



UCL



UCL Sustainable Development Goals Report 2020–21

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FOREWORD

This year feels like a watershed moment for the world in our efforts to create a more sustainable and equitable future for everyone. Both the coronavirus pandemic and climate emergency are truly global challenges, with both disproportionately affecting the poorest and most marginalised people in society.

Our sector is well-placed to provide leadership in the world's efforts to address these challenges. This was demonstrated throughout the coronavirus pandemic, during which universities such as UCL provided advice to governments and spearheaded the development of life-saving treatments and vaccines.

It is incumbent upon us to do the same to address the numerous challenges framed within the UN Sustainable Development Goals (SDGs), from minimising climate change and decreases in biodiversity, to reducing social inequalities and ensuring a good education for all the world's children.

Addressing the challenges facing society was at the heart of UCL's founding mission in 1826, and we continue to bring together the brightest minds across different disciplines to tackle the pressing issues of the 21st century.

When I joined UCL in January 2021, I was pleased to find many thousands of our staff and students addressing the SDGs through their research, teaching and extra-curricular activities. Increasingly, our university's operations and policies do likewise. This report showcases a representative selection of these and there are many more on our website.



Photo: Sarah Lee

In 2020–21, we established the UCL SDGs Initiative (see right), which we hope will encourage more activity across UCL that addresses the SDGs.

However, we are acutely aware that we cannot address global problems and deliver true impact on our own. We can only achieve this, firstly by listening to others who may know more than us, and, more broadly, by providing opportunities for more and deeper local and global partnerships – with other universities, governments, policymakers, the third sector, industry and communities.

This was demonstrated by Beyond Boundaries, an event hosted by UCL in 2020. It brought together 60 speakers from around the world and attracted a global audience of thousands (see page 55).

The SDGs truly offer us a common language and framework that can unite us and our partners to deliver lasting change for people and planet. Let's keep working together to achieve this.

Dr Michael Spence,
UCL President and Provost



The UCL SDGs Initiative (SDGI) was established in 2020–21 to stimulate and facilitate more SDGs-related activities across UCL, including: across 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 will seek to highlight new opportunities for collaboration, including between these different spheres of our activity. It will help to ensure our collective effort is greater than the sum of its parts.

Find out more about the UCL SDGs Initiative

METHODOLOGY

2020–21 is the first academic year that UCL has published a report on the extent of SDGs-related activity across the university. Like many other institutions around the world, we are still exploring how we can best measure the different types of activity that are supporting the Goals, but we wanted to report on what we could measure.

This year, the first year of the UCL SDGs Initiative (see page 3), we focused on measuring our research and teaching activity that is supporting the SDGs. We are aware neither are perfect and we set out some of the caveats to our methodologies below. We will refine our approach in future years.

Going forwards, we will also seek to measure our student, operational and external engagement activity that is supporting the SDGs in the longer term.

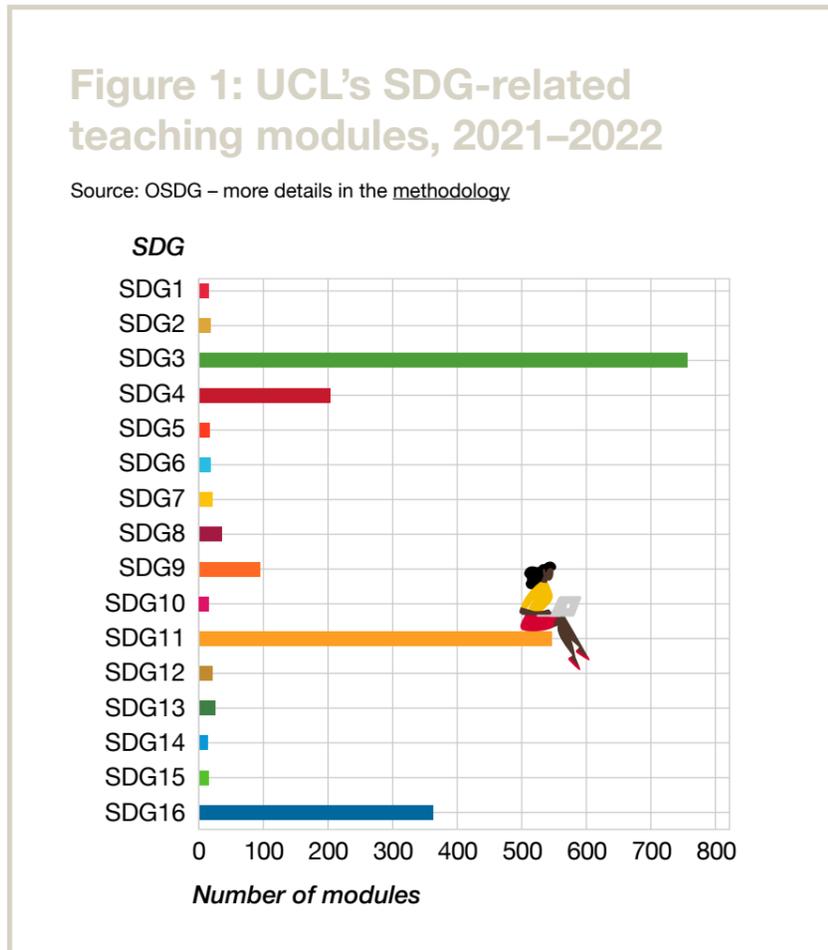
SDGs-related teaching at UCL

We classified the descriptions of the 6,113 taught modules in UCL's online catalogue by SDG using [OSDG](#), an open access tool jointly developed in partnership by the [UN 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.

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. The results are shown in Figure 1.

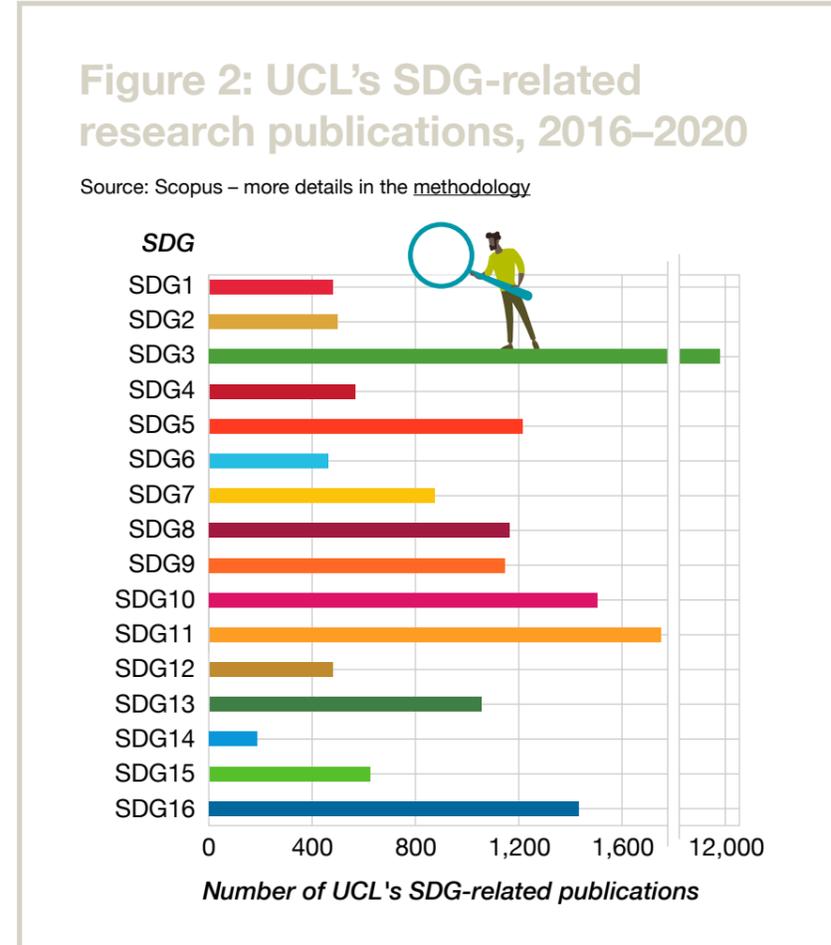
The methodology relied on module leads using SDG keywords, which many may not have done – they were unaware their description would be mapped – so the number identified is likely to be an underestimate. It also relies on a particular set of key words: as we discovered when mapping research activity (see right), very different results are generated by different sets of keywords. Finally, longer module descriptions have higher chances of being identified as relevant simply because they tend to utilise a larger vocabulary.



SDGs-related research at UCL

Like many other universities, we mapped the extent of UCL research activity related to each SDG by analysing the number of UCL-affiliated research publications matched to two sets of SDG-related keywords.

One set of SDG keywords was developed and validated by [Elsevier](#). These are used in its SciVal product and by Times Higher Education (THE) to generate research publication lists for its Impact Rankings.



A different set of SDG keywords has been compiled by the [Sustainable Development Solutions Network \(SDSN\)](#).

Both sets have limitations. The Elsevier keywords are conservative, generating relatively small publications lists with high confidence of SDG relevance. It may miss publications related to an SDG that do not match the specific keywords. The SDSN keywords are less restrictive, and so are likely to result in more false positives

(matches to SDGs for papers that are not directly related to that SDG). For example, the SDSN keywords for SDG1 include 'Class', which returns research papers on class-based economic systems (as would be relevant for SDG1). But it also returns papers where class is used to classify objects or processes across many areas of research including physics, biology and many other contexts unrelated to SDG1 or poverty. For the purposes of this report we used the Elsevier keywords, in line with THE.

To be included, a paper had to be present in Scopus. We then categorised them by UCL faculty using UCL's internal publications database using DOIs. A paper was counted once per faculty (even if it had multiple authors within a faculty). Figure 2 shows the numbers of SDG-related publications by UCL faculty.

Top 10% most cited and international research collaborations

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, reviews, etc). International research collaborations were measured by the percentage of publications with at least one co-author from a country outside the UK.

In both cases, publications were sourced by searching Scopus with Elsevier's SDG search strings; these publications were then imported into Clarivate's InCites to generate the citation metrics. About 12% of the Scopus publications were not included in the InCites analysis because InCites covers different source material.

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.

1 NO POVERTY



End poverty in all its forms everywhere



The impact of financial hardship on food security in the UK

UCL researchers worked with The Trussell Trust, the UK's biggest Food Aid provider, to explore the use of food banks in the UK and the impact on the diet and health of those people needing to use them. The cross-disciplinary team investigated the causes and factors affecting food insecurity, and the impact of financial hardship on people's health and wellbeing. In 2015–16, the Trust distributed 1.1 million emergency food parcels and this number increased by 74% in the five years to 2020–21.

This work was timely because the COVID-19 pandemic has seen a fivefold to tenfold increase in food bank attendance following increased unemployment. It helps to inform how we might address the problem of acute severe food insecurity, which was experienced by many people for the first time ever in 2020.

Helping to achieve Target 1.1

Helping to achieve Target 2.1

UCL report recommends new approach for addressing structural inequalities in the UK

A UCL report showed that people are facing multiple levels of disadvantage and proposed that the UK government needed to take a new approach to solve social inequalities.

