



UCL Sustainable Development Goals Report 2021–22



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FOREWORD

In 2015, the United Nations published its 2030 Agenda for Sustainable Development. At its core were the 17 Sustainable Development Goals (SDGs), which the world needs to achieve by 2030 to ensure the world's ongoing economic growth, while protecting the environment and addressing social inequalities.

We are now more than halfway to 2030. Humanity is making progress towards some of the Goals in parts of the world, but it is increasingly clear we are not on track to achieve them by 2030. In some areas we are going backwards, notably in reducing inequalities and tackling climate change.

Universities are well-placed to play a leading role in a renewed effort to address the global challenges framed by the SDGs. We can do this through creating and sharing knowledge, and by working in partnership – across academic disciplines, different sectors and geographic borders – where other sectors cannot, to bridge the boundaries that often hinder progress.

Addressing the challenges facing humanity was at the core of UCL's founding mission in 1826, and almost 100 years on it remains at the heart of our vision.

Staff across our 11 faculties continue to tackle systemic global problems through their world-class cross-disciplinary research. Increasingly, they are also seeking to equip our students with the knowledge, skills and competencies they need to continue tackling these



challenges as the next generation of academics, entrepreneurs or policymakers.

For the first time, we have also measured the extent to which our students are addressing the SDGs through their extra-curricular activities (see pages 19–20). Increasing numbers are supporting communities around our London campuses and overseas through their Students' Union societies or volunteering projects, or by independently engaging with global bodies and networks.

As an institution, we continue play a leading role in the international U7+ Alliance, which facilitates cross-regional, cross-institutional activities relating to pressing global challenges among 48 universities from G7 countries and beyond. This year, we were pleased to co-convene the U7+ Worldwide Student Forum on climate change on behalf of the alliance (see page 31).

We are also the host of the new Sustainable Development Solutions Network UK Hub, which brings together and mobilises UK institutions around solutions that contribute to address the SDGs (see page 27).



The UCL SDGs Initiative (SDGI) was established in 2020–21 to stimulate more SDGs-related activities across UCL, including: our world-class research and teaching; the ways we engage with local, national and global communities; the extra- and co-curricular activities of our students; and the way we operate as an institution.

The SDGI is facilitating new opportunities for collaboration between and beyond these different spheres of our activity. It will help to ensure our collective effort is greater than the sum of its parts.

[Read more about the UCL SDGs Initiative.](#)

It is through these partnerships and many others with local communities, the third sector, governments and industry that we can have most impact on achieving the SDGs. I look forward to working together as 2030 approaches.

Dr Michael Spence,
UCL President and Provost

METHODOLOGY

2021–22 is the second academic year that UCL has reported on the extent of SDGs-related activity across the university.

Since last year, we have improved the accuracy of how we are measuring our SDGs-related teaching and research. We have also started to measure the extent of our students' extra-curricular activity, as well as aspects of our external partnerships that are addressing the SDGs.

We are aware some of our measures could be improved: we set out some of the caveats to our methodologies below. We will continue to refine how we measure SDGs-related activity by learning from others in the sector and beyond. We will also identify further metrics to illustrate how our community is helping to achieve the Goals.

SDGs-related teaching activity at UCL

For the second year, we classified the descriptions of the 6,797 taught modules in UCL's online module catalogue by Goal using OSDG, a multilingual open-access tool jointly developed by the UN Development Programme SDG AI Lab and research and policy analysis centre PPMI.

Combining several existing sets of SDG categories and augmenting them with additional keywords, OSDG compiled a set of SDG-relevant terminology. The list of original sources is available on OSDG's website. For last year's report, OSDG searched for keywords in the module



descriptions and attributed an SDG to them if the descriptions contained two or more keywords for that SDG.

OSDG has further improved its methodology since then, by integrating machine learning models that predict the preliminary SDG labels, for them to be verified through the ontology/keyword matching. The updated approach is now able to identify modules that may have been missed previously, so the results should be more accurate than last year's report.

The methodology relies on module leads using SDG keywords, which many may not have done – they were unaware their description would be mapped – so the number identified is likely to be an underestimate. Similarly, longer module descriptions have higher chances of being identified as relevant to an SDG simply because they tend to use a wider vocabulary. Figures 1 and 2 (page 9–10) show the numbers of SDG-related modules by UCL faculty and by SDG.

SDGs-related research activity at UCL

Research publications

This year, to broaden our search for SDGs-related research, we mapped UCL research activity related to each SDG by combining the publications found in Elsevier's Scopus database (using keyword searches) and in Clarivate's Web of Science database (as categorised by their InCites tool); last year we only used Scopus. Elsevier also improved the accuracy of their keyword searches this year.

To be included, a paper had to be present in the Scopus or Web of Science databases, with any duplicates removed from the total. We then attributed each paper to UCL faculties by matching to UCL's internal publications database by DOIs. A paper was counted once per faculty (even if it had multiple authors within a faculty), but could be counted in more than one faculty if it has co-authors in multiple faculties. It could be counted in more than one SDG if it is given multiple SDG

classifications by Scopus and InCites. Figures 3 and 5 (pages 12 and 16) show the number of SDGs-related publications by UCL faculty and by SDG.

SDGs-related research impact case studies

For the first time, we also used OSDG to classify the impact case studies we submitted to the UK Research Assessment Framework (REF), see Figure 4 (page 15).

Top 10% most cited and international research collaborations

The lists of publications for each SDG (combined from the Scopus and Web of Science databases) were imported as custom datasets into InCites for citation and collaboration analyses.

The percentage of UCL publications in the top 10% most cited for all research of similar papers was calculated by comparing citations with 'similar papers', referring to similar Web of Science subject categories, years,

and document types (e.g. articles and reviews). International research collaborations were measured by the percentage of publications with at least one co-author from a country outside the UK.

Policy citations

Policy citations were sourced from Overton, an index of policy documents, guidelines, think tank publications and working papers, which collects data from more than 1,000 sources worldwide.

Student extra-curricular activity addressing the SDGs

For the first time, we mapped how many of our students were engaged in activity outside of their course which was contributing to the SDGs. We surveyed student societies asking them to state which of the SDGs their activity was supporting. For those societies that didn't respond, the UCL SDGs Initiative made that judgement on their behalf, based on information provided by the societies.

The Students' Union UCL Volunteering Service did the same for the student-led volunteering projects. We used the number of students who were members of those societies and projects that were judged to be supporting an SDG as an indicator of the extent of student involvement in each Goal.

The figures rely on the subjective judgement of staff and students at UCL. The numbers also reflect particular a moment in the year, while membership numbers fluctuate during the academic year, and students may be members of more than one society or project.

Figures 6 and 7 (pages 18–20) shows the numbers of students involved in addressing the SDGs through their student societies and volunteering projects.

External partnerships activity addressing the SDGs

For the first time, we also mapped the extent to which two types of external partnerships were supporting the SDGs. With UCL Innovation & Enterprise we measured how many of the student startups supported by the UCL Entrepreneurship Hub were addressing each of the SDGs (see Figure 8, page 29). Each startup was asked to identify which (if any) of the SDGs they thought they were addressing.

Similarly, working with the UCL Office of the Vice-President (Advancement), we measured solicited philanthropic income received by UCL in support of specific SDGs (see Figure 9, page 30). OVPA assigned each gift to one 'lead' SDG to avoid duplication and double counting.

OUR TEACHING



Increasingly, our courses are equipping our students with the skills and knowledge that will help them to address the SDGs in their future careers after graduating from UCL.

Understanding the role of law in sustainable land use

A Master's course module is equipping a new generation of environmental experts with an understanding of the regulatory and policy framework that informs land use and development.

"Without careful consideration, new infrastructure, such as flood defences and public transport hubs, can negatively impact some communities more than others and may disrupt ecosystems," explains Professor Jane Holder (UCL Laws), who runs the Land Use, Sustainability & Environmental Justice module.

Through a series of interactive seminars and debates held in Camley Street Natural Park, nearby UCL, students consider the legal and policy dynamics of environmental regulation, and critically assess the role that law and policy play in achieving sustainability and environmental justice. Case studies are used to explore these issues in a practical way on different spatial scales: air pollution and loss of green space in Somers Town, London; litigating the UK Airports National Policy Statement; and waste regulation in Ghana.

