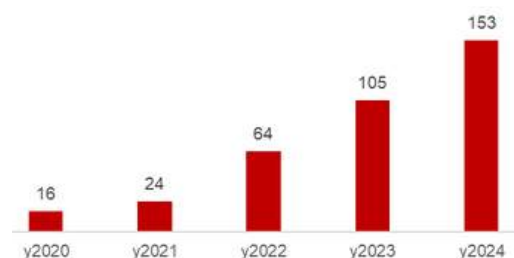
The Scottish Health Equity Research Unit (SHERU) is an independent research unit, funded by the Health Foundation, to provide insight, analysis, and scrutiny on the socio-economic factors driving health inequalities in Scotland. It is a collaboration between the Fraser of Allander Institute and the Humanities & Social Sciences' Centre for Health Policy (CEP) at Strathclyde.







# SDG 4: Quality Education



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 4 per year (2020-24).

Education for Sustainable Development (ESD) drives our strategic plans at Strathclyde. Our ESD mainstreaming plans are supported by faculty and departmental leads initiatives to embed the core skills and competencies for sustainability across curricula. For example, the Institute of Education in Humanities (Hass) leads projects related to embedding sustainability across teacher education disciplinary area. Similarly, our widening access work and other projects across the institution continue to contribute to SDG 4.

## Students as Assessors at Strathclyde

Assessment is at the core of the student experience, however, assessment and feedback scores often receive lower appraisals on surveys such as the National Students Survey (NSS) across UK Higher Education (HE). A systematic narrative literature review was conducted to understand factors that enhance student learning in HE and inform peer assessment practice of teachers. The review demonstrates the benefits of peer assessment where students gain from acting as peer assessors and assessees, which develops students' reflective skills through a meta-cognitive process. The research concludes with key recommendations to maximise the benefit to learners and educators alike.

Contact: **Manuela Williams**  
Read more [here](#) & [here](#)

## Dyslexia & Learning to Code

Computing Science students with dyslexia can face additional challenges when learning to program. Such challenges are likely to impact student motivation and success, which is antithetical to developing an accessible and inclusive curriculum. This paper identifies gaps in existing research through a systematic literature review. It highlights where students with dyslexia could benefit from tailored support. This is done by completing a thematic analysis comparing the challenges faced by students with dyslexia and challenges for novice programmers. It concludes by suggestions to inform future pedagogical research in relation to dyslexic students in STEM.

Contact: **Rosanne English & Catriona Weir**  
Read more [here](#)

## Digital Skills Gap in Zambia

Zambia is implementing the smart Zambia vision to be delivered by 2030. This is large-scale digital transformation of the public service sector undertaking digitalisation of records management by deploying electronic records and document management systems (ERDMS). However, recent studies show records officers in Zambia lack digital skills for managing e-records, leading to challenges to staff and beneficiaries. This project aims to collaborate with the Zambian government and academia to bridge this digital skills gap.

Contact: **Milena Dobрева**  
Read more [here](#)

## Libraries as Agents of Sustainability Thinking (LASTS)

LASTS project aims to investigate the current role of schools and public libraries in Scotland for promoting environmental literacy and sustainability thinking in everyday life, and how a user-focused and context-specific programme could be developed to promote these among different groups of school and public library users. The project also looks at how policies and resources can promote the sustainability thinking model in different libraries in Scotland.

Contact: **Gobinda Chowdhury**

Read more [here](#)

**4** QUALITY  
EDUCATION



**13** CLIMATE  
ACTION



**11** SUSTAINABLE CITIES  
AND COMMUNITIES



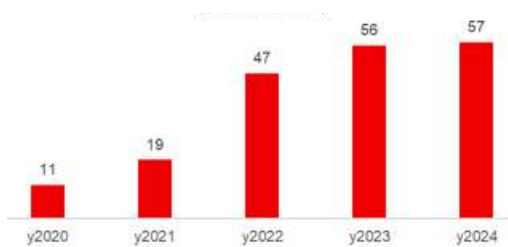
**17** PARTNERSHIPS  
FOR THE GOALS







# SDG 5: Gender Equality



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 5 per year (2020-24).

At Strathclyde, we're committed to providing a positive work and study environment. Our Equality, Diversity & Inclusion (EDI) office provides gender-based violence (GBV) training courses to staff and students, and facilitate initiatives across the University and Union. Our research is tackling intersectional issues that link gender to personal disadvantages characteristics and its effects on social mobility and access to employment or education.

## Mainstreaming Women's Rights

This research explored perceptions and understandings of human rights. It aimed to uncover whether issues that solely affect women are necessarily understood as human rights violations or whether they are understood simply as gendered issues. One aspect of this study involved interviews with those who teach human rights or have worked in the area of human rights. It shone a light on how classical understandings of human rights still permeate the discourse and as such it can be difficult to situate gendered issues, such as reproductive rights, within the wider human rights framework, and so such gendered issues might not be able to fully utilise human rights litigation effectively.

Contact: **Lynsey Mitchell**  
Read more [here](#) & [here](#)

## Feminised Care Work in Bulgaria

This research is a collaboration with Bulgarian Association LevFem. Through 50 qualitative interviews with workers in the Care sector in five locations across Bulgaria, the study examines challenges and opportunities faced by workers with regard to the de-financing of public services, ageing population, outward migration, and relation to institutional care strategies in post-socialist Bulgaria and the European Care Strategy. The report exposes the conditions that underpin the existence of this undervalued labour, and work with policy actors to improve these conditions.

Contact: **Mariya Ivancheva**  
Read more [here](#) & [here](#) (in Bulgarian)

## The Gender Index (TGI)

The Gender Index Report 2023 includes generational analysis, diversity and access to early-stage investment seen using Enterprise Investment Scheme Association (EISA) funds. This analysis is possible through the combination of machine learning technology and big data to create unique insight and analysis. This report covers over eight million unique directors, four and a half million active companies and 1,276 Venture Capital and Private Equity investors. Through exploring this substantial database, TGI highlights the ongoing challenges for female-led companies accessing all forms of external capital.