In 2019, a partnership between UCL's Grand Challenge of Justice & Equality, UCL Public Policy and the Resolution Foundation think tank, brought together organisations from across academia, business, government, policy and the third sector to develop an intersectional understanding of inequalities in the UK and explore how policy can more effectively address structural inequalities.

'Exploring Inequalities: Igniting research to better inform UK policy', sought to understand the complex, interlinking factors such as education, access to opportunity and regional differences. The project's final report, 'Structurally Unsound' showed that certain groups face multiple levels of disadvantage,

"The issues driving inequality must be understood as complex and interlinked."

Siobhan Morris (UCL Grand Challenge of Justice & Equality)

with structural inequalities emerging before birth and accumulating during a person's life. "The issues driving inequality must be understood as complex and interlinked," says report lead author Siobhan Morris (UCL Grand Challenge of Justice & Equality).

Helping to achieve Target 1.3

Helping to achieve Target 10.3



Are Tanzania's wildlife management areas alleviating poverty?

Anthropologists at UCL are exploring the impacts of Tanzania's community-based schemes to manage natural resources on the people they are designed to benefit.

Professor Katherine Homewood (UCL Anthropology) leads the Poverty and Ecosystem Services Impacts of Tanzania's Wildlife Management Areas (WMAs) study, which is evaluating the impacts of WMAs on local peoples' lives and livelihoods.

WMAs are communal land areas set aside as habitats for wildlife, which are designed to bring economic benefits while protecting habitats and ecosystem services including biodiversity.

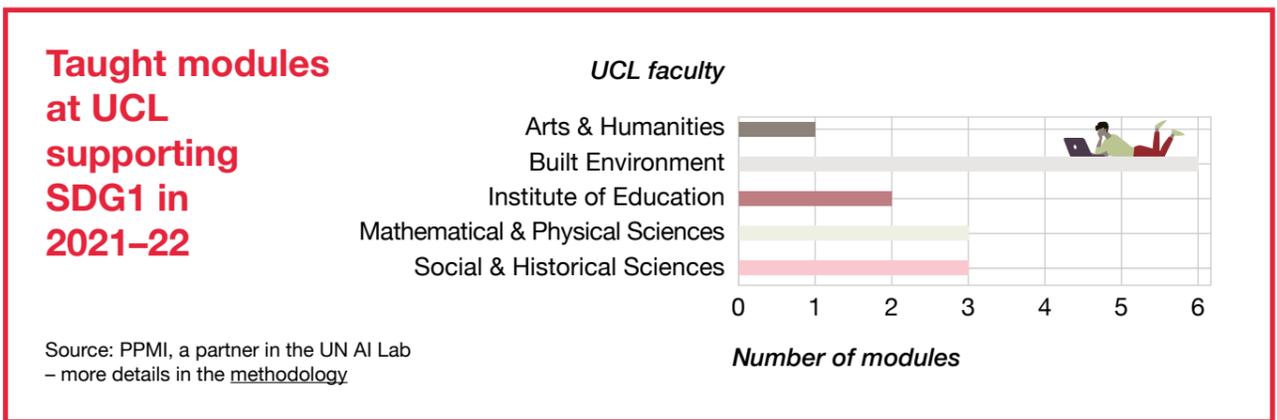
"However, while this is how Wildlife Management Areas in Tanzania are presented, many observers see



them as a way of commercialising natural resources formerly supporting local livelihoods," explains Professor Homewood. "While the rhetoric emphasises benefits to communities who exist within them, in reality communities receive only a very limited share."

Helping to achieve Target 1.1

Helping to achieve Target 2.1



1,264

SDG1-related policy citations in 2016–20

Source: Overton – see methodology

Accounting for differences in the ability of households to pay

Economists at UCL argue that inequality should be considered when regulators intervene in the ability of financial institutions to provide credit.

“Current thinking among economists highlights the impact of imperfections in the credit system on the economy as it goes through periods of recession and boom. But existing models do not

consider the impact on individual household’s ability to avoid financial hardship,” explains Dr Ralph Luetticke (UCL Economics).

Depending on their financial outgoings, and whether they have savings or other assets, households vary greatly in their ability to withstand economic shocks, such as unemployment. Many have to rely on credit cards and loans.

Dr Luetticke and his departmental colleague Professor Morten Ravn wanted to develop insights to allow

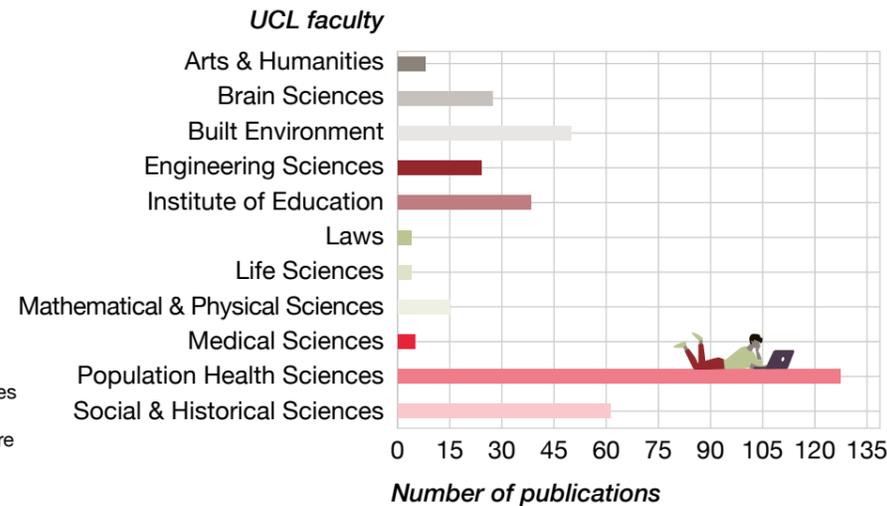
a deeper understanding of financial regulation and its interaction with inequality.

Their new model will help central banks and financial bodies sharpen their insights and develop policies that better address the trade-offs between economic volatility and individuals’ financial volatility.



Number of UCL’s research publications supporting SDG1 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



25.7%

of UCL’s SDG1-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

61.5%

of UCL’s SDG1-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG1 are on the [UCL SDGs Initiative website](#).

2 ZERO HUNGER



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

Community-led solutions help tackle child malnutrition in India

An innovative programme that combines community engagement with research across three UCL faculties is designing interventions to tackle child malnutrition in India.

A programme of participatory interdisciplinary research to tackle malnutrition has brought together schools, frontline health workers and communities in two villages in India with academics from the UCL Great Ormond Street Hospital Institute for Child Health, Institute of Education and UCL Civil, Environmental & Geomatic Engineering.

They assessed the environmental and engineering factors affecting nutrition and found that clean water, safe sanitation systems, clean kitchen utensils and availability of soap have a vital role to play. The collaborative team trains community champions to engage with their communities via schools and rural healthcare centres to ensure proposed interventions are acceptable to the people they are designed to help.



Exploring the impacts of agricultural expansion in Africa

Experts from UCL’s Centre for Biodiversity & Environment Research are part of Sentinel, an interdisciplinary collaboration involving 10 research teams in the UK and Africa, which is exploring the trade-offs needed to achieve ‘zero hunger’ in sub-Saharan Africa.



Photo: Barbara Adolph



Providing an accurate picture of Chinese wheat production

An award-winning UK-China partnership is improving crop monitoring across the North China Plain to increase productivity and develop sustainable agriculture.

Experts at UCL are working in partnership with colleagues at the Chinese Academy of Agricultural Sciences and China Agricultural University on the Sentinels of Wheat project to improve the efficiency of wheat production across northern China.

China is the world's largest single producer of wheat and, with a population of more than 1.2 billion, it is also one of the largest consumers. As the population of China – and the world – grows, more intensive agriculture methods are needed to ensure food security for all.

“Accurate digital monitoring of agricultural productivity is essential for both global food security and the livelihoods of low-income rural regions, but until now, monitoring

methods haven't met the challenge,” says Professor Philip Lewis (UCL Geography), the project's UK lead.

Sentinels of Wheat is combining remote sensing and ground-sourced datasets using more advanced remote sensing technologies, new satellites and advanced data-assimilation techniques. This is

enabling the team to provide more detailed and accurate information on crop growth and yields.

Helping to achieve Target 2.3

Redistributing surplus meals to tackle food poverty in London

Teams of students have redistributed more than 3,000 meals that would otherwise have gone to waste from UCL to The Marylebone Project, a shelter for homeless women in west London, which relies on donations for food. More than 50 students registered their interest in the project's first year in 2018 and the number of volunteers has continued to grow, reaching 120 in 2020–21.



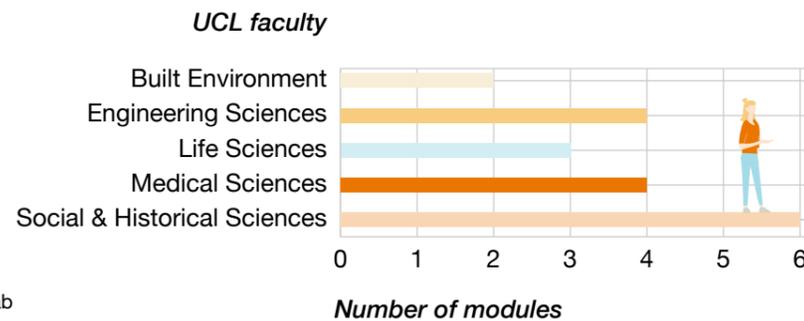
Helping to achieve Target 2.1

Helping to achieve Target 12.3

Helping to achieve Target 13.3

Taught modules at UCL supporting SDG2 in 2021–22

Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)



1,026

SDG2-related policy citations in 2016–20

Source: Overton – see [methodology](#)

Tackling rice poverty

Rice Inc, a social enterprise founded by UCL students and supported by UCL Innovation & Enterprise, is working with south-east Asian farmers to make rice sustainable and eliminate the 30% of rice that is currently wasted. It designs, manufactures, and deploys cost-effective post-harvest farming equipment to small holder rice farmers so they can move away from traditional wasteful practices.

One such technology is the biomass rice dryer, which helps farmers nearly double their income, recovering up to 30% of rice that would otherwise be wasted.

Rice supplied by Rice Inc is now offered in UCL's food outlets, so the university community can support a UCL student start-up and farmers in south-east Asia when buying lunch.

Rice Inc is currently based in the Hatchery, a dedicated start-up space within BaseKX, UCL's entrepreneurship hub in King's



Photo: Rice Inc

Cross, where it has access to free office space, event space and entrepreneurship advice to develop their company further.