"The module brings together the varied perspectives of students from a range of Master's courses," says Professor Holder. "City planning students bring insights and practical experience from planning and urban development, while law students bring their experience of working in legal practice in diverse jurisdictions."



Preparing future psychologists for the impact of the climate crisis on human wellbeing

A new module is equipping UCL Psychology & Language Sciences (PALS) students with the knowledge and skills they will need in their future careers to engage with the threat posed by the climate crisis.

"The climate crisis poses an existential threat to the natural environment and human societies alike," argues Professor Kate Jeffery (UCL PALS), the module's lead. "It is thus an important topic for psychologists to engage with, and this course aims to equip students with the knowledge and skills with which to do this."

"The climate crisis is an important topic for psychologists to engage with, and this course aims to equip students with the knowledge and skills with which to do this."

Kate Jeffery
(UCL Psychology & Language Sciences)



Students on the Psychology of Climate Change module are taught about the causes and consequences of climate change. It also explores how people make sense of climate change cognitively and emotionally, including why some people deny facts about climate change, as well as common emotional reactions, such as anxiety, grief and hopelessness, or resilience, campaigning and activism.

"We ask them to consider factors that enable or impede pro-environmental behaviours, as understanding these changes can improve the success of initiatives to change behaviour," adds Professor Jeffery.



THE SDGS AND ME



Jane Holder is Professor of Environmental Law in UCL Laws. She chairs the UCL Steering Group on Education for Sustainable Development.

Which of the SDGs is the most important for humanity to address?

The SDGs are closely connected and impact on each other, in the main positively, but also negatively in some cases, so it's hard to pull out one as the most important. Having said that, I start from the position that biodiversity is a good foundation from which to tackle many of our environmental problems, including climate change, so I would highlight SDG14: Life Below Water and SDG15: Life on Land.

If there was an 18th Goal, what should it be?

Animal welfare – to further well-being of individual animals, whether wild or domesticated and aim for far less intensive animal livestock farming. Arguably, this already underlies many of the existing SDGs, but a specific goal would be an important and clear push in the right direction.

[Read more of Professor Holder's answers online.](#)

Using artificial intelligence to support sustainable development

A new MSc course is empowering students to explore how technologies such as artificial intelligence can help and hinder efforts to achieve the SDGs.

New technologies including artificial intelligence (AI) and machine learning have shown promise in modelling and understanding the effects of climate change, but without appropriate computational design and governance, the same technologies themselves have the potential to create cascading negative impacts.

The core module of the MSc in AI for Sustainable Development provides computer science students with an overview of the UN SDGs, as well as an understanding of how AI might help to achieve them – or hamper their progress.

“During the course, students are encouraged to think critically about a particular application of artificial intelligence that relates to one of the SDGs,” explains Dr Maria Perez-Ortiz (UCL Computer Science). “They do an in-depth analysis of its impacts and consider aspects relating to social, economic and environmental sustainability.”

During the MSc programme, students have a chance to apply their new-found skills in real life, by working on their coursework in partnership with an external stakeholder facing a sustainable development challenge.

Previous students have explored AI technology that analyses satellite images to identify illegal, unregulated fishing, and investigated an AI tool that measures and predicts crop yields in the USA.

Helping to achieve Target 13.1

Helping to achieve Target 14.2

Helping to achieve Target 17.17

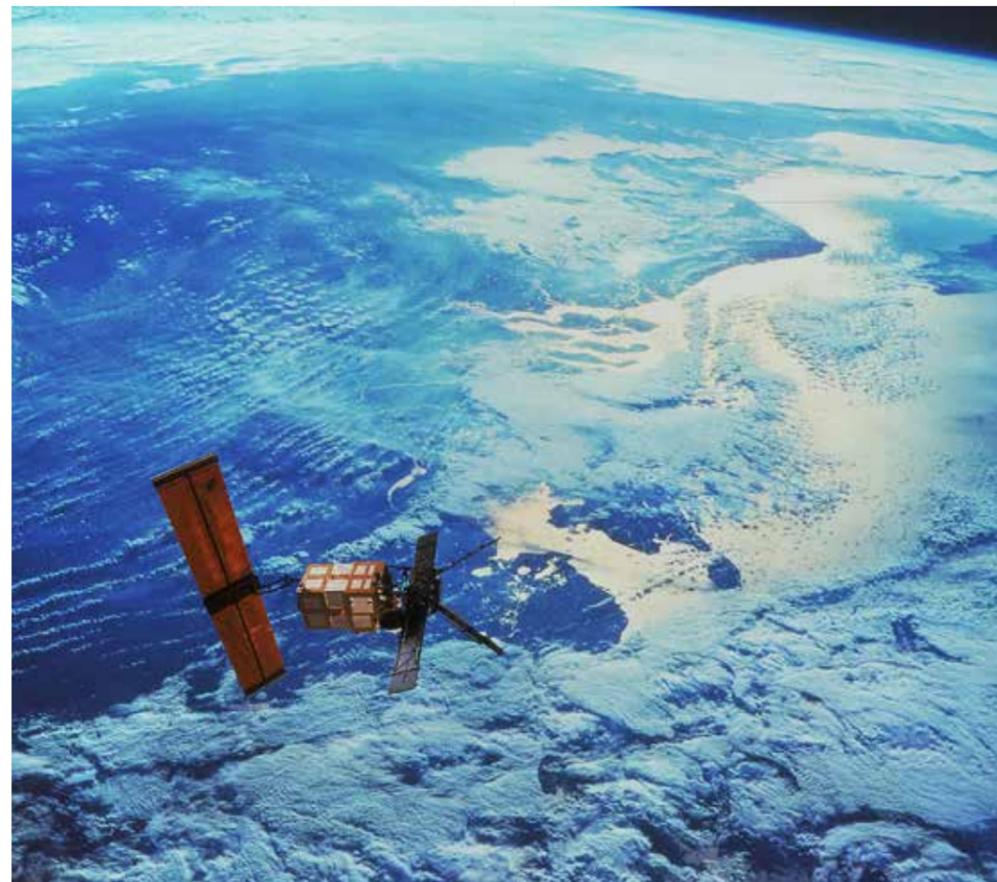
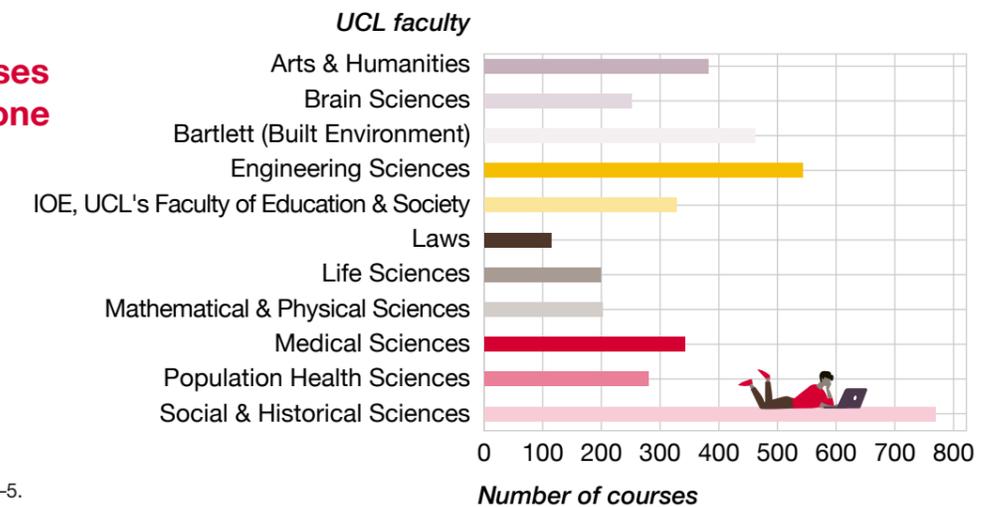


Figure 1: Taught courses addressing one or more of the SDGs, 2022–23, by faculty



Helping young people worldwide to become global citizens

A free online course to support global citizenship education for primary and secondary teachers across the world has been developed by Dr Nicole Blum and Dr Fran Hunt (both UCL Institute of Education, UCL's Faculty of Education & Society).