Contact: **Aylin Ates & Eleanor Shaw**  
Read more [here](#) & [here](#)



## Strathclyde and LevFem

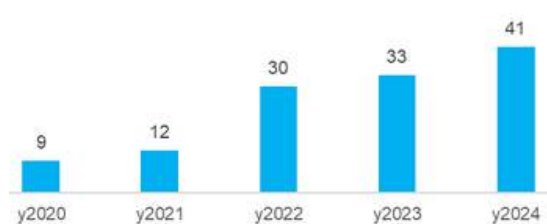
Strathclyde's collaboration with LevFem was recognised at the Alliance of Gender Equality in Europe, securing further funding from the Economic Opportunities Fund (2025-2027). This will allow the team to continue working on disseminating the report through further mobilisation and advocacy campaigns on the importance of care work and the required support for marginalised workers.

Image from a workshop delivered by LevFem and Strathclyde's Senior Lecturer in Education **Maria Ivancheva**.





# SDG 6: Water & Sanitation



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 6 per year (2020-24).

Clean water, sanitation, and hygiene, often referred to as WASH, is critical for achieving the SDGs. Our Civil and Environmental Engineering (CEE) department remains a leader in WASH-related research and contributing to SDG 6, however other faculties are increasingly contributing to understanding the health-related, social and societal implications of WASH and SDG 6 in general.

## Inequality & Drinking Water

Access to safe drinking water, sanitation, and hygiene (WASH) is crucial for disease prevention and improving general health outcomes. However, a significant number of people across the globe still lack access to safe drinking water. Therefore, evidence-based research is needed to guide policymakers in improving WASH adoption and practice across the globe. In this study, we add to knowledge and policy by probing the role of income inequality and financial inclusion on access to improved WASH facilities using a comprehensive panel dataset from 119 countries between 2004 and 2020. Our study demonstrates that financial inclusion significantly increases access to safe WASH facilities.

Contact: **Godsway Korku Tetteh**  
Read more [here](#)

## Microplastics in Scottish Rivers

Contamination of the environment by microplastics (MPs) is an emerging concern globally due to their ubiquitous nature, interactions with pollutants, and adverse effects on aquatic organisms. Studies so far focused on marine environments, with freshwater systems only recently attracting attention. This study investigated the presence, abundance, and distribution of MPs and potentially toxic elements (PTEs) in sediments of the River Kelvin, Scotland, UK. Findings indicated an increase of MPs from upstream to downstream locations, whereas fibres were abundant at all locations. Moderate risk to organisms was found at one location.

Contact: **Christine Davidson & Oluwatosin Sarah Shokunbi**  
Read more [here](#)

## Community Bluescapes Flood Resilience

The Beverley Brook catchment is a focus for flood resilience and innovation projects, particularly within the context of the Flood and Coastal Resilience Innovation Programme. Strathclyde researchers are addressing policy barriers related to flood resilience in this area. The program aims to test innovative approaches, including nature-based solutions, to enhance flood defences and adapt to climate change. This UK-government-backed project tests new methods for managing flood risk and adapting to climate change impacts.

Contact: **Douglas Bertram**  
Read more [here](#)



## Strathclyde Students' Union Water Policy

Many plastic bottles are never being recycled, and when incinerated produce toxic fumes. It takes a huge amount of fossil fuel powered energy to create plastic bottles producing over a million tons of waste a year and several million tons of carbon dioxide. This is compounded by the fact that many plastic bottles end up never being recycled, and when incinerated produce toxic fumes. For these reasons, Strath Union resolved to prohibit the sale of bottled water in The Union, and campaigned for a similar ban across outlets on campus, replacing bottled water with a combination of water fountains in The Union (with free, recyclable cups provided) and access to low-cost water bottles for long-term use. For more info, see [link](#) (P11).

**6** CLEAN WATER  
AND SANITATION



**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**11** SUSTAINABLE CITIES  
AND COMMUNITIES



**13** CLIMATE  
ACTION







# SDG 7: Sustainable Energy



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 7 per year (2020-24).

SDG 7 sits at the heart of partnerships, research and sector-wide engagement at Strathclyde, accelerating how we produce, distribute and consume alternative and renewable energy in a clean and affordable way. Engineering leads in SDG 7 related-research but other faculties contributed as well. Additionally, our internal operations and estates teams have led initiatives to ensure our energy consumption is meeting our sustainability and Net Zero targets and aspirations.

## Data for Energy Access in Malawi

In Malawi, over 13 million people lack access to the traditional grid. Solar photovoltaic minigrids present a cost-effective and low-carbon option for rural electrification. However, Malawi's nascent minigrid sector has few active projects and lacks insight from reliable pilot data to inform technical designs and business models in order for the technology to scale up. In response, this project partnered with a leading minigrid provider in Malawi to access and analyse key data on performance, demand, and revenue from the largest active minigrid in the country. The outcomes of this project extend research networks, benefit academia, and support minigrid private sectors in Malawi and internationally.

Contact: **Aran Eales**  
Read more [here](#) & [here](#)

## Low Carbon & Renewable Energy at Strathclyde

Strathclyde, as part of its commitment to enhancing sustainability, installed a District Energy Scheme in 2018, with funding support from Scottish Government and the Scottish Funding Council (SFC). Since then, we have been preparing our buildings to be net-zero-ready through improved building fabric and optimised heating systems to improve energy efficiency and enable integration of heat pumps as a very low carbon heat source. The project showed how complex infrastructure can be installed in a city centre location without significant operational disruption. Strathclyde's Energy Scheme is low carbon for now, but to meet climate goals, a new source of fuel will need to be considered to drive forward our Net Zero ambitions.

Contact: **David Charles**  
Read more [here](#)

## Low Income Countries & Energy

This study tests an SDG-indicator database by combining 32 World Development Indicators via principal component analysis to create composites for agriculture, energy, and environment across 10 developing countries. Since 2015, middle-income countries outpace low-income peers in energy and agriculture. Energy-agriculture inter-linkages are heterogeneous and sometimes adverse, complicating SDG synergies. Policy should close low income and middle-income country gaps and manage these trade-offs, recognising the endogeneity of SDG progress and embedding environmental sustainability across generations.