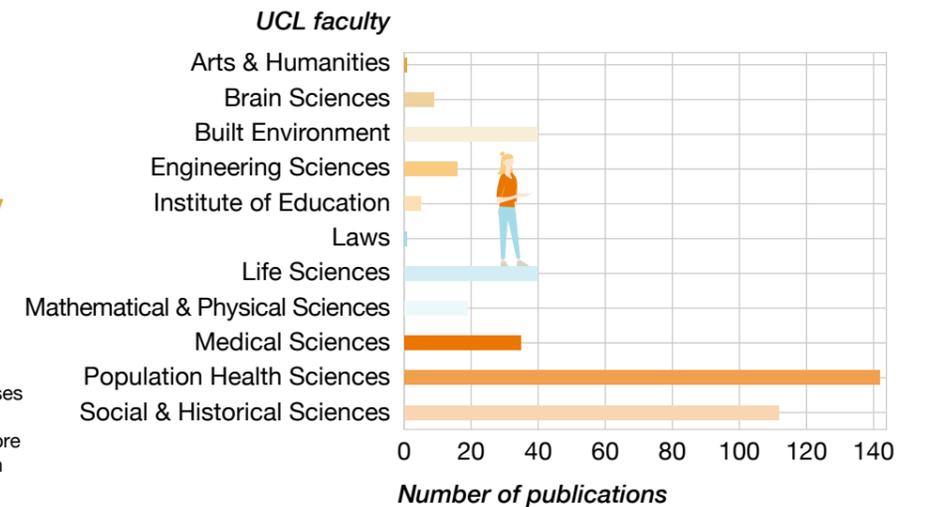
Helping to achieve Target 2.1

Helping to achieve Target 9.4

Helping to achieve Target 13.3

Number of UCL's research publications supporting SDG2 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



26.5%

of UCL's SDG2-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

76.6%

of UCL's SDG2-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG2 are on the [UCL SDGs Initiative website](#).

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



Uncovering the true extent of Parkinson's disease in Africa

UCL scientists are leading genetic studies of Parkinson's disease in Africa to raise awareness, provide equitable access to treatments and help reduce the global impact of this debilitating condition.

Parkinson's disease is the fastest-growing neurodegenerative illness worldwide. By 2040, more than 13 million people will be living with the disease – a quarter of them in Africa.

Studies have found at least 20 genes linked to an increased risk of Parkinson's in Caucasians and several promising diagnostic and therapeutic targets have been identified, but these potentially successful treatments are likely to be ineffective in patients from other racial backgrounds.



"Parkinson's disease is prevalent in all parts of the world, but few research studies have included black African and Asian populations," explains Dr Mie Rizig (UCL Queen Square Institute of Neurology).

The team has built collaborations with neurologists and healthcare organisations in Nigeria and advocacy groups such as Parkinson's Africa. As well as supporting local healthcare workers, the team is screening the genomes of hundreds of black Africans with Parkinson's for known susceptibility and disease genes.

Helping to achieve **Target 3.4**

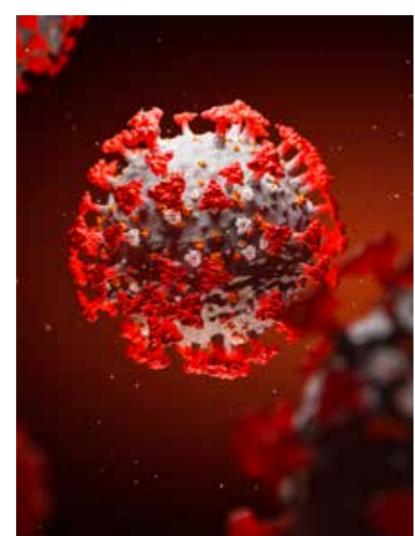
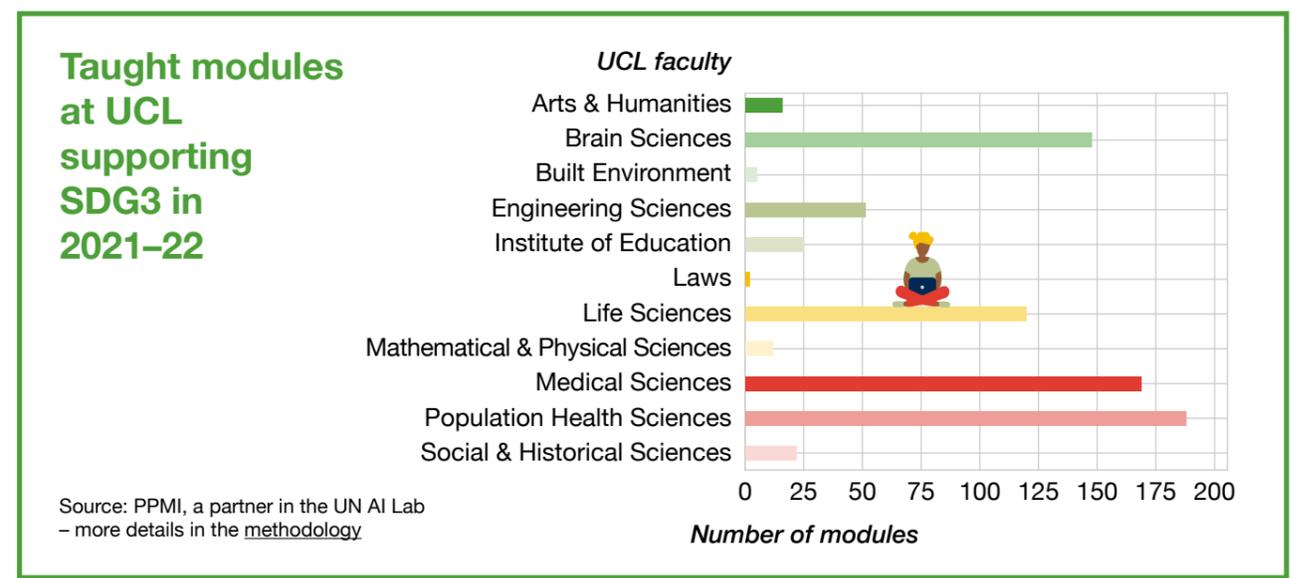
UCL students join national response to global pandemic

More than 300 UCL Medical School students were fast-tracked through graduation in April 2020, ready to be made frontline NHS doctors, joining the national effort to respond to the coronavirus pandemic.

"This is an altruistic and inspirational cohort of medical students who have answered the call and are eager to utilise their skills to help the NHS."

Professor Deborah Gill, then Director of UCL Medical School

To help support the national response during the initial height of the COVID-19 pandemic in the UK, it was decided that final-year medical students would be given the opportunity to start their training immediately after their finals and to take up the post of a Foundation Interim Year 1 doctor. ▶



◀ Professor Deborah Gill, then Director of UCL Medical School, said: "This is an altruistic and inspirational cohort of medical students who have answered the call and are eager to utilise their skills to help the NHS – we could not be any prouder."

Helping to achieve **Target 3.3**

New imaging technique radically improves prostate cancer diagnosis and treatment

A new MRI scanning technique developed by UCL scientists and clinicians using multi-parametric Magnetic Resonance Imaging (mp-MRI) allows, for the first time, specialists to identify tumours in the prostate without the need for invasive, risky and sometimes unnecessary procedures; it has transformed the diagnosis and treatment of prostate cancer, saving lives and reducing healthcare costs.

Helping to achieve **Target 3.4**



UCL experts engage public through podcasts on coronavirus

A unique UCL podcast series examined the variety of issues surrounding the COVID-19 pandemic from the perspective of the university's experts.

Coronavirus: The Whole Story explored a range of topics with a panel of academics drawn from UCL's breadth of disciplines, from intensive-care medicine and education to economics and health psychology.

In its first seven months the podcast series received more than 30,000 listens from over 50 countries.

Over 53 episodes the series tackled questions as varied as: 'How has the pandemic highlighted BAME inequalities?', 'How do we kick-start the economy?', 'What's happening in India?' and 'How do we build pandemic resilience?'.

Helping to achieve **Target 3.3**

2,292

SDG3-related policy citations in 2016–20

Source: Overton – see methodology

Medical School course encourages sustainable and healthy food choices

Teaching embedded in UCL's medical education programmes is addressing the link between sustainable and healthy living and health and disease.

The UCL Medical School's Culinary Medicine in Primary Care addresses aspects of the World Health Organisation's 'triple billion'

targets and the SDGs, which aim to support 'universal health care' delivery and promotion of health and well-being through delivery of primary care.

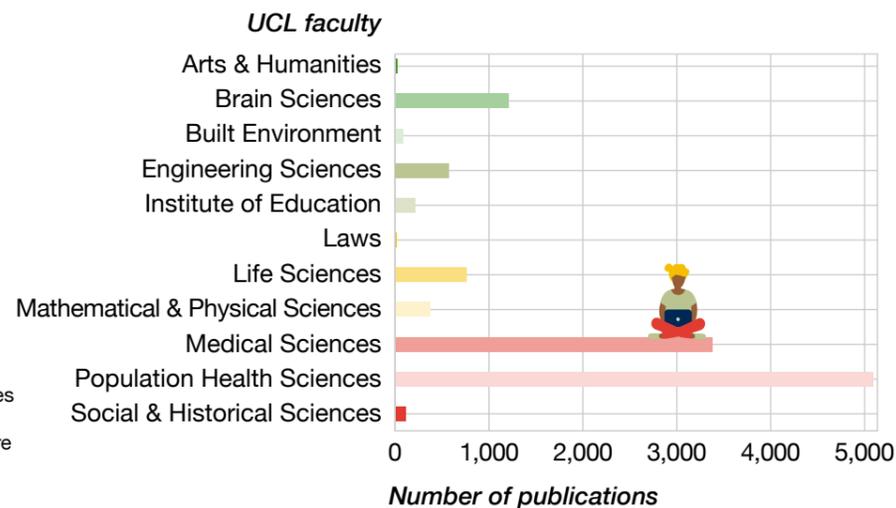
"Our teaching supports students' and their future patients' learning by providing spaces for conversations about sustainable and healthy living; considering its inter-relationship with health and disease," explains Dr Sara Thompson (UCL Primary Care & Population Health).

The course includes a one-day practical culinary medicine workshop, during which students discuss how they and their future patients can reduce the carbon footprint of their food.



Number of UCL's research publications supporting SDG3 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the SDGs Initiative website



25.4%

of UCL's SDG3-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

66.2%

of UCL's SDG3-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG3 are on the [UCL SDGs Initiative website](#).

4 QUALITY EDUCATION



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

Educating teachers in Jordan

Experts from the UCL Institute of Education (IOE), led by Professor Norbert Pachler, have been working with the Queen Rania Teacher Academy (QRTA), the University of Jordan and local Ministry of Education, to develop a nine-month initial teaching diploma.



"Our work with Jordanian colleagues has focused on co-developing an internationally recognised diploma that is strongly contextualised to Jordan and its educational system," Professor Pachler explains.

The Pre-Service Teacher Education Professional Diploma launched in 2016 and currently boasts nearly 1,500 graduates.

The IOE team continues to support the programme, helping to recruit and develop those educating the teachers, as well as selecting students. It has designed and implemented a robust quality assurance framework and advised on teaching environments, such as classrooms and facilities as well as virtual learning tools.