It explores different pedagogical approaches to engaging students and provides practical ideas, lesson guides and examples of current policy and practice to facilitate learning in areas such as social justice, global citizenship and inequality.

Helping to achieve Target 4.7

Improving access to safe, affordable healthcare for all

A programme of Master's courses has been introduced at the new UCL Global Business School for Health (GBSH) to give students the competencies and skills they need to lead the way in healthcare management, locally and globally.

"Giving more people access to better healthcare is a key part of reducing inequality and tackling poverty globally," explains Professor Nora Ann Colton, Director of the GBSH.

The GBSH – the world's first business school dedicated to health – was established in 2021 to deliver research and teaching that will help achieve universal access to high-quality, safe and affordable healthcare.

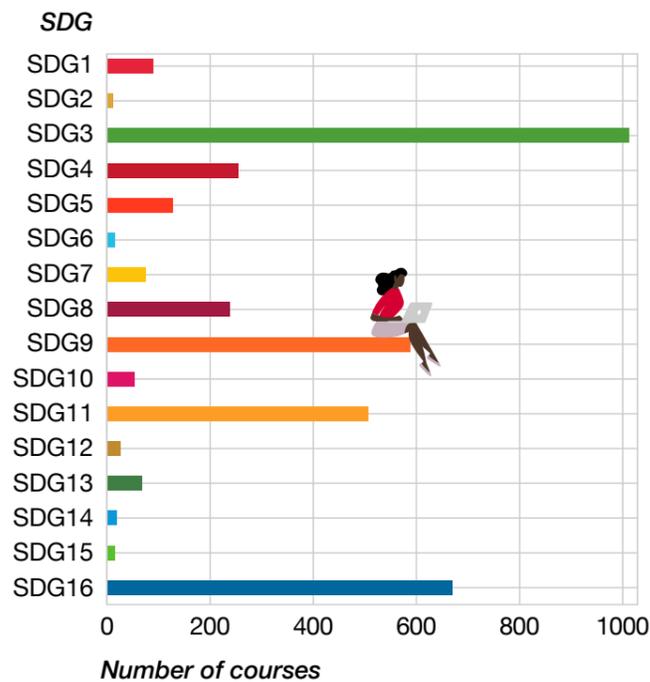
The GBSH's flagship course is the MBA Health, which provides managers, clinicians and health business specialists with the transformative skills of an MBA graduate.

Other GBSH courses include its MSc in Digital Health & Entrepreneurship, on which students learn the foundations of digital health and enterprise and take an idea for a health innovation through to developing a business case.



Figure 2: Taught courses addressing one or more of the SDGs, 2022–23, by SDG

Source: OSDG – see Methodology, pages 4–5



Helping to achieve Target 3.8

57%

of taught courses at UCL address one or more of the SDGs

Source: OSDG – see methodology, pages 4–5.

DISCOVER MORE

Read more about these activities and other examples of how teaching at UCL is helping to achieve the Goals on the [UCL SDGs Initiative website](#).

OUR RESEARCH



Our world-class, cross-disciplinary research across UCL's 11 faculties – from Medical Sciences to Arts & Humanities – is helping to achieve all 17 of the SDGs.

Shedding light on the lives of enslaved people in Jamaica

The UCL Centre for the Study of the Legacies of British Slavery is providing opportunities to understand survival under British slavery, through transcribing and digitising handwritten registers of all enslaved people in Port Royal parish, Jamaica.

The registers chart details of enslaved women, men and children. They were produced by

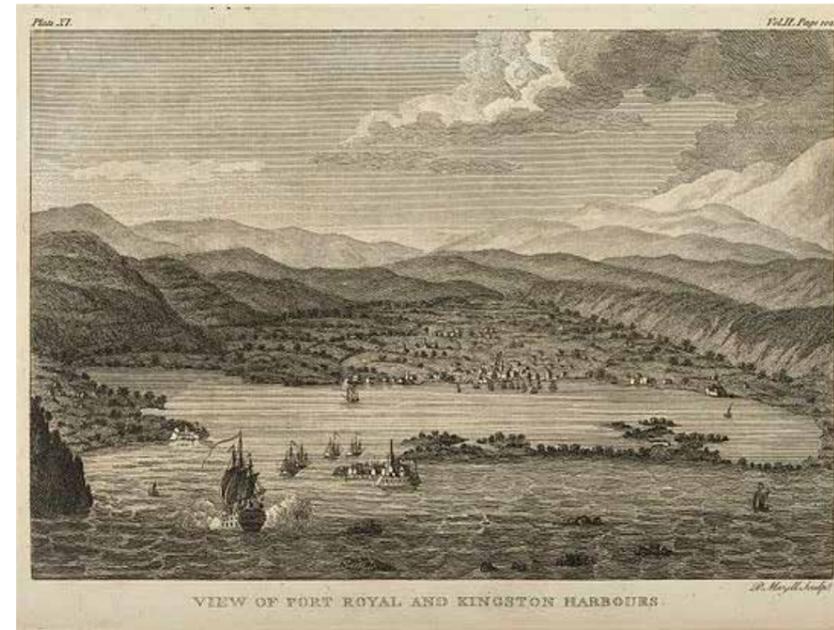
slave-owners every three years from 1817 to 1832 to help them manage the economy of their plantations.

Working in partnership with the National Library of Jamaica and National Museum Jamaica, the team is using the Port Royal registers, and data on more than 60,000 slave owners recorded in the centre's database. They are aiming to build a clearer picture of what centuries of black enslavement has meant for the communities in Port Royal who lived in and beyond

slavery.

"When people think of Port Royal, Jamaica, they often think of 'Pirates of the Caribbean'. In reality, slavery was a major part of its economy and we want to bring that perspective to life," says Professor Matthew Smith (UCL History), the centre's director.

Helping to achieve Target 10.2



"When people think of Port Royal, Jamaica, they often think of 'Pirates of the Caribbean'. In reality, slavery was a major part of its economy and we want to bring that perspective to life."

Professor Matthew Smith (UCL History)

Tackling disease transmission in Africa through equitable partnerships

A research network across Africa and the UK is changing how pneumonia, meningitis and sepsis are monitored and treated to enhance vaccination programmes and reduce infant mortality.

Vaccines help to control the spread of the microbes that cause these diseases, but getting them to the

people who need them most and putting in place other measures to reduce the spread of disease, has proved challenging.

UCL's Mucosal Pathogen Research Unit (MPRU) has developed a new programme to establish and coordinate equitable research partnerships between African centres of excellence and UK universities that are set to help reduce disease burden and address these major public health priorities for low- and middle-income African countries.



Four hubs of expertise are being developed to ensure advances in research translate into improvements in public health. To ensure people's experiences and needs are considered when developing public health policies, the MPRU is encouraging African-led partnerships with strong community involvement, helping to develop two-way dialogue between policymakers and the public.

Teams across 11 countries are: evaluating vaccine uptake and safety; developing clinical trials and feasibility studies for new and existing treatments; and investigating how people develop immunity to disease.



Creating an index of London's healthy streets

The Healthy Street Index, developed at UCL, is helping people to choose travel routes and places to live, as well as informing more sustainable town planning.

UCL experts in public health, urban planning, and environmental data science have developed city-scale indicators of how healthy streets are from the perspective of the people using them.

The Healthy Streets Index combines datasets for features such as noise, air quality, traffic, pavement space and public transport connectivity.

The team has scored every street across greater London from 0 to 100 based around the ten Healthy Streets indicators, including 'easy to cross', 'places to stop and rest' and 'people feel relaxed'.

Interactive maps show the street ratings for the whole of Greater London, with maps planned for other cities.