Contact: **Stephen Agyeman**  
Read more [here](#)



## Malawi Microgrid & Renewable Energy

The outcomes of the Rural Energy Access through Social Enterprise & Decentralisation (EASE) benefit local populations, research networks, academia, and support minigrid private sectors locally and internationally, while aligning with existing research programs such as the Global Renewables Centre (GRC) and the UNDP African Minigrids Programme.

7 AFFORDABLE AND  
CLEAN ENERGY



11 SUSTAINABLE CITIES  
AND COMMUNITIES



13 CLIMATE  
ACTION



9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



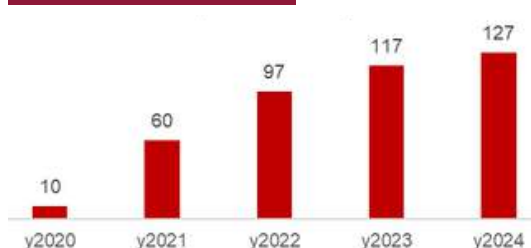
17 PARTNERSHIPS  
FOR THE GOALS







# SDG 8: Work & Economy



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 8 per year (2020-24).

In our 2025 strategic plan, Strathclyde pledged to be a Fair & Equal Pay employer. Additionally, our research and educational activities continue to contribute to SDG 8, especially our Hunter Centre for Entrepreneurship, Strategy and Innovation, our entrepreneurial hub Strathclyde Inspire, and our internal business community in general. This led to a rise of reported SDG 8-related research, with other faculties adding to the Strathclyde business school research on SDG 8.

## Circular Supply Chain Strategies in Brazil

This study empirically explains how supply chain relationships are shaped to deploy circular strategies in Brazilian manufacturing. Circular strategies, such as reuse, reduce, and recycle are guidelines for the repeated reapplication of non-virgin material resources to address consumption and production demands. This research takes a resource-dependence theory perspective to explore interdependence between actors required to implement the circular strategies, thus, highlighting how to mitigate barriers to circularity in the novel emerging market context. By addressing research gaps in the management of relationships in circular operations, this study can guide managers to deploy circular strategies in practice.

Contact: **William de Souza**  
Read more [here](#)

## Fair Hospitality in Scotland & Norway

The Strathclyde Business School (SBS) collaborated with industry partners and academia to present research on fair hospitality work in Scotland and Norway. Through two engaging workshops, Strath researchers shared ideas to enhance workplace culture in the hospitality sector and collaborated with colleagues from the University of Stavanger in Norway to present a stakeholder workshop on addressing the problem of sexual harassment in the sector. The latter allowed for comparative discussions between hospitality sectors in different legislative and business environments, along with discussions on causes, workplace strategies and broader responses needed to tackle these issues.

Contact: **Irma Booyens**  
Read more [here](#)

## Post-colonial Entrepreneurship in Africa

This book chapter provides a contextualised, critical overview of literature on entrepreneurship in Africa, through the lens of the 'holy trinity' of: Edward Said's Orientalism, Homi Bhabha's concept of the 'third space' and Gayatri Spivak's concept of subalternity. This is contextualised further through real-life case studies from Kenya and Mauritius, two African countries where entrepreneurship is seen as a key economic driver. The findings show a gap between practice and policy whereby informal entrepreneurship remains the backbone of many African societies that resist formalisation while also remaining overtly underrepresented and silenced in global statistics and research.

Contact: **Pratima Sambajee**  
Read more [here](#)



## COMMIT: Low-Carbon SME Development and Transition

**Professor John Bachtler & Dr Liliana Fonseca**, from Strathclyde's European Policies Research Centre, collaborated on the Low-Carbon SME Development and Transition (COMMIT) project with partners from eight European countries. This includes universities, local authorities, energy agencies and development agencies. The project assists European local and regional authorities in developing an SME support ecosystem for the low-carbon, industrial transition, focusing on four interrelated support areas including: information & knowledge, innovation & technology, finance, and green skills. Through workshops, research, seminars, and stakeholder discussions, the project identifies, analyses and shares good practices to facilitate place-based strategies, instruments and governance arrangements. For more info, see [here](#).



**8 DECENT WORK AND ECONOMIC GROWTH**



**13 CLIMATE ACTION**



**17 PARTNERSHIPS FOR THE GOALS**





# SDG 9: Industry & Innovation



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 9 per year (2020-24).

Innovation and industry collaborations are part Strathclyde's key strategic themes. Our internal teams, including Innovation and Industry Engagement (IIE), Strath Inspire, and faculty based teams bring interdisciplinary researchers together to work closely with industry partners on impactful projects. In research, SDG 9-related research continues to increase year-on-year across faculties, but especially in Engineering, where our innovation centres continue to push the bar higher every year.

## Big Data & Intellectual Property for Sustainability

Despite recent EU legislation for open data practices, private corporations, pivotal in the fourth industrial revolution (4IR), are insufficiently contributing to data sharing for the common good. The urgency of sustainability and the rising importance of transparency in global digital constitutionalism require private entities to enhance access to and re-use of data. The paper explores the triple meaning of 'data sustainability,' evaluates the potential role of database rights in opening corporate big data, and envisions a sustainable framework for data governance for the climate. The paper contends that despite positive steps, the EU Data Act lacks necessary legal leverage required for a green and digital transformation.

Contact: **Guido Noto La diega**  
Read more [here](#) & [here](#)

## ExtendPlus SME Climate Training Programme

The ExtendPlus programme, led by Glasgow City Council and the University of Strathclyde, is a collaborative industry initiative that supported 288 SMEs across 14 sectors on their Net Zero journey through free carbon baseline assessments. Funded by the UK Shared Prosperity Fund, it identified 31,085.4 tCO<sub>2</sub>e in emissions, with 59% of businesses reporting Scope 3 data. The initiative provided tailored reports, training, and helped SMEs access funding for renewable solutions. It boosted sustainability, improved waste practices, and fostered collaboration, contributing to cleaner air, better health, and long-term environmental and economic benefits.