"Our work with Jordanian colleagues has focused on co-developing an internationally recognised diploma that is strongly contextualised to Jordan and its educational system."

MA in Development Education and Global Learning

An online UCL MA gives students the opportunity to study a range of perspectives and approaches to development education, global learning and global citizenship.

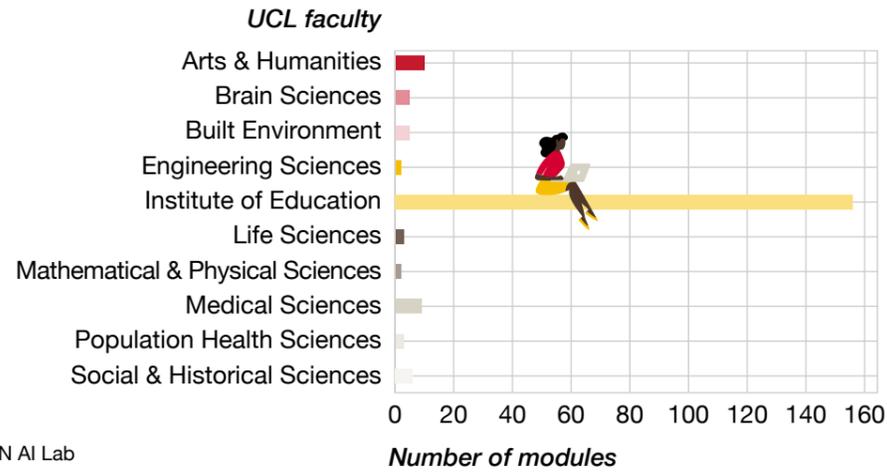
Students complement these core areas by selecting optional areas for study, including north-south educational partnerships, teaching controversial issues, and learning and working in international contexts.

"In the core areas of study, students explore the principles and practices of development education, an approach to learning that leads to a greater understanding of global inequalities," says Dr Clare Bentall (UCL Institute of Education), the programme lead.



Professor Norbert Pachler (UCL Institute of Education)

Taught modules at UCL supporting SDG4 in 2021–22



Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)

Providing access for all

UCL was founded in 1826 on the principle that everyone should be able to benefit from a university education, regardless of their religious or social background. It continues to work to maintain these principles by ensuring it is accessible to all students regardless of their socio-economic background.

Access UCL is a scheme to recruit academically bright students from groups currently under-represented at UCL. Eligible applicants will receive a contextual offer lower than the standard offer for the programme they have applied for.

It is targeted at state school students who live in an area of financial, social or economic deprivation or which has a low progression rate to higher education.

Since the scheme was established in 2019, Access UCL has enabled over 800 students to study at UCL who may not have otherwise been able to do so.

Helping to achieve Target 4.3

Art workshops for Kenyan refugee schoolchildren

A UCL artist has set up a programme of practical art workshops for schoolchildren in Kakuma Refugee Camp, Kenya. The camp is home to more than 190,000 refugees of 21 different nationalities. They include more than 90,000 primary and secondary school-aged children, who attend 26 primary schools and seven secondary schools within the camp.

Since 2015, Professor Lisa Milroy (UCL Slade School of Fine Art) has been delivering 'Hands On Art Workshops' for schoolchildren through video conference and mobile phone messaging, supported by UNHCR, the UN Refugee Agency.



"Students are encouraged to develop their imaginative thinking and creative skills through the workshops, engaging with drawing, painting, performance, object-making, writing and aspects of functional design," Professor Milroy explains.

Helping to achieve Target 4.5

Hard of hearing students get taste of university life

Students with hearing loss can experience what university life and learning are like at a UCL residential summer school.



Helping to achieve Target 4.5

690

SDG4-related policy citations in 2016–20

Source: Overton – see [methodology](#)

UCL Press

The UK's first fully open-access university press is enabling people around the globe to freely download its wide range of books and journals, many of which focus on sustainable development.

More than 200 books and a portfolio of 15 academic journals have been published by UCL Press since it was launched in 2015. Its open-access model means that people anywhere in the world can

benefit from the research published in its books and articles.

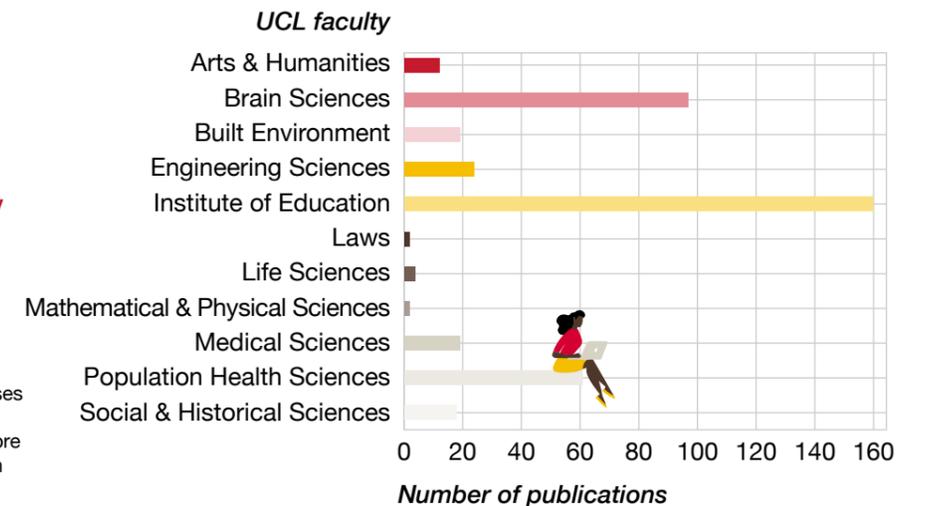
Since its launch, the books and journals published by UCL Press have been downloaded more than 5 million times in over 245 countries and territories.

Helping to achieve Target 4.7



Number of UCL's research publications supporting SDG4 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



18.8%

of UCL's SDG4-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

46.7%

of UCL's SDG4-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG4 are on the [UCL SDGs Initiative website](#).

Achieve gender equality and empower all women and girls



Photo: Simone Datzberger

Reducing period poverty

Sustainable UCL and UCL Students' Union are working together to reduce 'period poverty' by providing sustainable period products to staff and student who need them.

At the same time, the initiative is aiming to raise awareness of the pros and cons of different disposable and reusable menstrual products, including their impact on health and the environment.

"We want to allow individuals to make informed choices of which sanitary products to use and help break the taboo around periods," says Emma Shirbon (Sustainable UCL).

Project Period began in 2018, when the Women's Officer at Student's Union UCL began stocking free sanitary towels and tampons in all the female toilets in its building and for collection from its main office.



Tackling school-related gender-based violence in Africa

A collaboration between the UCL Institution of Education (IOE), UNICEF and governments in Africa has implemented policies and action plans to tackle gender-based violence in schools in Africa.

"Studies show that social inequalities, cultural norms, exclusions and stigma contribute to the prevalence of school-related gender-based violence (SRGBV) in Africa, but evidence that points to ways to tackle the problem has been lacking," says Professor Jenny Parkes (UCL IOE).

As part of the initiative, Professor Parkes established a team to collate the evidence needed to address the issue. Colleagues in the IOE worked with educational organisations and governments in Côte d'Ivoire, Ethiopia, Togo and Zambia.

The team scoped out what policies and practices were already in place to protect young people from violence at school and identify

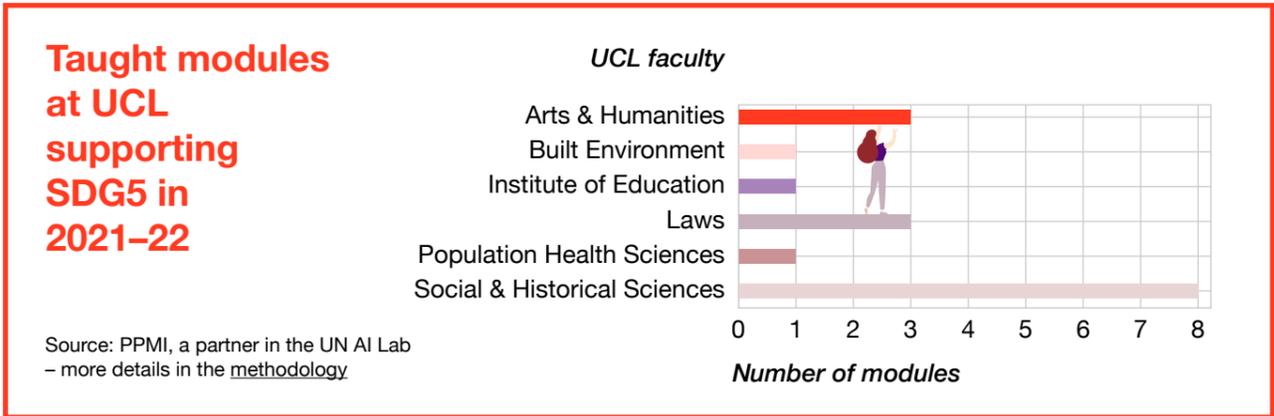
gaps, and then went on to develop a framework to strengthen national action on SRGBV.



Shining a light on child marriage

Child marriage is a global issue that extends beyond country borders, cultures and religion. It affects 14 million children every year, one-fifth of them boys.

The cross-disciplinary UCL Institute for Global Health (IGH) is home to the Global Network on Mental Health and Child Marriage. The network collaborates with partners across Africa, Asia, Europe and the Americas to reduce the burden ▶



◀ of forced and child marriage on mental health by improving policy, research and advocacy.

"Despite most countries recognising that early and forced marriage can have serious health consequences for the individuals concerned, mental health rarely makes it to any list, and if it does, responses and supports are lacking," explains Dr Rochelle Burgess (UCL IGH), who is leading the network.

In one study, network member Dr Delan Devakumar (UCL IGH) collaborated with local partners in Nepal to produce a documentary telling the stories of couples who were married young and how child marriage affected their lives physically and psychologically. The film, accompanied by facilitated discussions, has reached more than 1,800 people living in village communities in the rural plains of Nepal where child marriage is common.



Boasting more than 100 members, the society holds career and personal development events, including career panels, CV clinics and networking nights. These bring together current female leaders in professional industries and provide opportunities for its members to prepare for becoming leaders themselves.



Empowering tomorrow's leaders

Students at UCL have formed an inclusive community focusing on empowerment, gender equity and personal development.

The UCL Leading Women Society aims to empower people of all genders and help its members strive for the careers they deserve.

UCL retains 'Silver' Athena Swan charter mark

UCL has retained its Silver Athena Swan award status for the next five years, recognising its commitment to equality.