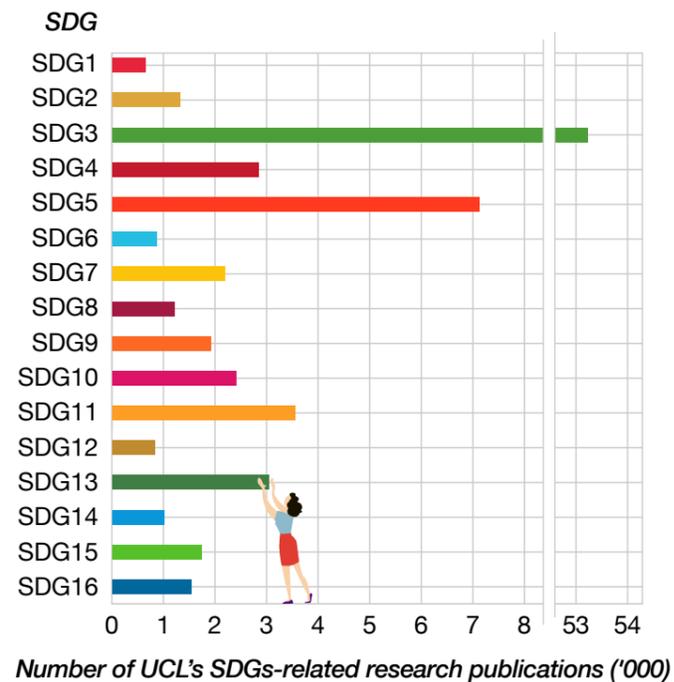
Previously, the information provided by the Index could only be obtained by spending time in an area or by consulting multiple sources of data. Now, individuals can use the accessible online index to help them choose how to travel to work and where they may want to live.

The index is also helping city planners and developers to evaluate potential development sites and improve the quality of the street environment by identifying areas that require investment.



Figure 3: Research at UCL supporting the SDGs, 2017–21

Source: Scopus and Clarivate – see Methodology, pages 4–5



THE SDGS AND ME



Dr Priti Parikh is Head of the Engineering for International Development Centre in the UCL Bartlett School of Sustainable Construction. She co-hosts UCL's podcast series *Unlocking the SDGs: A Blueprint for the Future*.

Which of the SDGs is the most important for humanity to address?

SDG6: Clean Water & Sanitation and SDG7: Affordable & Clean Energy are vital to address. Infrastructure can be used as a lever to improve health, education, livelihood creation and tackle climate change.

If there was an 18th Goal, what should it be?

Sanitation. Currently water and sanitation are combined into one goal (SDG6) but the problem is that most of the resources are targeted to water. Sanitation as a sector suffers from underinvestment.

[Read more of Dr Parikh's answers online.](#)



“To encourage and empower young people to participate in addressing the big sustainability challenges today, teachers need to be equipped to cover topics such as climate change in their teaching.”

Dr David Mitchell (Institute of Education, UCL’s Faculty of Education & Society)

New research promotes teaching for sustainability across school subjects

A project within the IOE, UCL’s Faculty of Education & Society, is developing teachers’ knowledge and skills to promote sustainability across the secondary school curriculum.

“To encourage and empower young people to participate in addressing the big sustainability challenges today, teachers need to be equipped to cover topics such

as climate change in their teaching,” explains Dr David Mitchell, who is exploring ways to address the issue. “Every school subject is relevant here, each contributing distinctively to the knowledge, skills and values needed to participate.”

To help give young people more access to knowledge relating to sustainability, a team led by Dr Mitchell devised a cross-subject approach to curriculum development, using a model developed as part of the UCL-led geography education

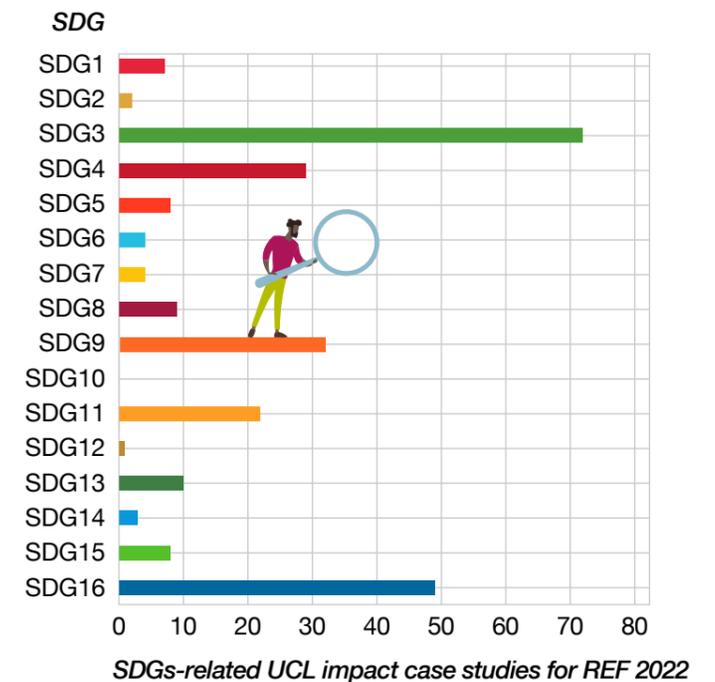
project GeoCapabilities. This approach has now been piloted with a cohort of students taking the IOE’s Postgraduate Certificate in Education across 18 subjects.

The student teachers worked both in their own subject and with colleagues in other subjects, sharing and comparing ways of teaching for sustainability. For example: those teaching religious education identified how indigenous beliefs and concepts of stewardship connected with ▶



Figure 4: Number of SDGs-related impact case studies submitted by UCL to the 2022 Research Assessment Exercise (REF)

Source: OSDG and UCL Research Impact – see Methodology, pages 4–5.



◀ environmental protection, while those teaching English considered how dystopian fiction links with teaching about climate activism.

The project feeds into UCL’s new Centre for Climate Change & Sustainability Education.



Putting children at the centre of the SDGs

Children in All Policies 2030 (CAP-2030), an initiative led by the UCL Institute for Global Health, is highlighting the need for a radical rethink on children’s health policies to mitigate increasing threats to children’s health, from climate change and the COVID-19 pandemic to the exploitative marketing of unhealthy foods and products.

CAP-2030 builds on the work of the 40 health experts who contributed to ‘A future for the world’s children?’, a report published in 2020 in partnership with the World Health Organization (WHO), UN Children’s Fund (UNICEF) and The Lancet medical journal.

Their overriding message was that children’s health and wellbeing gives meaning to the concept of sustainability, and that the perspectives and voices of young ▶

59,809

SDGs-related UCL research publications, 2017–21

Source: Scopus and Clarivate – see methodology, pages 4–5.

98%

of UCL's Impact case studies in its submission to the 2022 Research Assessment Exercise addressed one or more SDG

Source: OSDG – see Methodology, pages 4–5.

people must be heard when shaping policies to deliver the SDGs across all sectors.

To implement their recommendations, in 2021 CAP-2030 was established to develop partnerships across every continent to find innovative ways to put 'children in all policies'. Through providing evidence and data, CAP-2030 encourages policymakers to take a broad view of what children need to be healthy and well.

The initiative's activities on climate change include demonstrating its impacts on child health, and using child-led citizen science in Nepal.



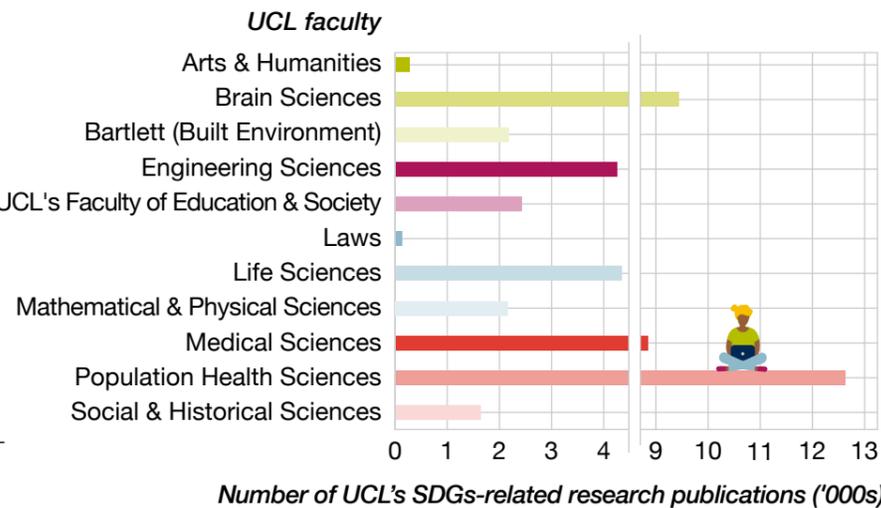
With partners in the Pacific Islands, it is also supporting Indigenous youths to find their voice as part of the environmental justice movement.