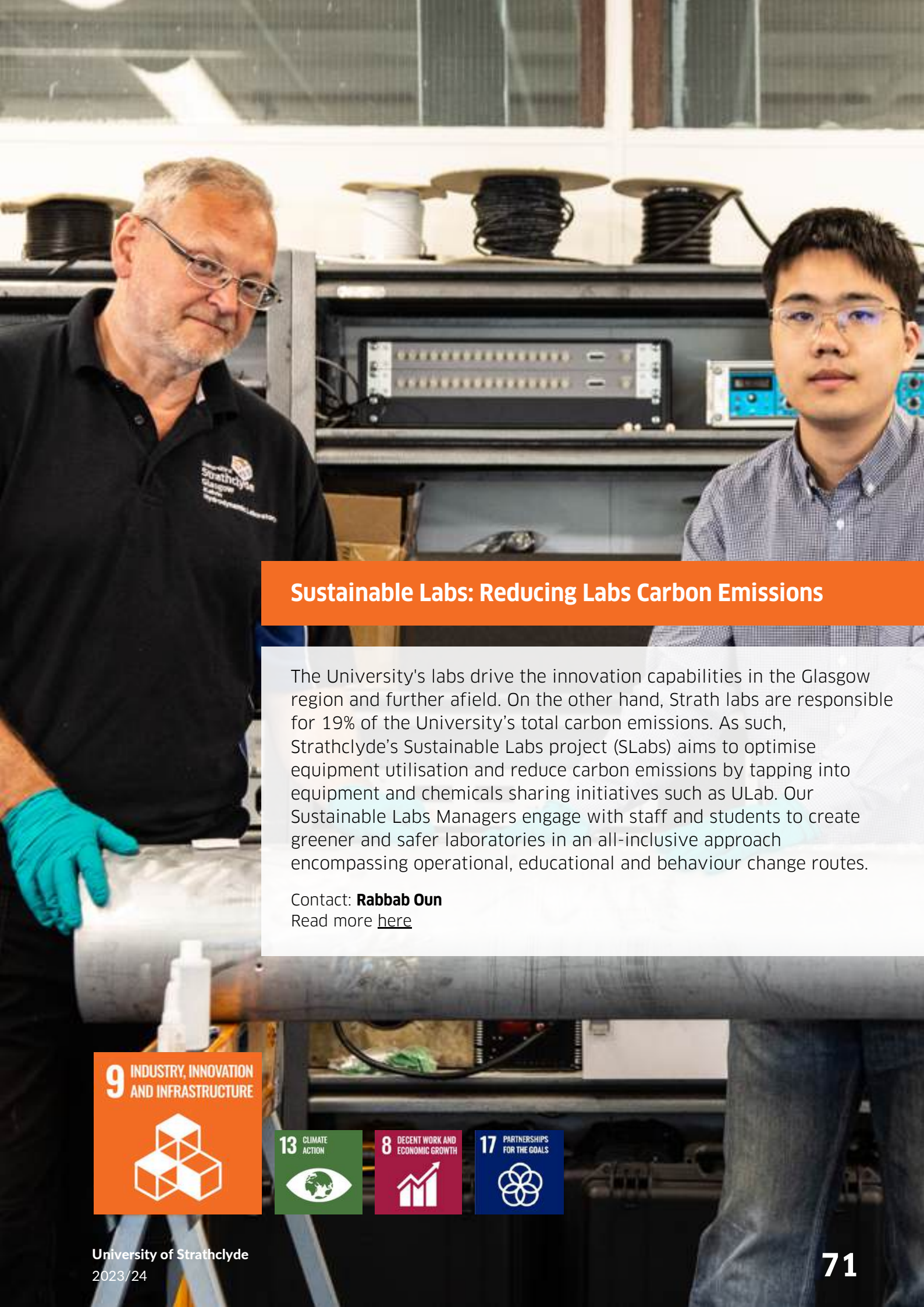
Contact: **Steven Birnie**  
Read more [here](#) & [here](#)

## ULab & Equipment Sharing at Strathclyde

Collaboration with industry is further supported by an equipment-sharing initiative named ULab. ULab catalogues laboratory equipment, allowing teams to monitor and facilitate activity using customisable booking and hiring options, both within the institution and with external collaborators and customers. This enables an effective ecosystem across Glasgow, for example increasing access to thermal characterisation equipment for early career researchers working with engineering and geological materials.

Contact: **IEE Team**  
Read more [here](#) & [here](#) & [here](#)





## Sustainable Labs: Reducing Labs Carbon Emissions

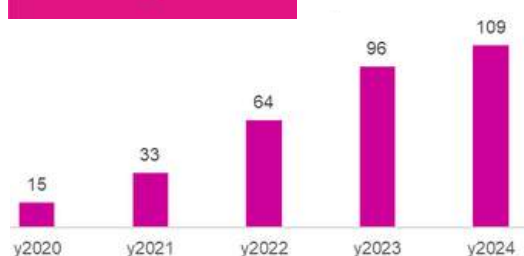
The University's labs drive the innovation capabilities in the Glasgow region and further afield. On the other hand, Strath labs are responsible for 19% of the University's total carbon emissions. As such, Strathclyde's Sustainable Labs project (SLabs) aims to optimise equipment utilisation and reduce carbon emissions by tapping into equipment and chemicals sharing initiatives such as ULab. Our Sustainable Labs Managers engage with staff and students to create greener and safer laboratories in an all-inclusive approach encompassing operational, educational and behaviour change routes.

Contact: **Rabbab Oun**  
Read more [here](#)





# SDG 10: Reduced Inequalities



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 10 per year (2020-24).

Integrating Equality, Diversity & Inclusion (EDI) sits at the heart of everything we do at Strathclyde. Our EDI teams provide support for disadvantaged communities within our students, staff and wider community. In research, we've seen a steady increase from 2020-2024 especially in HaSS-related outputs that study topics such as discrimination and equality from a holistic perspective.