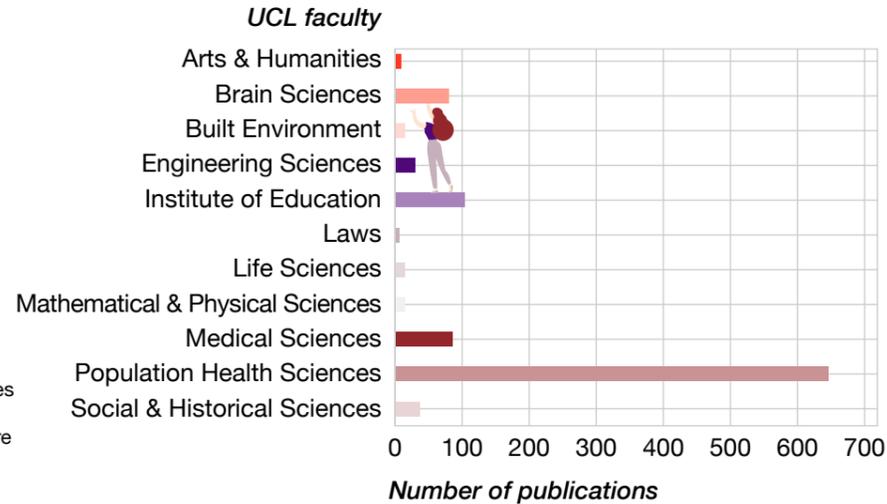
The national Athena SWAN Charter was established in 2005 to encourage and recognise a commitment to advancing the careers of women employed in higher education and research. UCL received its first institutional Silver award in 2015. ▶

648

SDG5-related policy citations in 2016–20

Source: Overton – see methodology

Number of UCL's research publications supporting SDG5 by faculty in 2016–20



Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)

“This latest award is a further indication of UCL’s founding commitment to equity and inclusion.”

Professor Sasha Roseneil, Pro-Provost (Equity & Inclusion), said: “This latest award is a further indication of UCL’s founding commitment to equity and inclusion and evidences how we are embedding best practice in all of our work.”

This year, several UCL departments were also recognised by Athena Swan; 41 now hold awards, the highest number of any UK higher education institution, including three Gold and 17 Silver.



Professor Sasha Roseneil, Pro-Provost (Equity & Inclusion)

21.7%

of UCL's SDG5-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

60.3%

of UCL's SDG5-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG5 are on the [UCL SDGs Initiative website](#).

6 CLEAN WATER AND SANITATION



Ensure access to water and sanitation for all



Photo: Calvin Ouko, University of Nairobi, Kenya

Making groundwater a safe source of drinking water in urban Africa

A multidisciplinary team of UCL researchers is working with universities, water companies and government ministries in Africa to improve and sustain access to safe drinking water.

Underlying Africa hides one of the continent’s most precious resources: groundwater flowing within aquifers underground, where researchers have estimated many countries have 100 times more water than in rivers and lakes on the surface. Yet less than 50% of rural communities in many sub-Saharan African countries have access to safe water.

“Groundwater is the most strategic and low-cost way to provide safe water to people in Africa,” explains Professor Richard Taylor (UCL Geography), who co-leads the AfriWatSan project.

The UCL team is working with its local counterparts in impoverished areas of a town (Lukaya, Uganda), city (Kisumu, Kenya) and megacity (Dakar, Senegal), to map underground aquifers, assess aquifer renewability, and

“Groundwater is the most strategic and low-cost way to provide safe water to people in Africa.”

Professor Richard Taylor (UCL Geography)

sustain conjunctive use of the subsurface to supply safe water and to contain faecal waste using low-cost sanitation systems and local sanitation facilities, such as pit latrines and septic tanks.

Helping to achieve Target 6.1

Helping to achieve Target 6.2

Helping to achieve Target 6.B

Reducing water waste

UCL runs an ongoing campaign to raise awareness of dripping taps to save water on campus and promote conscious water usage. Students and staff are encouraged to report drips online.



Helping to achieve Target 6.4

Improving our water efficiency on campus

An ongoing programme of construction and refurbishment to improve UCL’s buildings is providing the opportunity to consider how the university can reduce water consumption, both during building work and future operations.

UCL’s standard target for new buildings is a 40% reduction in water consumption compared to the standard industry baseline, as defined by BREEAM, the environmental assessment method for buildings. ▶



◀ New developments typically achieve this through specifying efficient sanitary fittings, as well as monitoring ongoing water usage. The UCL Student Centre uses low-flush toilets and water-efficient shower facilities, contributing to a projected 55% reduction in water consumption.

Where practical, UCL's buildings also reduce the potable water supply with rainwater harvesting and greywater recycling.

Helping to achieve Target 6.4

Investing in sanitation to help reach the SDGs

A cross-disciplinary team at UCL has linked the need for safe sanitation to all 17 SDGs, demonstrating the far-reaching benefits of investing in sanitation infrastructure that go beyond better health.

“More than half the world's population lack access to safely managed sanitation, and in 2017 approximately two billion people were still living without even the most basic sanitation,” explains Dr Priti Parikh, Director of the UCL Engineering for International Development Centre. “This increases morbidity rates, healthcare costs and reduces productivity.”

“In 2017 approximately two billion people were still living without even the most basic sanitation.”

Dr Priti Parikh (UCL Centre for Engineering for International Development)

To ensure everything possible is done to address this lack of basic human rights, Dr Parikh is drawing attention to the importance of sanitation infrastructure and management by reviewing its impact across all the other SDGs.

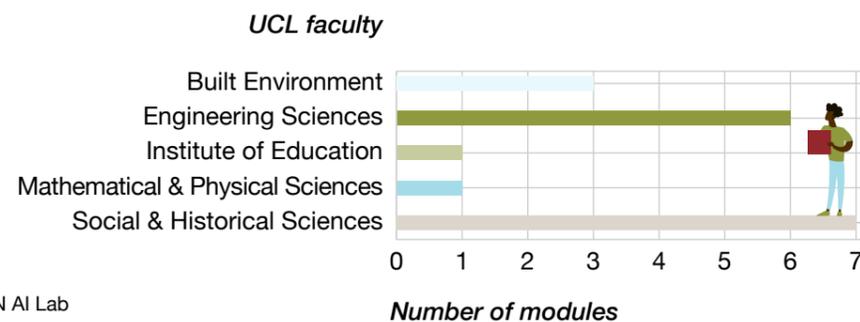
The review has identified synergies between sanitation and two thirds (130) of the 169 Targets and trade-offs for a third of them, across all 17 SDGs, demonstrating the far-reaching benefits that can be unlocked from investment in sanitation, which extend beyond health.

Dr Parikh hopes the team's approach will provide vital evidence for policymakers and practitioners to support new cross-disciplinary interventions to deliver improved sanitation for all by 2030.

Helping to achieve Target 6.2

Taught modules at UCL supporting SDG6 in 2021–22

Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)



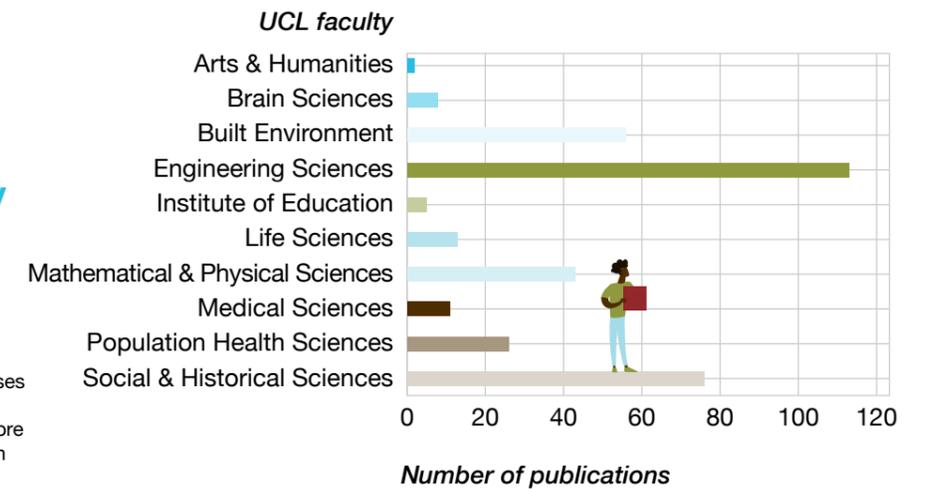
418

SDG6-related policy citations in 2016–20

Source: Overton – see [methodology](#)

Number of UCL's research publications supporting SDG6 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



Learning from nature to revolutionise water treatment

Clean water is a vital resource but one that is becoming rapidly scarce for much of the global population. The need for innovative technologies that convert seawater to drinking water or remove impurities from wastewater is becoming increasingly important.

“Designing and implementing innovative ways to purify and desalinate water is essential if we



are to conserve resources and provide drinking water for the world's growing population,” says Professor Marc-Olivier Coppens, Director of the UCL Centre for Nature-Inspired Engineering (CNIE).

Over time, the artificial membranes currently used in water treatment become damaged by unwanted material that accumulates on their surface.

CNIE's researchers are taking a different approach: learning from biological membranes, such as cell membranes or kidney blood vessels, to develop more efficient, durable membranes.

Helping to achieve Target 6.3

20.4%

of UCL's SDG6-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

72.8%

of UCL's SDG6-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG6 are on the [UCL SDGs Initiative website](#).

Ensure access to affordable, reliable, sustainable and modern energy



Improving the energy efficiency of UCL's buildings

UCL has set challenging targets for improving energy efficiency in its new and existing buildings, as part of its institutional commitment to being a net-zero carbon university by 2030.

The design of the newly built UCL Student Centre is based on highly efficient building fabric. The exposed concrete used in the building helps regulate the temperature by slowly absorbing and releasing heat.

The ongoing renewal and maintenance of UCL's estate is also providing opportunities to embrace energy-saving alternatives. The university has insulated roofs, replaced boilers with more efficient models, installed double-glazing and replaced inefficient lighting with new LED technology in several larger buildings.

UCL has also connected its room booking system with the heating control system to ensure rooms are only heated when they are in use.

Where feasible, UCL is also incorporating on-site low- or zero-carbon energy technologies such as solar panels and heat pumps across its campus, reducing its use of carbon-generating sources.



How environmental policies interacts with international trade

A research-led, interactive module in UCL Laws equips students with advanced knowledge and critical understanding of the increasingly complex interaction between international trade and environmental protection.

The LLM Law and Policy of International Trade and the Environment is centred on problem-based learning and gives students the opportunity to explore 'real-world' case-studies of prominent environmental measures or principles and their relationship with World Trade Organization disciplines.

Most of the trade-environment interface examined in the module relates to climate change mitigation (for example, border carbon adjustments and promotion of climate-friendly renewable energy). It also considers other global environmental concerns, such as biodiversity conservation, fair and equitable benefit-sharing, and the fight against unsustainable fishing practices.



Generating electricity in a London community garden

A cross-disciplinary UCL team is working with the Calthorpe Community Garden in Kings Cross, London, to test the use of plant microbial fuel cells (MFCs) to produce electricity without a generator. ▶

“We aim to further develop the prototype to provide a simple way to integrate bioelectrical systems into cityscapes such as green roof areas and vertical gardens.”