Helping to achieve Target 3.2

Helping to achieve Target 13.2

Helping to achieve Target 17.16

Figure 5: Research at UCL supporting the SDGs, 2017–21, by UCL faculty



Source: Scopus and Clarivate – see Methodology, pages 4–5

61.2%

of UCL's SDGs-related research publications are international collaborations, 2017–21

Source: Scopus and Clarivate – see methodology, pages 4–5.

23.6%

of UCL's SDGs-related publications are in the top 10% most cited for all research of similar papers in 2017–21

Source: Scopus and Clarivate – see methodology, pages 4–5.

DISCOVER MORE

Read more about these activities and other examples of how research at UCL is helping to achieve the Goals on the [UCL SDGs Initiative website](#).

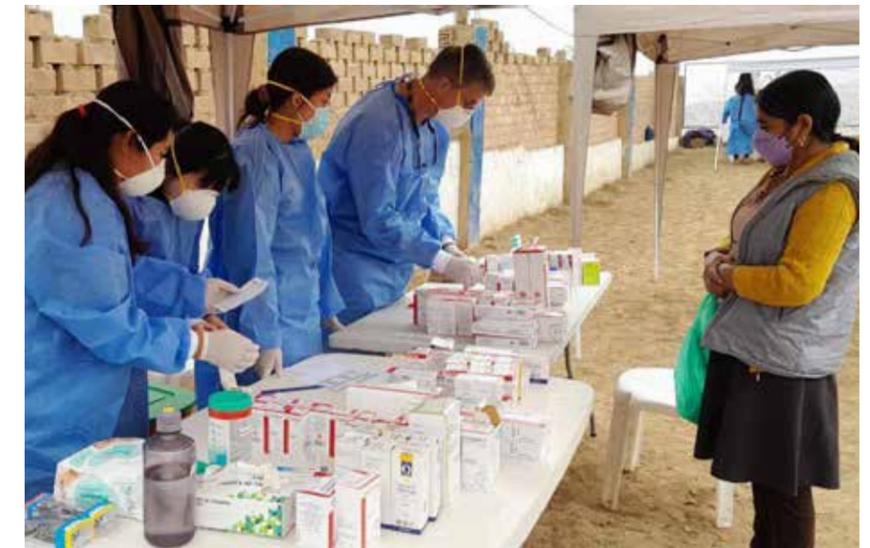
OUR STUDENTS' EXTRA-CURRICULAR ACTIVITIES



Our students are helping to address the SDGs through their wide range of student societies, volunteering projects and individual endeavours.

Providing healthcare to remote villages in Peru

In June 2022, a group of UCL students travelled to Peru for eight days to help MEDLIFE provide accessible healthcare to the country's rural communities that live on hills.



MEDLIFE is an international non-governmental organisation that partners with low-income communities in Latin America and Africa to improve their access to medicine and education, and to undertake community development projects. It encourages students to create groups at their own university and join service-learning trips to support the MEDLIFE programme.

“It stood out to me because it offered the opportunity to help low-income communities in person.”

Swee Lee (UCL Biomedical Sciences), MEDLIFE Society

“It stood out to me because it offered the opportunity to help low-income communities in person,” says Swee Lee (UCL Biomedical Sciences), who joined the UCL MEDLIFE Society as a fresher in 2019 and was one of the team in Peru.

On their trip to Peru, the students volunteered with mobile clinics that provide healthcare to remote communities, including dispensing free medicines, and supporting GP consultations and cervical cancer testing.

Because the hillside communities were so remote, the students also helped to build concrete staircases up to 50 metres high so the mobile clinics could reach the communities.

“One of the stations in the mobile clinic was focused on teaching female patients about feminine hygiene and health,” explains Swee Lee. “We discussed ovarian and cervical cancer, as well as sexually transmitted diseases. In the communities that we visited, sexual and domestic abuse were common, so we wanted to make it known to the patients when they should seek help through education.”

Helping to achieve Target 3.7

UCL students receive global fellowships to address the SDGs

Ten UCL undergraduate students have been chosen as Millennium Fellows to help achieve the SDGs.

Run by the Millennium Campus Network and United Nations Academic Impact, the Millennium Fellowship Scheme is an international leadership development programme through which undergraduate students help to further the SDGs in their communities.

Over 30,000 applicants from more than 2,400 campuses worldwide applied to join the Class of 2022–23, with 3,000 Millennium Fellows selected to take part. UCL secured the most Millennium Fellows of any UK university for the third year running – and was the only UK university with students selected in 2021–22.

The selective Fellowship is a leadership development programme

that convenes, challenges and celebrates student leadership to help achieve the Goals. As part of the application process, students propose a project they will undertake during the scheme, which runs annually from August to December.

Successful applicants form cohorts on their campus, meeting throughout their tenure to share best practice on their individual projects or to work together on larger initiatives.

Projects being undertaken by this year's cohort include: Glass2Sand, which is reducing the number of glass bottles dumped in landfill in India by crushing them into silica sand; a student-to-student text service to help UCL students feel safer walking home from campus to their accommodation in the evenings; a device to clean and sanitise pedestrian walkways around UCL's campus and the local community; and a civic-education programme aimed at high school and university students in Eastern Europe.



Redeveloping spaces to improve wellbeing

Volunteers from the UCL Open Space Redevelopment volunteering project have helped charity Thames Reach to create a new garden at one of its hostels in south London.

The charity helps vulnerable and formerly homeless people to get their lives back on track and lead fulfilling lives. A large part of its work is to make sure people engage in their wellbeing and maintain good mental health.

“Green spaces and gardens can help to improve wellbeing,” says Hsuan Chang (UCL Engineering Sciences 2), the Project Leader. “While the charity's staff try to maintain the hostels' back yards, unfortunately, a lot of the time the spaces are not ▶

Figure 6: Students addressing the SDGs through their UCL student-led volunteering projects

Students' Union UCL – see Methodology, pages 4–5.



◀ used and during the COVID-19 pandemic, some became overgrown and clients stopped using the spaces.”

The student team worked with the residents and charity staff to transform its unused back yard into a functional garden.

“Traditionally, we've always just had a bench that people can sit on and the grass area, and that was it,” explains Kelly, from Thames Reach, who worked with the student team. “The students were really ambitious in thinking about how different plants can support wellbeing, whether that's flowers that have a strong scent or having a herb garden so that clients can go



and pick fresh herbs that they can then cook with or add to a summer salad, things like that.”



THE SDGs AND ME



Summer Wyatt-Buchan (UCL Geography) was one of UCL's Millennium Fellowship Campus Directors in 2021–22, see page 18.

Which of the SDGs is the most important for humanity to address?

SDG 17: Partnerships for the Goals.

If there was an 18th Goal, what should it be?

SDG18: Clean Air.

If you could bring in one law or societal shift to help the UK address the SDGs, what would it be?

Bans on fossil fuels and supporting the fossil fuel industry. I would ask for the leaders of the most unsustainable corporations to be held accountable and face the consequences of their actions.

[Read more of Summer's answers online.](#)



Students highlight links between water and the SDGs

More than 40 members of the UCL Water, Sanitation & Hygiene (WASH) Student Society are raising awareness of SDG6: Clean Water & Sanitation.

“I joined the society because I felt that many students were not aware of the importance of clean water and sanitation,” says Zara Hamzah Sendut (UCL Political Science), the society’s president in 2021–22.

“Coming from Malaysia, I have witnessed the inequalities of water accessibility first hand – from water cuts to polluted rivers. The society’s

mission to raise awareness of these inequities was something that appealed to me.”

In February 2022, WASH society held a workshop at the London Student Sustainability Conference, which was organised by UCL in collaboration with other universities. They emphasised the importance of promoting universal access to WASH and noted its relevance to other issues including climate change, women’s rights and public health.