## Race, Slavery and Politics in the Caribbean

In 1836, in the city of Santiago de Cuba, a Spanish general named Manuel Lorenzo declared his support for a liberal constitution, sparking a wave of popular celebration. For a brief moment, it seemed a new era of freedom and equality was dawning. Crucially, this movement wasn't just for the wealthy elite; free Black and mixed-race artisans and soldiers joined enthusiastically, taking up arms to defend their new rights, but not for long. By focusing on the extraordinary story of one man—a free Black peasant named Candelario Villafaña, who was arrested and exiled for his role in the movement – this research uncovers the human cost of repression and gives a voice to those written out of history.

Contact: **Jesus Sanjurjo-Ramos**  
Read more [here](#)

## Students with Complex Needs & Project-based Learning

The "Being Together" project partners Strathclyde Humanities (HaSS) first-year students with young people with complex needs (CASN) in specialised schools. The project includes 30 hours of preparatory content and 40 hours of placement, fostering communication and understanding. This initiative aims to create a more inclusive education system in Scotland, enhancing teacher preparedness and giving a voice to marginalised students. Some of the sensory activities can help to bring the curriculum to life for children with complex additional support needs. Feedback has been positive, highlighting the project's impact on future educators, and the benefits that students felt came from being prepared.

Contact: **Maggie MacAskill**  
Read more [here](#)

## Strathclyde Cares & Corporate Parenting

The Strathclyde Cares programme, a UK first, helps students from disadvantaged backgrounds, such as care experienced and Asylum Seekers, throughout their Higher Education journey. The support starts from pre-application stage to studying, graduation and beyond. Through our Corporate Parenting scheme, Strath students in the Strath Cares programme are matched with staff mentors to provide 1-1 support throughout their journey at Strathclyde. This scheme also includes our recipients of our pioneering Asylum Seeker Scholarships, offered in partnership with the Scottish Refugee Council, and The Carnegie Trust.

Contact: **Louise Martin**  
More info [here](#) & [here](#)



## Data on the Lives of People with Learning Disabilities

Strathclyde's Fraser of Allander Institute led a programme aimed at Improving the lives of people with learning disabilities in Scotland. By identifying evidence-based solutions to challenges they faced, focusing on what we know and don't know about people with learning disabilities, the project explores the quality and availability of data currently in use by the public sector in Scotland, how it can be improved and measures the benefits from such improvements.

Contact: **David Jack**

Read more [here](#)

**10** REDUCED  
INEQUALITIES



**3** GOOD HEALTH  
AND WELL-BEING



**4** QUALITY  
EDUCATION

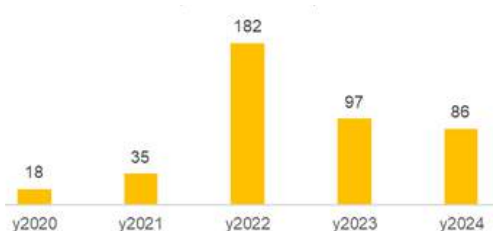


**17** PARTNERSHIPS  
FOR THE GOALS





# SDG 11: Cities & Communities



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 11 per year (2020-24).

Our estates teams, supported by Sustainable Strathclyde, work closely with Glasgow City Council to make Strathclyde's urban and natural environment more sustainable across our campuses and surrounding areas. In research, led by our Architecture department, SDG 11 related research outputs remain important. However we saw a decrease from 2022 across faculties. This may be attributed to key colleagues having left the institution.

## Indigenous Cultural Expressions of Land and Community

Since the twentieth century, Indigenous communities have undergone a literary revival through the languages of the region known as "Latin America." A major theme across this area is the cultural significance of maize, and its literary representation of the relationship with the land. This article compares the depiction of maize in four bilingual poems written in Indigenous languages alongside Spanish: Nahuatl, Yucatec Maya, Central Quechua, and Southern Quechua. The article argues the poems weave an interconnected yet multi-perspectival cartographic tapestry with maize as the common thread, and communicate culturally specific ways of understanding and appreciating communities' relationship with geography, land and nature.

Contact: **Charles Pigott**  
Read more [here](#)

## Innovation & Cultural Heritage Recovery through HE

Funded by Erasmus+ programme, the Recovery of Cultural Heritage through Higher Education-Driven Open Innovation (eCHOing) led collaborations between heritage professionals, students and citizens across five countries, focusing on small scale capacity building and new skills transfer. The project provided resilient and sustainable solutions through innovative methods like open innovation (OI) and citizen science (CS) to benefit society, and create links with universities to support the recovery of the cultural and creative sector (CCS). New tools were developed including a model of HEI-driven OIP sustainability through Online MOOCs, a series of educative webinars and videos, co-developed reports and working methodologies with associated partners.

Contact: **Milena Dobрева**  
Read more [here](#) & [here](#)

## Active Mobility Hub

Set up in late 2022, the Hub since expanded, bringing in researchers from across disciplines as well as external practitioners, securing external funding, and leading local and international conversations on active mobility. The achievements so far included: Building a collaborative online and in-person space and research culture of 20 members from all four faculties. Expanding research into Undergraduate, MSc/MRes and PhD levels in courses including the 'MSc Sustainability and Environmental Studies', 'BEng Computer and Electronic Systems' and 'BSc in Sport and Physical Activity', and opening pathways to impact through knowledge exchange funding from the Paths for All Smarter Choices Smarter Places open fund.

Contact: **Deirdre Harrington**  
Read more [here](#)



## Decentralised Communities in Space

The number of space craft in low-Earth orbit, along with the data and services they provide, is growing rapidly. Space operations and governance remain largely unexplored, limiting the potential of space-based services and posing risks to the sustainability of the space environment. As these space craft become increasingly interconnected, these are expected to evolve into an Internet of Things (IoT) network, creating a vast, distributed system of sensors in orbit. This project envisions transforming this network into a Decentralised Autonomous Community in Space, governed by its members via a distributed ledger, independent of centralised government or corporate control, where decisions about orbital manoeuvres or provision of satellite-based services, would be made autonomously, enhancing safety and sustainability in space. This project evaluated various characteristics, such as consensus mechanisms and architecture, to identify how these technologies can be optimised for space and secure, decentralised control and communication between spacecraft.