Dr Luiza Campos (UCL CEGE)



◀ The prototype includes 470 individual fuel cells stacked in drawers at the back (320 units) and 150 plant MFCs at the front that help reduce the organic matter content in the diluted digestate and create a vertical garden.

“We aim to further develop the prototype to provide a simple way to integrate bioelectrical systems into cityscapes such as green roof areas and vertical gardens,” explains Dr Luiza Campos (UCL Civil, Environmental & Geomatic Engineering, CEGE).



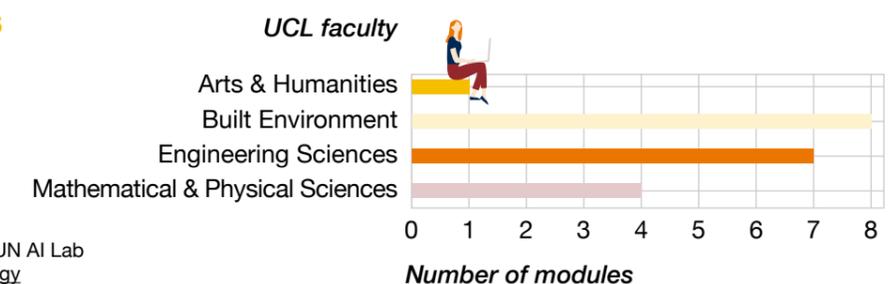
Meeting the energy needs of those living 'off-grid' in Colombia

Since 2015, Dr Julia Tomei (UCL Institute for Sustainable Resources) and colleagues have been working with universities in Colombia to understand the energy opportunities and challenges for communities living 'off-grid' in Chocó, a coastal region.

In Colombia, 98% of the population now have access to electricity. But providing access to the remaining 2% – 1.4 million people living mainly in poor rural areas – remains a challenge. ▶

Taught modules at UCL supporting SDG7 in 2021–22

Source: PPML, a partner in the UN AI Lab – more details in the [methodology](#)



646

SDG7-related policy citations in 2016–20

Source: Overton – see methodology

Typically, demand for electricity is low in these communities, which makes it difficult to attract private-sector investment. The group's studies show that if electricity is to provide the multiple development benefits on offer, it needs to be delivered as part of wider development programmes that place the needs of local communities at the centre.

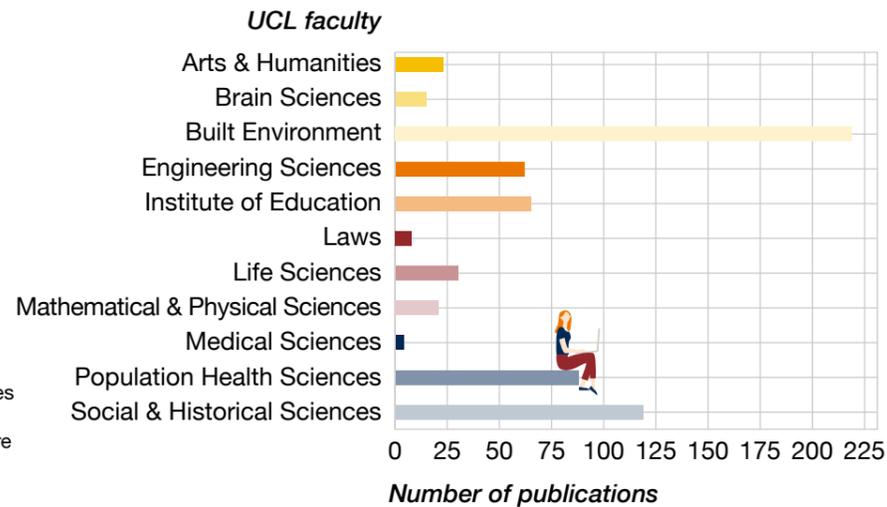
Helping to achieve Target 7.1

Harnessing the sun to power UCL

UCL has installed solar panel arrays on several of its residential and academic buildings, most recently on the Institute of Archaeology, Langton Close student residences and Student Centre (pictured), helping it to achieve its goal of having net-zero-carbon buildings by 2024 and being a net-zero-carbon institution by 2030.



Number of UCL's research publications supporting SDG7 by faculty in 2016–20



Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)

18.8%

of UCL's SDG7-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

46.7%

of UCL's SDG7-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG7 are on the [UCL SDGs Initiative website](#).

8 DECENT WORK AND ECONOMIC GROWTH



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

Combatting modern-day slavery and exploitation

UCL's Sustainability Strategy challenges the university to procure products and services that are good for people and the planet, train staff on slavery and conduct supply chain audits by 2022. More than 1,200 suppliers have signed up to an online platform that creates bespoke sustainability action plans, which include addressing slavery and exploitation in their own operations.



Helping to achieve Target 8.7

Helping to achieve Target 8.8

Helping to achieve Target 10.3

Helping to achieve Target 12.6



Encouraging students to seek careers in sustainability

Students at UCL are providing a platform to discuss the potential of the green economy and promote the possibilities of a career in sustainability.

Formed in 2010, the society's membership has rapidly increased and in 2020–21 numbered more than 100 students. It offers a platform for multidisciplinary discussion of green economy issues, with a focus on how 'green' jobs can have an impact in green finance or green consulting.

Recent events have included a panel that welcomed back former UCL students now working in sustainability, and the opportunity to hear from speakers who work in the sustainability departments of consultancies and green asset management firms.

Helping to achieve Target 8.2

Developing the first regional tax system addressing the SDGs

Green economists helped the Biscay regional government in its ambition to develop the world's first Sustainable Development Goals-oriented regional tax system.

A team from the UCL Institute for Innovation & Public Purpose (IIPP) worked with the Biscay Governor's tax team, based in Bilbao, Spain, to develop a new framework for the provincial economy and taxation system. "Our work aimed to transform the direction of economic activity in the region towards sustainable, inclusive growth, and in doing so address the SDGs," explains Kate Roll (UCL IIPP).

The project draws on several strands of IIPP's ground-breaking thought leadership and research, which is considering how the role of the state and capitalism can be rethought and how institutions might be transformed accordingly.



“Our work aimed to transform the direction of economic activity in the region towards sustainable, inclusive growth, and in doing so address the SDGs.”

Kate Roll
(UCL IIPP)

Helping to achieve
Target 8.2



◀ For example, companies in the region that are undertaking specific work to decrease their use of resources, reduce pollution, or narrow the gender pay gap, would receive tax benefits and certified recognition of their activities.

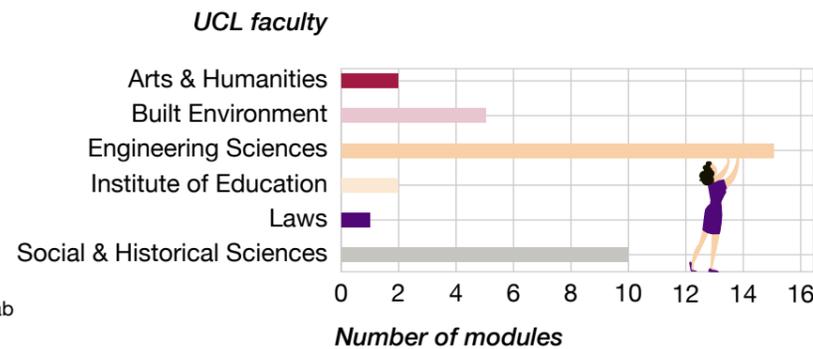
Reducing the burden of diabetes-related sight loss on India's economy

A UK-India collaboration is changing the way patients are screened for diabetes-related sight loss and helping to reduce the burden of blindness in India.

More than 70 million people in India have diabetes. A common complication of the disease is sight-threatening diabetic retinopathy (STDR), which is the main cause of blindness in working-age people in the country.▶

Taught modules at UCL supporting SDG8 in 2021-22

Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)



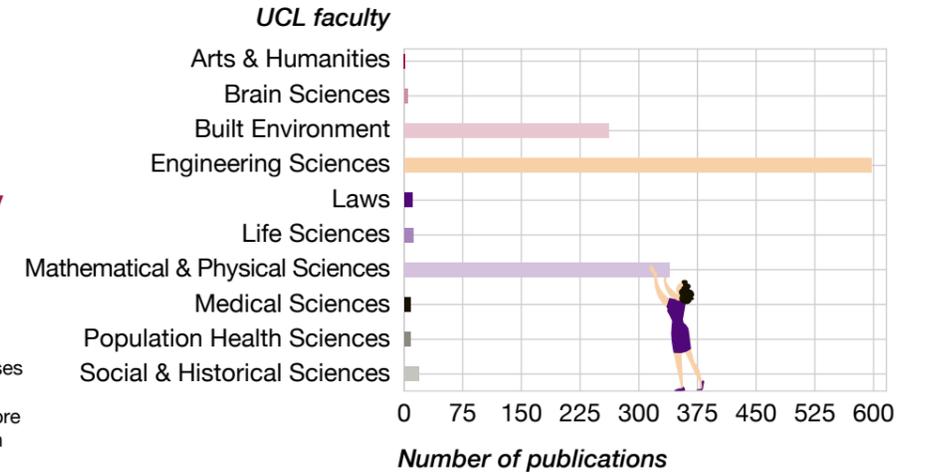
2,013

SDG8-related policy citations in 2016-20

Source: Overton – see [methodology](#)

Number of UCL's research publications supporting SDG8 by faculty in 2016-20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



◀ Nearly 80% of adults with diabetes reside in low- and middle-income countries where primary care infrastructure is in its infancy, fuelling the global challenge of managing diabetes and its complications.

“Complications of diabetes need to be identified and treated early to reduce the impact of blindness on quality of life and the nation’s

economy,” says Professor Sobha Sivaprasad (UCL Institute of Ophthalmology) and Consultant Ophthalmologist at Moorfields Eye Hospital, London.

Professor Sivaprasad is leading ORNATE India, a programme building research capacity and capability in India and the UK to tackle the global burden of diabetes-related visual impairment.

The multidisciplinary team is developing a range of strategies and methods that could change the face of diabetes-related healthcare in India.

Helping to achieve
Target 8.5

23.7%

of UCL's SDG8-related publications are in the top 10% most cited for all research of similar papers in 2016-20

Source: Scopus and Clarivate – see [methodology](#)

62.2%

of UCL's SDG8-related research publications are international collaborations, 2016-20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG8 are on the [UCL SDGs Initiative website](#).

Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

UCL spin-out Quantemol helps industries accelerate tech innovation

Specialist chemical modelling software developed at UCL is supporting innovations in technologies from spacecraft propulsion to telecommunications.

“We provide specialist software to companies whose technologies rely on complex chemical interactions taking place under exacting conditions, for example in the manufacture of silicon chips,” explains Professor Jonathan Tennyson (UCL Physics & Astronomy), chief scientist of Quantemol, the UCL spin-out he established in 2004 with Dr Daniel Brown (UCL Computer Science).