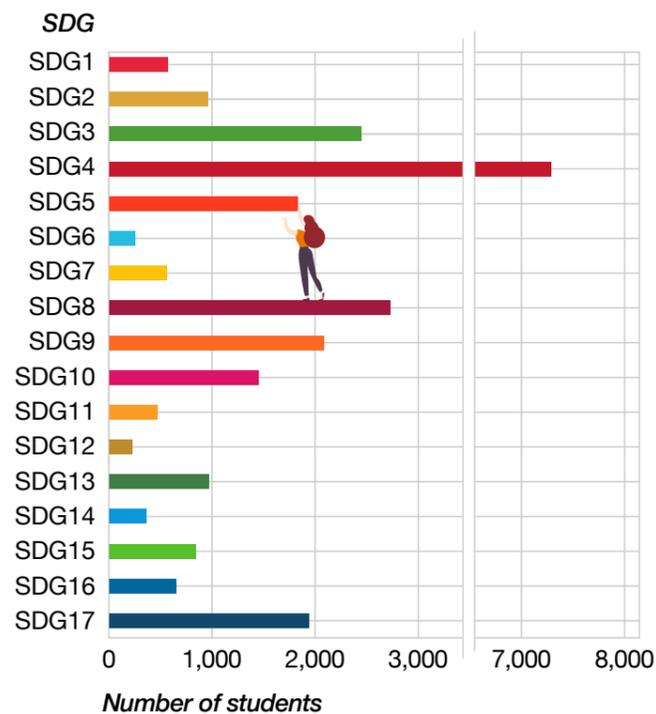
“It is easy to think that SDG6: Clean Water & Sanitation is an incredibly niche area of sustainability – but once you realise how interconnected key WASH issues are to other aspects of development, it reveals how important it is,” explains Zara.

“I wanted to be an advocate for universal access to a basic human right, which so many people around the world lack access to.”

Zara Hamzah Sendut
(UCL Political Science),
WASH President, 2021–22

Figure 7: Number of students addressing the SDGs through their UCL student societies

Source: Students’ Union UCL – see Methodology, pages 4–5.



Other society events have included a Thames river walk to raise awareness among UCL students, an event promoting Global Handwashing Day and a fundraising evening for Water Aid’s Thirst for Knowledge appeal.

Helping to achieve Target 6.1



Cleaning up the streets of Bloomsbury

During 2022, more than 40 members of the UCL Green Walkers student volunteering project took to the streets around UCL’s main campus in Bloomsbury, London, to pick up litter that blights the centre of London.

Helping to achieve Target 11.6

604

UCL students took part in SDGs-related student-led volunteering projects

Source: Scopus and Clarivate – see methodology, pages 4–5.



Volunteer project takes classical music to care homes

A quintet of student musicians performed classical music concerts for socially disadvantaged elderly people to support their health and wellbeing.

Known as UCLef, the group performed concerts for 20 residents of a One Housing Group nursing care home for disadvantaged elderly people in London. The students also held a public fundraising concert at UCL.

“Our is to share the beauty of Western classical music with those who are socially, economically and physically disadvantaged,” explains

Kaito Mizukoshi (UCL Management Science), the project’s leader. “They might not have listened to classical pieces before; therefore, this would be a great opportunity for them to encounter a whole new world – inspiring and energising their lives.”

Over the Christmas period during the COVID-19 pandemic, the project performed a remote concert for the care home. “At that time, it was still quite rare to see a streamed performance of classical music, so the whole event was something quite innovative and creative,” adds Kaito.

Helping to achieve Target 3.4

10

UCL students were selected as Millennium Fellows in 2022 – the most of any UK university

Source: Scopus and Clarivate – see methodology, pages 4–5.

DISCOVER MORE

Read more on these activities and other examples of how our students are helping to address the SDGs on the [UCL SDGs Initiative website](#).

OUR OPERATIONAL ACTIVITIES



As an institution we are working to ensure our own operations and policies are helping to address the SDGs.

Fostering research collaborations that benefit communities and students

Master's students at UCL have been working with charities and community groups to support local organisations through the Community Research Initiative for Students (CRIS).

The Students' Union UCL Volunteering Service established the scheme to improve the student experience and encourage links between UCL and local communities.

"Many students feel excited about their dissertation topic and want to do something important that goes beyond their course," explains Anne Laybourne, CRIS Manager. "We wanted to find a way to connect these students with the richly diverse and knowledgeable voluntary and community sector, to find out what new knowledge they would find

most useful and to design a mutually beneficial dissertation project to meet this need.

"CRIS helps break down walls between UCL and local communities. It offers great support and helps students to design research that helps local communities."

CRIS is helping the university contribute to positive social change through creating and disseminating new knowledge. It also helps to encourage more equitable involvement in research, ensuring that the voices and expertise of people living near UCL's campuses are heard.

"We wanted the service to function as a bridge into the university for citizen groups and local people and at the same time provide a bridge out of the university for academics and students to share their perspectives and skills," Anne adds.

"The initiative helps break down walls between UCL and local communities. It offers great support and helps students to design research that helps local communities."

**Anne Laybourne,
Community Research
Initiative for
Students Manager**

Projects include working with a voluntary group and local council to design safer, more accessible parks in Tottenham, and working with the charity Brook to help overcome the barriers young people face in accessing sexual-health services.

Helping to achieve
Target 17.17



Photo: Josephine Mizen and Ben Courtney

New UCL tool help scientists reduce their carbon footprint

A team at Sustainable UCL has worked closely with the worldwide scientific community to develop a set of tools and resources that are helping to reduce carbon emissions and plastic waste in labs.

The resulting online Laboratory Efficient Assessment Framework (LEAF) encourages scientists to consider the environmental impacts of the innovations they develop.

"Science labs can use 10 times the energy of other academic spaces, such as offices. This is in part due to energy intensive equipment such as freezers, but impacts extend beyond energy, for example, single-use plastic consumables and harmful chemicals," explains Martin Farley (Sustainable UCL), who leads the initiative.



LEAF includes a set of criteria and educational tools that help lab users to reduce their use of plastics, water, energy and other resources. These actions include reviewing their use of single-use plastics, such as gloves, containers, and pipette tips. Implementing the framework has reduced waste and improved efficiencies without negatively impacting the quality or progress of the science.

Inbuilt 'calculators' enable laboratories to measure reductions in carbon emissions and estimate the impact of their actions in financial terms. An initial two-year pilot scheme involving UCL and 22 other universities and research institutes, saved a total of £641,000 and avoided 648 tonnes of CO₂ emissions.

Since its launch in 2018, more than 1,300 labs from more than 80 institutions in 13 countries have pledged to use LEAF, making it the world's most widely used standard for sustainable laboratory operations. It has also been implemented by UKRI's Medical Research Council (MRC) and the Natural Environment Research Council (NERC), two of the UK's major research funders.

Helping to achieve
Target 12.5

Helping to achieve
Target 13.3

Capturing waste energy to heat UCL's campus

More than 40 of UCL's buildings are supplied with heat and low-carbon electricity from a District Energy Network using a Combined Heat and Power (CHP) system.

When CHP engines generate electricity, they also generate heat that is captured and used to provide heating and hot water to UCL's buildings, rather than being wasted.

"The system saves 18% of carbon emissions a year compared to conventional heating and, by decreasing the amount of electricity we need



to buy, it also helped UCL to reduce its energy costs by around £500,000 in 2020-21," says Ciaran Jebb (Sustainable UCL).

Over the next decade UCL is seeking to connect to further low-carbon waste heat sources such as sewers and the London Underground to capture more heat that would otherwise go to waste.

"The upgraded District Energy Network will be a major contributor to the university's aim to be zero carbon by 2030," says Ciaran.

Helping to achieve
Target 7.2

Helping to achieve
Target 13.3



UCL sets ambitious target to be net zero carbon by 2030

A programme of activities across UCL is helping the university achieve its goal for its building energy use to be net zero carbon by 2024 and to be a net-zero-carbon institution by 2030.

The multi-pronged effort will include changing behaviours, from reviewing whether buildings need heating/cooling 24 hours a day, seven days a week, to encouraging the use of videoconferencing to reduce the need to travel.

“There are lots of ways we can make smarter use of our buildings and equipment,” says Ciaran Jebb (Sustainable UCL). “These include reducing the need to heat and cool whole buildings by optimising or consolidating activities; buying fewer and lower-carbon products; improving controls for heating and cooling to reduce wastage; and repairing and sharing equipment.”

The university is also increasing uptake of its LEAF sustainable laboratory programme (see page 23), which provides a framework for reducing carbon emissions.