Contact: **Beth Probert**

Read more [here](#) & [here](#)

**11** SUSTAINABLE CITIES  
AND COMMUNITIES



**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

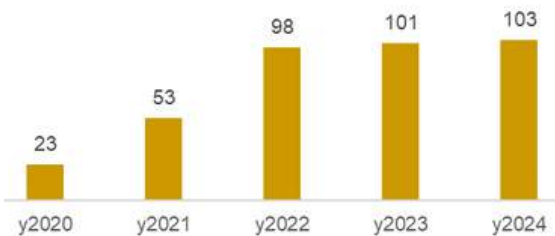


**17** PARTNERSHIPS  
FOR THE GOALS





# SDG 12: Consumption



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 12 per year (2020-24).

The Strathclyde Students' Union led multiple projects related to SDG 12 this year including introducing new policies and motions related to veganism and procurement on campus, festivals, and student-led activism through clubs and societies. In research, the number of SDG-linked outputs remained consistent, with Engineering faculty leading the way with a focus on production systems, while other faculties contributed as well such as the Strathclyde Business School focusing on social and consumer behaviour.

## Sustainable Production & Society in Brazil

This research seeks to address the integration of workers' health & well-being with fostering healthy and sustainable territories. This is to be done through investigating the relationship between production processes and social reproduction of habits and processes within the agri-business context of Mato Grosso. This is through analysing epidemiological profiles of worker populations against occupational and socio-environmental risks across the region's main production chains. The results aim to produce participatory communication channels with groups of exposed workers, and enable the co-creation of problems and solutions that center their health and well-being in the production processes.

Contact: **Bianca Vasquez Pistorio**  
Read more [here](#)

## Veganism Awareness at Strathclyde

Strathclyde Students' Union passed a policy that supports veganism and vegan food options at the Union and all its premises. This is in line with the Union's commitment to work towards a better, fairer world with a stronger, healthier economy that relies on an environmentally sustainable approach in all aspect of students life. The Union will take steps to achieve this goal through informative action, and recognition of issues of sustainability and encouraging environmentally friendly behaviour. The Union resolves to encourage sustainable food practices and working toward combatting injustice and campaigning for positive change for people and the planet.

Contact: **Katie Bharaj**  
Read more [here](#)

## Mixed-Packaging & Food Waste

This research investigates the effectiveness of imperfect bundle ("ugly bundling") packaging in reducing food waste and increasing the attractiveness of imperfect produce to consumers. In an experimental study, 150 participants were recruited at a large state university campus in the UK for a food evaluation study. Through planned contrast tests with participants, the results suggest significant main effect of package type, revealing insights into how packaging type can be leveraged to improve attractiveness of imperfect produce.

Contact: **Hyoje (Jay) Kim**  
Read more [here](#)



## Ugly Food Can Save the World!

Strathclyde Business School (SBS) researchers are challenging our consumption habits that are contributing to the climate crisis.

Image by **Hyoje (Jay) Kim**, Lecturer in Marketing, SBS





## Agro-ecological Plantation in Brazil

Strathclyde researchers partnered with local, traditional communities in Mato Grosso to foster healthy and sustainable production practices in the agriculture sector.

Image by **Bianca Vasquez Pistorio**, PhD Candidate at Work, Employment and Organisation (WEO), SBS

12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



13 CLIMATE  
ACTION



15 LIFE  
ON LAND



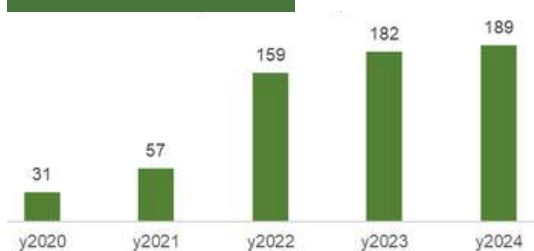
17 PARTNERSHIPS  
FOR THE GOALS







# SDG 13: Climate



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 13 per year (2020-24).

Climate action and Net Zero are core to Strathclyde's outgoing Strategy 2025 and incoming Strategy 2030. Our holistic approach mobilises teams and resources across estates, operations, research, education and partnerships. In research, our Engineering faculty's focus on renewables and innovative Net Zero solutions led the way, while other faculties also increased their contributions for SDG 13.

## Climate Resilient Transport-Energy Systems in Kenya

This study, in collaboration with academic partners, saw the development of an open-access Transport-Energy systems model for the Kenyan context (TEAM-Kenya) to aid decision-makers in strategising for desirable transport futures that provide people with equitable, clean and affordable access to goods, services and opportunities. The findings show that high e-mobility scenarios save the Kenyan treasury up to 69% - \$4.2bn annually, which calls for affordable finance to unlock the benefits of an early transition. This must go hand-in-hand with increased support for walking and cycling to provide access to services and economic opportunities, particularly for marginalised groups.

Contact: **James Dixon**  
Read more [here](#) & [here](#)

## Climate Adaptation & Assessments in Scotland

Fraser of Allander Institute, part of Strathclyde, collaborated with ClimateXChange to inform the Scottish Gov on matters relating to climate change. The reports seek to address research gaps around the opportunities, the challenges, and ambitions for Scotland to achieve climate and adaptation targets, the potential benefits for economic prosperity, jobs, trade and investment. While the economic opportunities for Scotland are reflected in relevant policies and strategies, the reports provide a deeper and more consistent understanding of the specific nature of those economic opportunities, and possible assessment tools that would enable effective interventions and investment.

Contact: **James Black**  
Read more [here](#) & [here](#)

## Green Conferencing at Strathclyde

Strathclyde is a hub for conferences where knowledge, ideas and innovation are promoted. We're dedicated to making the events, facilities and services in our main events hub, the Technology and Innovation Centre (TIC), sustainable. Through achieving the Green Meetings Gold Award, we encourage staff and visitors to join us in the sustainability mission. This is supported by our Green Policy and Visitor Charter, and refer to the Go Greener in Glasgow guidelines, which share tips to conference users to plan for a greener visit.