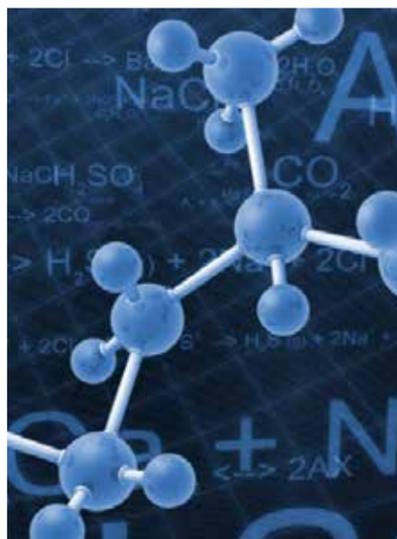
The company develops and licenses software tools that simulate what happens to atoms and molecules in their plasma phase – an unstable state that gases can reach under extreme heat or low pressure.

Informed by research at UCL, its products have been widely used by companies in the semiconductor industry. It is now helping customers in industries as diverse as medical devices and generating cheap energy through fusion.

The research is helping manufacturers gain a better understanding of quantum-level processes for molecules that are difficult to isolate and study experimentally.

“By reducing experimental trial and error, we are speeding up the innovation process, so that products reach the market more quickly,” adds Professor Tennyson.

Helping to achieve Target 9.4



Water-based technology helps fuel improvements in materials for car batteries

A ‘green’ technology developed at UCL is providing faster ways to discover new materials for more sustainable high-performance batteries that will help to increase the range of electric cars and reduce vehicle charging times.

Chemists at UCL have developed a high throughput chemical process to produce tiny metal oxide nanoparticles – a thousand times smaller than the width of a human hair. The technology can be used in several applications from batteries to healthcare products.

“Only a handful of similar hydrothermal flow process reactors like this are known in the world,” explains Professor Jawwad Darr (UCL Chemistry), Head of UCL’s Clean Materials Technology Group.

The flow reactors form nanomaterials by efficiently mixing superheated water (higher than 450 °C) with metal salts in a controlled way, without the need for toxic organic solvents. ▶

“Our environmentally friendly technology is bridging the gap between laboratory discovery and industrial-scale production to accelerate sustainable innovation.”

Professor Jawwad Darr, Head of UCL’s Clean Materials Technology Group

Helping to achieve Target 9.4



◀ “What’s different about our system is we’ve patented a special mixing design called a ‘confined jet mixer’ that prevents the reactor from getting blocked as material is generated in the process,” explains Professor Darr. “As a flow process, it can be more easily scaled up and consistently makes very well-defined particles.”

This adaptation also speeds up nanoparticle production and means new materials can be made in larger quantities, speeding up its application in industrial production. “Our environmentally friendly technology is bridging the gap between laboratory discovery and industrial-scale production to accelerate sustainable innovation,” Professor Darr says.

Putting cement under the microscope to help improve its performance

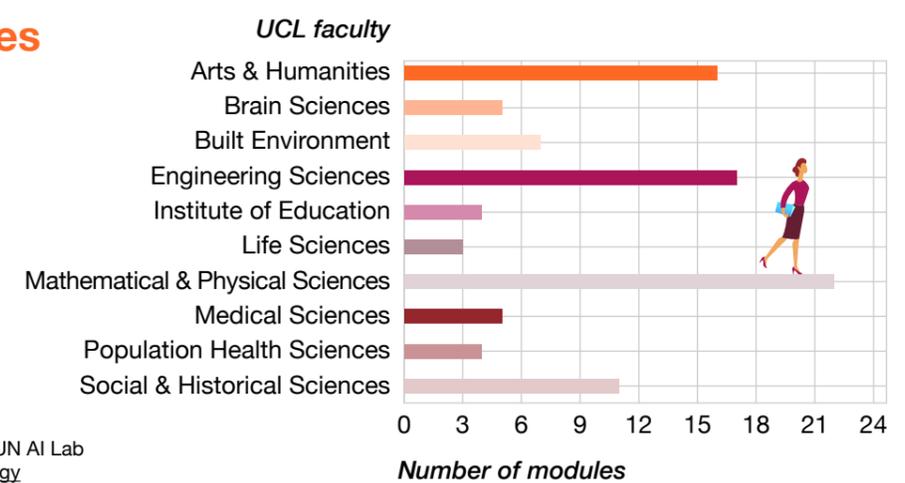
Manufacture of cement worldwide accounts for approximately eight per cent of all human-produced carbon dioxide.

By understanding and changing how crystals form in cement, scientists are finding ways to reduce the impact of concrete on the environment.

A research team at the UCL Centre for Nanotechnology is aiming to adjust the composition of cement so it can act as a carbon sink and offset some of the carbon dioxide produced during its manufacture, while maintaining its performance.

“An important component of cement manufacture called cement clinker is produced at a high temperature in a kiln,” explains Professor Ian Robinson (UCL Centre for Nanotechnology), ▶

Taught modules at UCL supporting SDG9 in 2021–22



Source: PPMI, a partner in the UN AI Lab – more details in the methodology

1,523

SDG9-related policy citations in 2016–20

Source: Overton – see methodology

◀ who is leading the research. By replacing this with appropriate amounts of industry by-products such as fly ash and granulated blast furnace slag, we are aiming to save energy and reduce CO₂ emissions.”

Using X-ray imaging, the researchers can check for irregularities and defects in the crystal structure that could affect the concrete’s performance. “If chemical reactions within the cement are suboptimal, the concrete weakens, which can end in disaster,” warns Professor Robinson. For example, adulterated

cement contributed to the widespread collapse of buildings during the 1999 earthquake in Izmit, Turkey (pictured, right).

Helping to achieve Target 9.4

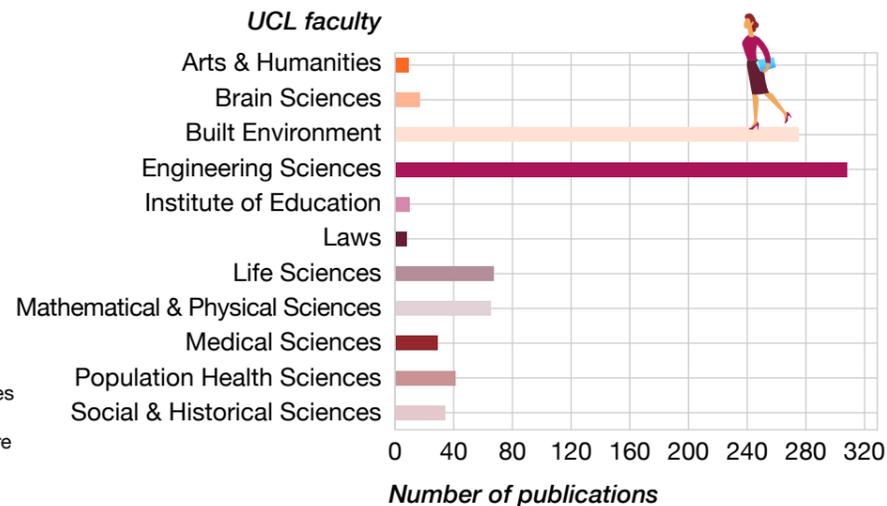
Helping to achieve Target 11.6

Helping to achieve Target 13.2



Number of UCL’s research publications supporting SDG9 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



25.9%

of UCL’s SDG9-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

56.5%

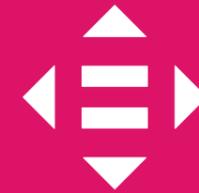
of UCL’s SDG9-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG9 are on the [UCL SDGs Initiative website](#).

10 REDUCED INEQUALITIES



Reduce inequality within and among countries



Solving everyday challenges for people with disabilities

Teams of UCL students are designing and building a variety of assistive technology equipment to improve the quality of life of people with disabilities in London.

Project Impactive is an umbrella for teams of UCL students who design and build customised equipment and accessories that increase the independence of people with disabilities across London.

Since its foundation in 2016, the project has had 30–40 volunteers each year, who have since delivered more than 20 items of bespoke assistive technology equipment. They include: a device that can activate the pedals of a piano for a wheelchair-bound person; an adapted exercise frame for someone with repetitive strain injury; and a camera holder for someone born with no fingers on her left hand (pictured).

Helping to achieve Target 10.2

Challenging racial inequality and hierarchy at UCL and beyond

The Sarah Parker Remond Centre was established at UCL in 2019 to harness expertise and experience from across the university in the critical study of race, as well as the history, theory and politics of racism and its effects.

“We want it to become a hub for radical scholarship and engaged thinking.”

Professor Paul Gilroy, Director of the UCL Sarah Parker Remond Centre

The centre focuses on the research of race and the history, theory and politics of racism. It was established in response to student-led demands for changes to the curriculum that acknowledge the colonial and imperial histories of UCL, London and the UK.

“We want it to become a hub for radical scholarship and engaged thinking, drawing in scholars, activists, policy-makers and students from across UCL, London and beyond,” says Professor Paul Gilroy, the centre’s inaugural director.

Helping to achieve Target 10.3

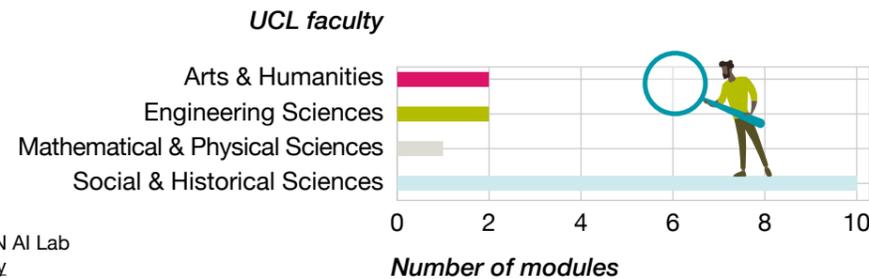
Improving access to life-changing assistive technologies

Almost a billion people around the world need assistive technology (AT). Wheelchairs, prosthetics, hearing aids, glasses and digital technologies are critical in enabling equal access to employment, education and independence for people with disabilities. ▶



Taught modules at UCL supporting SDG10 in 2021–22

Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)



◀ The UCL-based Global Disability Innovation (GDI) Hub is leading AT2030, a £20 million UK aid-funded programme to test ‘what works’ in getting access to AT for millions of people worldwide. The GDI Hub is working in partnership with UN agencies, global academic institutions and non-governmental organisations (NGOs), bringing together partners who have not traditionally worked in AT with those who have to test new ideas with users, experts and innovators.

Testing community-led, systems-focused and market-driven approaches in more than 35 countries, AT2030 is supporting innovations and entrepreneurs, field-testing solutions, influencing policymaking, and exploring new ways to deliver AT.

For example, the GDI Hub is developing a new model for wheelchair provision in Kenya in collaboration with Motivation, an NGO that aims to change the way wheelchairs are provided around the world.



Charter mark recognises UCL's commitment to race equality

UCL's ‘Bronze’ award from the national Race Equality Charter (REC) scheme was renewed in 2020 for a further five years. In 2015, it was one of just eight institutions to receive ‘Bronze’. REC provides a framework through which institutions work to identify and self-reflect on institutional and cultural barriers standing in the way of black, Asian and minority ethnic staff and students and seek to improve their representation, progression and success.