The university is also investing in zero-carbon infrastructure. It already generates 120,000kWh a year from 600m² of solar panels and has identified space for a further 3,000m² of additional panels. UCL will upgrade its district energy network (see page 23) to be zero carbon.

“Our commitment to become a zero-carbon university has brought our whole community together to innovate and test out new ideas.”

Ciaran Jebb
(Sustainable UCL)

The network generates electricity, but also captures the heat generated in the process. Rather than this being wasted, the network uses it to provide heating and hot water to UCL’s buildings. Any remaining carbon emissions would be offset using accredited ethical projects.

“Our commitment to become a zero-carbon university has brought our whole community together to innovate and test out new ideas,” adds Ciaran.

Helping to achieve **Target 13.3**



THE SDGS AND ME



Dr Michael Woodrow is a lecturer in engineering education in UCL Civil, Environmental & Geomatic Engineering.

Which of the SDGs is the most important for humanity to address?

SDG13: Climate Action. Even with the current threat of nuclear war in Eastern Europe, it is difficult to imagine a more existential threat to humanity than global climate change.

If there was an 18th Goal, what should it be?

Space. The past decade has seen incredible innovation in space travel, but this unbridled development has resulted in tonnes of space debris that could jeopardise future space travel. We need to develop a more sustainable approach to colonising space.

[Read more of Dr Woodrow’s answers online.](#)

53%

reduction in carbon from building energy use between 2018–2019 and 2021–2022

Source: Sustainable UCL.



Educating early-year children on the environment

Children in the UCL Day Nursery are receiving an early-years education in different aspects of sustainable development, from biodiversity and energy to waste and recycling.

The children enjoy weekly ‘Forest School’ sessions to give the early-year children a working understanding of their effect on their environment. They take part in activities including mini-beast hunts, tree climbing, playing ‘leaf detectives’ (identifying the trees and flora), and fat-ball making (for the bird feeders).

They also investigate how paper is made, recycling their own paper for Christmas cards. “We reflect on how much paper we use during our day,” explains Emma Rhymer (UCL Day Nursery). “We concluded that recycling paper is much better than throwing it away, but the children also began to understand that to create recycled paper still takes a lot of energy – and if they could reduce the amount of paper waste we create, it would ultimately save resources and energy.”



The children also explore the decomposition times for different materials. They discovered plastic waste remained unchanged in the time it took for the fruit and vegetable waste to break down.

Helping to achieve **Target 13.3**

Helping to achieve **Target 14.1**

100%

of UCL’s main electricity consumption is from clean renewable sources: wind, solar, hydro

Source: Sustainable UCL.

523m²

of additional biodiverse space has been added since 2019–2020

Source: Sustainable UCL.

DISCOVER MORE

Read more on these activities and other examples of how our operations are helping to address the SDGs on the [UCL SDGs Initiative website](#).

OUR EXTERNAL PARTNERSHIPS



We are working with a variety of external partners to help achieve the SDGs, including local communities – both around our campuses in London and across the world – industry, non-governmental organisations, corporate and individual donors, and local and national governments.

Improving access to nature, arts and culture to address disparities in health

A team at UCL is building on community experiences during the pandemic to find ways to improve health and wellbeing by closing the gap between the creative arts and healthcare systems.

Social prescribing – which allows healthcare providers to link people with non-clinical services to support their wellbeing – has become an important part of mental health service provision. But the COVID-19 pandemic exposed the fragility of the systems in place to support vulnerable people's health and wellbeing in this way.

Lockdown activities ranged from Facebook groups that created poetry from personal photographs

to doorstep theatre performances and online exercise classes.

“During the pandemic, community groups, social workers and link workers worked tirelessly to adapt their services and find ways to stay connected with vulnerable people on- and offline,” explains Professor Helen Chatterjee (UCL Genetics, Evolution & Environment), who led a project to evaluate these novel approaches.

“We seized the opportunity to evaluate the exciting range of activities that developed during lockdown and, in collaboration with community partners, to develop guidelines on best practice that could be used post-pandemic,” she adds.

Working with Dr Linda Thomson (UCL Arts & Sciences and UCL Biosciences) and a range

of community partners and organisations, she devised the Community COVID Project to highlight what had most helped vulnerable people during lockdown and to propose ways to make access to the arts, nature and culture, fairer and equitable for all.

More than 4,000 people with lived experience of isolation and physical and mental health challenges shared their experiences of lockdown with the project through a series of workshops, surveys and focus groups. They discussed whether they had got involved in new activities and how the experiences affected their mental health and wellbeing.

From the project findings, the team developed an evaluation framework to help cultural organisations learn from the experiences of lockdown and inform strategies to design and develop future resources and collaborations.



Photo: Josephine Mizzen and Ben Courtney

Helping to achieve Target 3.4

Helping to achieve Target 10.3

Helping to achieve Target 10.2

UCL hosts new UK sustainability hub

UCL, through its Institute for Innovation & Public Purpose (IIPP), is the host institution of the UN Sustainable Development Solutions Network (SDSN) UK Hub. The hub convenes UK universities to advance practical solutions that contribute to achieving the UN's 2030 Agenda for Sustainable Development.

Already comprising 20 organisations, the UK network is one of 50 national and regional SDSN hubs around the world.



They coordinate and mobilise SDSN member institutions to help realise the SDGs.

Since its launch at the end of January 2022, SDSN UK has begun several collaborative projects: collaborating with the UN Global Compact Network UK on the

‘Measuring Up 2.0’ report, which assesses the UK’s performance against the SDGs; improving the collection and availability of UK government data for the SDGs; exploring greater coordination of sourcing and reporting on SDG data among UK higher education institutions; and investigating the most effective internal structures to embed the SDGs within UK universities.

Helping to achieve Target 17.17



Improving access to cultural heritage through community engagement

A partnership between UCL Special Collections and the London Borough of Newham has developed a training programme for local young people interested in working in the cultural heritage sector. The borough is home to the university's UCL East campus.

“We designed the New Curators project to act as a ‘foot in the door’ for young people who hadn’t been to university or didn’t have the financial support to complete considerable amounts of voluntary work,” explains Vicky Price, Head of Outreach at UCL Special Collections.

Seven professionals from the heritage sector were brought in to develop workshops where they shared advice and wisdom on working in the heritage sector with 11 ‘New Curators’.

The online sessions covered topics such as how to use archives, what public history means, how to create an exhibition, how to speak to the public about your research and how to communicate your ideas digitally.

The trainee curators developed and staged a pop-up exhibition that explored the history of food and its production in East London, which toured nine of Newham’s public libraries.

“We designed the project to act as a ‘foot in the door’ for young people who hadn’t been to university or didn’t have the financial support to complete considerable amounts of voluntary work.”

Vicky Price (UCL Special Collections)

Helping to achieve Target 11.4

Helping to achieve Target 17.17



Mbendjele hunter-gatherers designing software for recording Ecoguard abuses and poachers in Congo-Brazzaville

Involving indigenous communities in research to support sustainable forest management

A team at UCL led by Professor Muki Haklay (UCL Geography) and Dr Jerome Lewis (UCL Anthropology) has developed the 'Extreme Citizen Science' (ECS) approach to support the application of traditional ecological knowledge to address environmental issues, such as illegal poaching or logging.

Indigenous people across the world have been custodians of their environment for thousands of years and possess an intimate and unrivalled knowledge of plant

and animal species. However, their lack of formal western education or familiarity with modern technologies often leads to them being ignored in research and decisions about their area.

"Citizen science usually means that a researcher has a question, and they ask the public to help them answer it," explains Professor Haklay. "But it can also mean that a community identifies a problem that science can help them solve – and a scientist might come to help them. The latter is what we call 'extreme' citizen science."

In collaboration with indigenous peoples, UCL's interdisciplinary ECS research group co-developed a new mobile-phone app that uses

icons to enable non-literate people to collect information. The data is then visualised on a map.

The ECS group then developed a way to deploy these digital tools to enable any community to design and conduct their own environmental research, regardless of literacy or familiarity with technology.

Sharing this knowledge with forest communities in Central Africa's Congo Basin has led to the collection of evidence against poachers and traffickers, the identification of illegal logging and animal corridors outside of protected areas, the documentation of human rights abuses, and the creation of protected community reserves.