Contact: **Lesley Turan**  
Read more [here](#)



## Ecology in Urban Rain Gardens

Rain gardens are an alternative to traditional drainage, able to lower flood risk and reduce environmental contamination from stormwater. Removal of contaminants by rain gardens is driven by both physical processes (such as filtration and sedimentation) and biological metabolic processes by soil micro-organisms, and can be installed to tackle flooding from climate change while help in protecting the environment from urban contaminants in the stormwater.

Contact: **Vernon Phoenix**

Read more [here](#)

13 CLIMATE ACTION



15 LIFE ON LAND



11 SUSTAINABLE CITIES AND COMMUNITIES

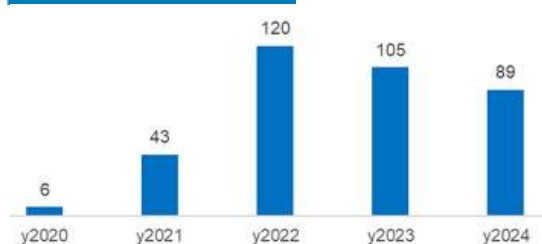


17 PARTNERSHIPS FOR THE GOALS





# SDG 14: Life Below Water



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 14 per year (2020-24).

The One Ocean Hub (OOH)'s leadership during consecutive Conference of the Parties (COP26 and 27) showcased Strathclyde's leadership in responding to SDG 14. This work cuts across our four faculties. For example in HaSS, our School of Law contributed to International Law relating to fisheries, oceans communities, and environment, while Engineering and Science contributed to SDG 14 through marine technology, mathematical modelling of marine ecosystems and other sustainability-related research.

## Indigenous Participation in Decisions on Seabed

This essay discusses challenges and opportunities in ensuring meaningful participation of Indigenous peoples at the International Seabed Authority (ISA), with a human rights lens and integrating their knowledge into international decisions on deep-seabed mining. The essay begins with issues of transparency and public participation in the practice of the ISA as barriers of Indigenous peoples' participation. Extant human rights obligations require Indigenous peoples' participation, and compliance is required in ISA, in reality this is not seen in practice. The results show that meaningful participation requires mobilisation of expertise to actively address any biases vis-à-vis Indigenous knowledge.

Contact: **Elisa Morgera**  
Read more [here](#) & [here](#)

## StrathE2E: Marine Ecosystem Modelling

In Science, researchers from the department of Mathematics and Statistics developed a marine ecosystem model (StrathE2E) for strategic management advice. With a marine food web spanning the microscopic to the scale of a whale, alongside human activities such as fishing, researchers at Strathclyde use StrathE2E to simulate the future for marine ecosystems under climate change. This provides important context for assessing trade-offs in ecosystem-based management, between different fisheries, but also other sectors such as offshore renewable energy projects and marine protected areas. Stakeholders and decision makers can use the model through an interactive web app.

Contact: **Jack Laverick**  
Read more [here](#) & [here](#)

## Under Water Object Detection Innovation

The project aims to develop a protocol of multimodal data collection through neuromorphic sensors for underwater object detection, a very tricky phenomenon due to variability of environmental changes like wave motion, salinity as well as visibility under water. Various sensors with different ranges and properties can be deployed to overcome the adverse environmental conditions for object detection. However, the proven neuromorphic methods introduce a paradigm shift in handling these sensor uncertainties through sensor fusion and increasing the autonomy of the data management and decision making within the operating envelope of all the sensors used for the object detection task.

Contact: **Chaitanya Patil**  
Read more [here](#) & [here](#)



## Strathclyde & Robosys Automation Collaboration

Strathclyde's **Dr Chaitanya Patil** collaborated with Robosys Automation on a Knowledge Exchange Agreement to support a project which will explore underwater object detection using neuromorphic sensing. The interdisciplinary agreement includes Strathclyde's Department of Naval Architecture, Ocean and Marine Engineering (NAOME) and NSSP (Neuromorphic Sensor Signal Processing) lab from the Department of Electrical and Electronics Engineering (EEE), and will also fund the testing of the sensing technology for underwater object detection using novel technologies.



14 LIFE  
BELOW WATER



8 DECENT WORK AND  
ECONOMIC GROWTH



10 REDUCED  
INEQUALITIES

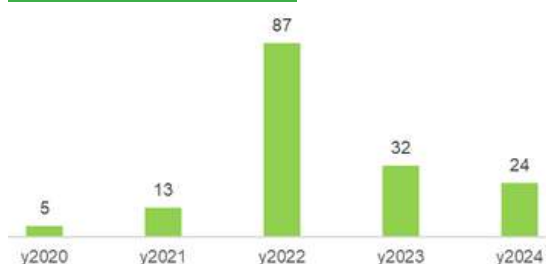


17 PARTNERSHIPS  
FOR THE GOALS





# SDG 15: Life on Land



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 15 per year (2020-24).

SDG 15 remains a challenging area due to the lack of a dedicated agricultural studies department, yet our interdisciplinary research, education and student activism continued to contribute to SDG 15. Strath Union's policies, and estates projects on land, nature and climate preservation added to our research across faculties which contributed via innovative solutions for farm, agriculture, and biodiversity.

## Sustainable Agriculture & Farm Energy Management

Started in 2022 we have demonstrated the viability of load disaggregation for paving the way towards Net Zero for dairy farms. With good performance demonstrations on 3 German farms, this has now been expanded to enable us to deliver impactful research across the farming sector. This project has enabled reduced dependence on the electricity grid, and leveraged low carbon technologies (solar and wind generation, electric vans, batteries for energy storage). This will not only reduce the farm's utility bills but also aid the transition towards sustainable farming. Moreover, the cost savings will enable significant investments in the region allowing for energy sharing across nearby schools and community hubs.

Contact: **Lina Stankovic**  
Read more [here](#) & [here](#)

## Sustainable Transport in Scottish National Parks

In 2024, Strathclyde researchers evaluated the Trossachs Explorer shuttle bus pilot, a sustainable transport initiative in Loch Lomond & The Trossachs National Park. Working with an international collaborator, they designed an inclusive, mixed-methods approach combining surveys, interviews, ticket data, and a Ketso workshop, to assess impact of the service. Findings informed policy, future planning, and funding bids, with the final report being referenced in national discussions on sustainable tourism. Findings highlighted significant successes, including improved access to remote areas, support for local communities and businesses, and alignment with sustainability objectives.