"Participating communities have told us how empowering it is to be able to share their environmental knowledge with those that are responsible for the issues they identify," says Dr Lewis. "They value being taken seriously and want to be more involved in the local environmental management of their traditional areas."

The open-source system has been used to improve environmental management in different locations including DR Congo, Namibia, Kenya, India, Cambodia, and the Brazilian Amazon.



UCL student startup develops logistics solution to reduce carbon footprint and plastic use

A student startup supported by UCL Entrepreneurship Hub is developing environmentally friendly 'smart boxes' for the shipping industry. The startup is using a patent-pending technology and recycled plastic to reduce the carbon footprint within the supply chain.

Co-founded by student James Della Valle (Bartlett School 2020) in 2021, BoxxDocks addresses two of the main issues of the logistics sector: the shipment of 'fresh air', which increases last-mile delivery costs and compounds the already excessive fuel consumption of delivery fleets; and the industry's adoption of single-use and virgin-based plastics.

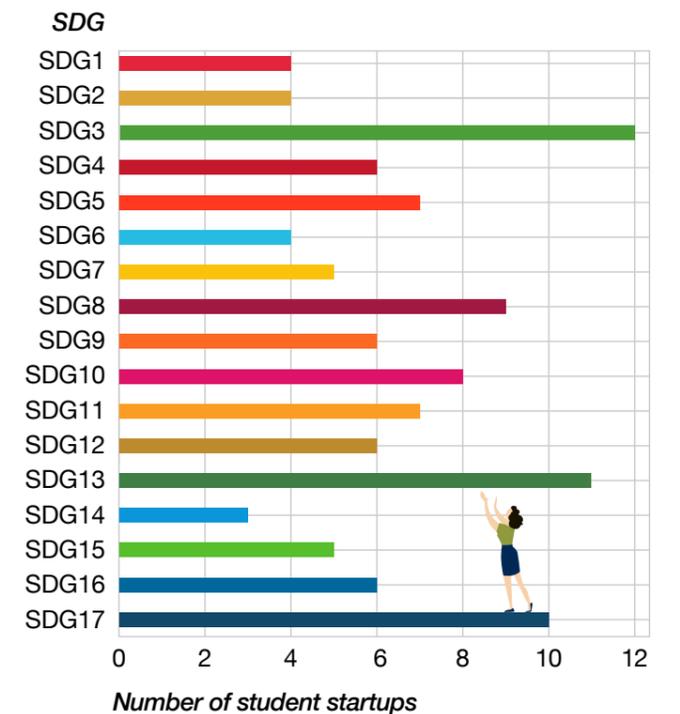
"The transport and logistics industry generates 21% of the world's carbon emissions, and the sector is still 95% dependant on oil," explains James, who co-founded BoxxDocks' with industry experts Alessandro Attanzio and Amarjit Pall.

BoxxDocks manufactures its products from recycled End of Life Vehicle (ELV) plastics, such as car bumpers, generating an 80% carbon saving in comparison to boxes made with virgin plastics.



Figure 8: UCL student startups addressing an SDG, 2021–22

Source: UCL Innovation & Enterprise – see Methodology, pages 4–5



Using artificial intelligence to optimise designs, they also use an average 20% less plastic.

BoxxDocks benefitted from The Hatchery, a dedicated space for supporting viable business startups founded by UCL students, researchers and recent graduates.

"We provide free, tailored support and dedicated office space designed to fast track the success of startups and get them ready for further investment," explains Jerry Allen, UCL Director for Entrepreneurship.





Spin-out uses artificial intelligence to help reduce emissions from the world's biggest polluters

Researchers in the UCL Bartlett School of Environment, Energy & Resources (BSEER) have developed an advanced artificial intelligence (AI) software platform that is helping to reduce carbon emissions in manufacturing plants by up to 20%.

“We create a ‘digital twin’ of the manufacturing plant using historic datasets of its physical and chemical processes,” explains Dr Aidan O’Sullivan (UCL BSEER), who is leading the research. “The software then performs complex analyses to identify points in the process where large amounts of energy are consumed.” Using this learned experience, the AI system finds solutions tailored to the individual plant.

In 2021, Dr O’Sullivan and his partners at the University of Cambridge’s Institute for Manufacturing and Canadian

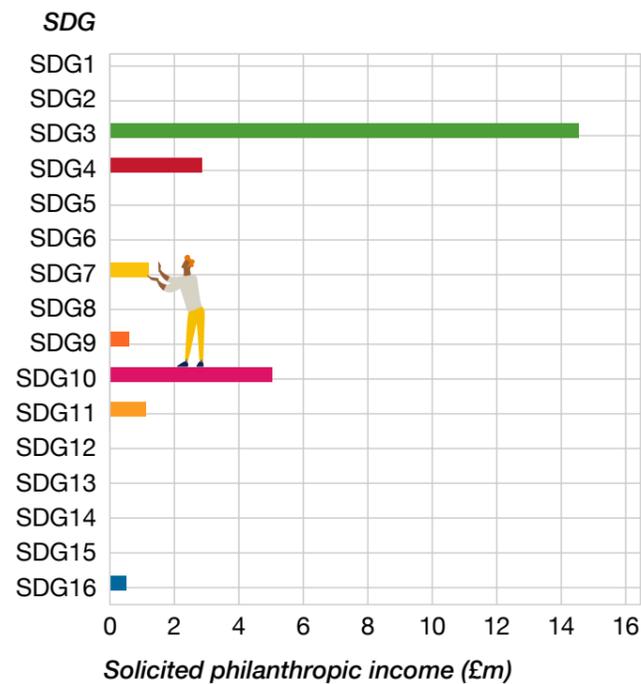


AI start-up Element AI, founded a company called Carbon Re, to market the software and help manufacturing plants use it to drastically reduce their emissions.

The spin-out was established with support from UCLB, UCL’s commercialisation company, and a £1 million investment led by the Clean Growth Fund, UCL’s Technology Fund and Cambridge Enterprise. ▶

Figure 9: Solicited philanthropic income addressing an SDG, 2021–22

Source: UCL Office of the Vice-President (Advancement) – see Methodology, pages 4–5



◀ Carbon Re is already transforming cement manufacturing and is set to help decarbonise other energy intensive industries, such as steel production, in the next two years.

Helping to achieve
Target 9.4

Helping to achieve
Target 13.3

Global student forum hosted by UCL provides generational perspective on climate action

Students at UCL were among the delegates at the U7+ Worldwide Student Forum 2021, where they proposed ways to incorporate the interests and rights of future generations into climate action, policy and planning.



The forum – Climate Change: Intergenerational Conflict or Intergenerational Alliance – was co-convened by UCL on behalf of the U7+ Alliance, in partnership with Northwestern University and the U7+ Student Leaders Board.

More than 90 student delegates from 24 U7+ partner universities across 12 countries participated in the 2021 Forum, which took place over the course of five months.

The students engaged in a wide variety of activities, including peer-to-peer discussions, skills masterclasses and academic roundtables hosted by UCL.

The students’ gave their final presentations to the U7+ Alliance’s Meeting of the Presidents in October 2021.

The U7+ Alliance, which comprises 48 universities from G7 countries and beyond, facilitates cross-regional, cross-institutional activities relating to pressing global challenges.

Helping to achieve
Target 13.2

Helping to achieve
Target 17.16

604

UCL students took part in SDGs-related student-led volunteering projects

Source: Scopus and Clarivate – see methodology, pages 4–5.

10

UCL students were selected as Millennium Fellows in 2022 – the most of any UK university

Source: Scopus and Clarivate – see methodology, pages 4–5.

THE SDGS AND ME



Monica Lakhanpaul is Professor of Integrated Community Child Health at the UCL Great Ormond Street Institute of Child Health). She co-hosts UCL’s podcast series Unlocking [the SDGs: A Blueprint for [the Future].

Which of the SDGs is the most important for humanity to address?

SDG 2: Zero Hunger.

If there was an 18th Goal, what should it be?

SDG18: No discrimination.

[Read more of Professor Lakhanpaul’s answers online.](#)

DISCOVER MORE

Read more about these activities and other examples of how UCL’s external partnerships are helping to achieve the Goals on the [UCL SDGs Initiative website](#).



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ucl.ac.uk/sdg



sdg@ucl.ac.uk



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