Contact: **Jane Johnstone**  
Read more [here](#) & [here](#)

## Preservation of Biodiversity at Strath's Ross Priory

Ross Priory is a Scottish national treasure, situated in the Loch Lomond and Trossachs National Park region, and owned by the University of Strathclyde. Dedicated estates teams manage the area and have been actively progressing proposals to better manage the Events and Recreation facilities and their impact on the environment. This will contribute to preserving the natural heritage and biodiversity at Ross priory and surrounding areas and provide benefits to the local community.

Contact: **David Charles**  
Read more [here](#) & [here](#)



## Strathclyde's Ross Priory: Heritage & Preservation



15 LIFE  
ON LAND



13 CLIMATE  
ACTION



17 PARTNERSHIPS  
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## Community-first Evaluations in Scottish National Parks

Putting community at the heart of research, a robust research design was employed by Strathclyde researchers to independently evaluate the Trossachs Explorer shuttle pilot.

Contact: **Jane Johnstone**

Read more [here](#) & [here](#)



15 LIFE ON LAND



8 DECENT WORK AND ECONOMIC GROWTH



13 CLIMATE ACTION



10 REDUCED INEQUALITIES



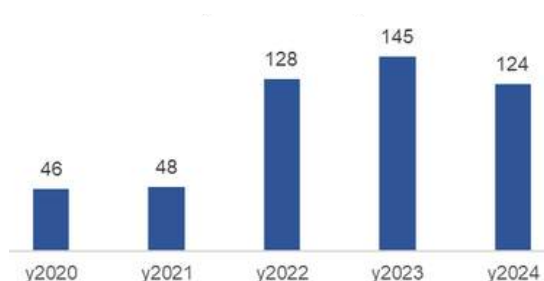
17 PARTNERSHIPS FOR THE GOALS







# SDG 16: Peace, Justice & Strong Institutions



**Figure Caption:** Number of Faculty Research Outputs linked to SDG 16 per year (2020-24).

Strathclyde's contributions to SDG 16 were via our partnerships with the Scottish government and through our Law School. Particularly, our Law Clinic project continued providing free legal advice to vulnerable and disadvantaged communities in Glasgow. In research, SDG 16 continued to be a focus in the HaSS, while other faculties' contributions remained stable, especially in relation to Forensics research in the Science faculty.

## Earth Observation for Human Rights

Human activities, from use of natural resources to patterns of inequality and conflict, leave measurable traces on our planet that are visible in Earth Observation (EO) data gathered continuously by satellites orbiting the Earth. This research examines how EO imagery can be aligned with established Human Rights indicators, helping stakeholders match technological capabilities to investigative needs. By categorising EO technology into six primary payload types, this study assesses their potential for full or partial application in human rights contexts, exploring both current uses and future opportunities, while clarifying standards, procedures, and limitations involved in adapting EO data for admissibility in court proceedings.

Contact: **Analisa Ricardi**  
Read more [here](#)

## Sustainability and Tourism Law

Tourism is a multifaceted economic sector, whose relevance and impact cuts across jurisdictions and levels of governance. Ensuring the sector's sustainability is a challenging endeavour, requiring a complex approach to regulation and decision-making. Yet scholarship on sustainable tourism is relatively thin in legal perspectives, especially ones of a critical, comparative, and interdisciplinary nature. Planned activities aim at filling this critical knowledge gap. They aim to bring together a diverse team of academics, stakeholders and decision-makers, based in Scotland and abroad, and invite them to co-produce an agenda for future socio-legal impact-driven research on sustainable tourism.

Contact: **Antonio Cardeza-Salzmänn & Maria Ntona**  
Read more [here](#)

## Human Rights Reform in Scotland

Given current constitutional arrangements in the UK, devolution's promise as a force for human rights progress remains restrained and limited. This research paper explores how potential opportunities offered by enhanced devolution could provide a fully integrated human rights framework, enabling further incorporation of social and economic policy areas such as employment, social security, immigration and equality. The article concludes with a reframing of human rights which reflects the more complex picture painted by diverging trajectories in each of the UK jurisdictions.

Contact: **Katie Boyle**  
Read more [here](#) & [here](#)



## Mainstreaming Access to Social Justice in Scotland

**Katie Boyle**, Professor of Human Rights Law and Social Justice at Strathclyde, contributed to advancing social justice agenda in Scotland, through her membership of the First Minister's Advisory Group on Human Rights Leadership and sector-wide engagements. Her work led to a series of law and policy changes, such as the incorporation of UN Convention on the Rights of the Child Incorporation (Scotland) Act 2024 and the forthcoming Human Rights (Scotland) Bill, that directly shaped the embedding of international human rights into domestic devolved law in Scotland. See more [here](#).

**16** PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



**8** DECENT WORK AND  
ECONOMIC GROWTH



**10** REDUCED  
INEQUALITIES



**17** PARTNERSHIPS  
FOR THE GOALS





## International Institute for the Sociology of Law

Through Strathclyde's International Strategic Partnership Fund, **Dr Antonio Cardesa-Salzmann** and **Dr Maria Ntona** from the Strathclyde School of Law studied Sustainable Tourism from a socio-legal perspective. This was done in partnerships with academic and non-academic partners across multiple jurisdictions, contributing to policy and decision making in the tourism and public sectors. Read more [here](#).



**16** PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS

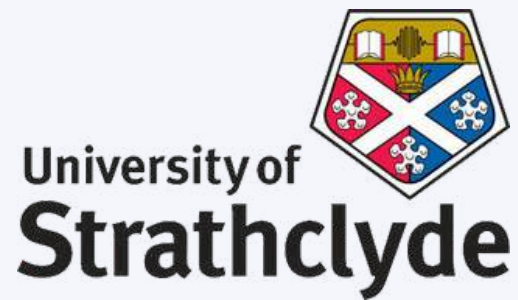


**8** DECENT WORK AND  
ECONOMIC GROWTH



**17** PARTNERSHIPS  
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