Building a more equal and inclusive society in the UK

A five-year review, commissioned by the Institute for Fiscal Studies, will build a comprehensive and coherent picture of which inequalities matter to people and why, what causes them and what we can do about them.

Members of UCL Economics joined other world-leading experts in sociology, epidemiology, political science, philosophy and economics on a panel overseeing the project.

The review aims to understand and report on the inequality of income, but also of health, gender, place and political participation. A large team of experts will look at a range of policy areas, from taxes and benefits to trade policy, education, the labour market, competition and regulation. ▶

5,698

SDG10-related policy citations in 2016–20

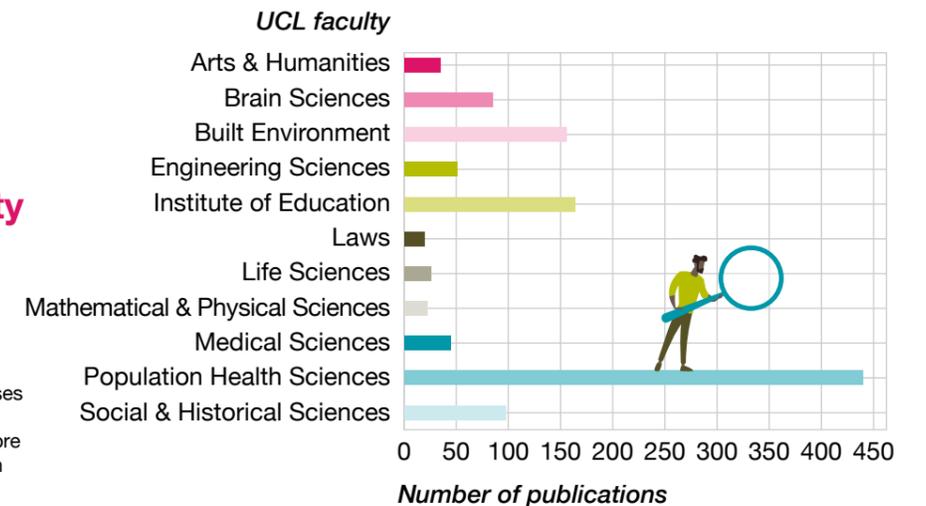
Source: Overton – see [methodology](#)

◀ “We will draw on expertise from across the social sciences to piece together what is going on and provide recommendations for policy changes to ensure everyone is better off in future,” says Professor Sir Richard Blundell, one of the UCL economists on the panel.



Number of UCL's research publications supporting SDG10 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



24.7%

of UCL's SDG10-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

52.8%

of UCL's SDG10-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG10 are on the [UCL SDGs Initiative website](#).

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



Critically challenging the directions and delivery of sustainable cities

The Bartlett School of Planning's unique MSc in Sustainable Urbanism merges the disciplines of social science and design, to produce the theoretical and technical knowledge needed to deliver sustainable cities. It tackles the key debates, theories and ideas structuring sustainable urbanism, and introduces the instruments for implementation (including planning, design and investment).

"We train students from across the globe to become practitioners able to deliver sustainable cities, in a variety of contexts," explains Professor Jo Williams (UCL Bartlett School of Planning). "We address sustainability in an interdisciplinary, comparative and applied way to deliver SDGs in cities globally."

Through inputs from leading research-led academics and sustainability practitioners, students are exposed to complex, real-life sustainability challenges. The knowledge developed from the more theoretical modules is then applied to develop strategic visions, policy documents, and technical masterplans for cities at a variety of scales, from neighbourhood to city-wide.

"We address sustainability in an interdisciplinary, comparative and applied way to deliver SDGs in cities globally."

Professor Jo Williams (UCL Bartlett School of Planning)

Helping to achieve Target 11.2

Helping to achieve Target 11.3

Helping to achieve Target 11.6

Helping to achieve Target 11.7

Supporting a new vision for Iraq's heritage and culture

A collaborative network including UCL historians is supporting a sustainable approach to heritage in post-conflict Iraq through locally led research and advocacy that retells the story.

Led by Professor Eleanor Robson (UCL History), the Nahrein Network has pioneered a new approach to research on heritage, history and the humanities in Iraq and its neighbours. ▶



◀ It has enabled people across the area to use their ideas and expertise to reinterpret the region's past as local history.

To date, the network has supported 19 projects across Iraq, Turkey and Lebanon and run successful workshops on research skills across the region. It has also funded 15 scholarship placements in the UK.

One project, led by an Iraqi artist, examines the links between traditional boat building and ancient forms. The Thesiger's Tarada project compares details of Iraq's marsh canoes (pictured opposite), gathered from oral histories and archive research, with archaeological data on similar boats from ancient times.

Helping to achieve Target 11.4



Developing sustainable and healthy cities

A UCL-led research partnership spanning four continents and drawing on expertise from multiple disciplines is helping cities to develop sustainably and to improve the health of their residents.

More than half the world's population now live in cities, and the number of people living in urban areas continues to grow, with many of the people who live in them unable to access basic necessities, from clean water to employment.

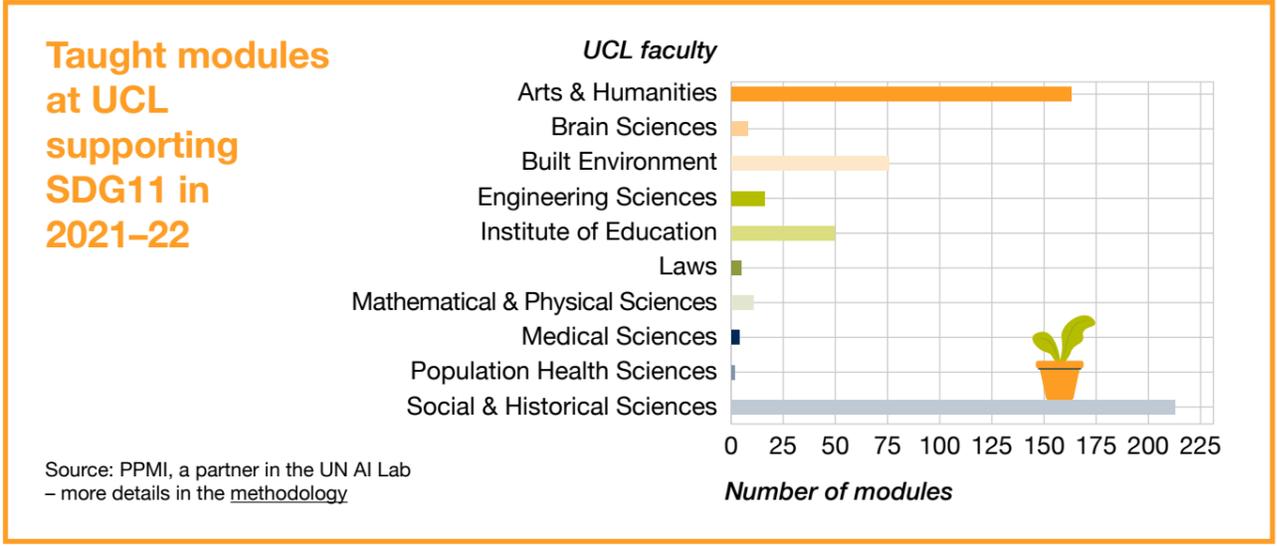
A consortium of 13 research organisations based in Africa, Asia, Europe and the United States is working to help change the way cities are designed and developed to ensure they meet the needs of their residents.

The Complex Urban Systems for Sustainability and Health consortium works in close partnership with local organisations to understand how policy decisions that will help to achieve health and sustainability goals can be improved and accelerated.

Its research is focused in six cities: London (UK), Rennes (France), Kisumu and Nairobi (Kenya), and Beijing and Ningbo (China).

Evidence gathered from research reviews, data analysis and modelling will develop specific solutions and help inform local policy and practices based on principles of sustainable development.

Helping to achieve Target 11.1



1,881

SDG11-related policy citations in 2016–20

Source: Overton – see methodology



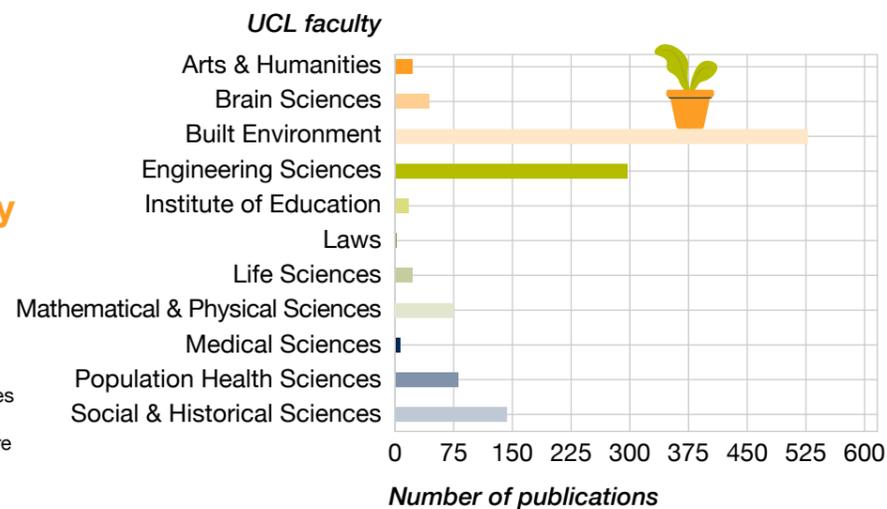
Making crisis communications available for all

An online citizen translation tool developed in partnership with the New Zealand Red Cross is helping people at risk in an emergency access the information they need.

Helping to achieve Target 11.B

Number of UCL's research publications supporting SDG11 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



23.4%

of UCL's SDG11-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

53.3%

of UCL's SDG11-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG11 are on the [UCL SDGs Initiative website](#).

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Ensure sustainable consumption and production patterns



Composting plastics to tackle waste

The Big Compost Experiment – led by UCL's Plastic Waste Innovation Hub – is using 'citizen scientists' to find out what the UK public think of biodegradable and compostable plastics, and whether the products live up to their name.

The hub is a multidisciplinary team of UCL scientists, engineers, designers and social scientists, who are taking design-led approaches to creating and testing new interventions to eliminate plastic waste.

The team designed an online survey and a simple home-based experiment to see how long packaging labelled as 'biodegradable' and 'compostable' takes to degrade in a household composter. The survey has elicited almost 10,000 responses to date with more than 2,700 people setting their own composting experiment, with data feeding into a live map of home-composting activities across the UK.

Helping to achieve Target 12.5

Improving designs to reduce plastic waste

A multidisciplinary UCL team is seeking to 'design out' plastic waste by devising innovative new ways to reuse, recycle or compost plastic.

The group, led by the Professor Mark Miodownik (UCL Institute of Making), includes a wide range of UCL experts, from biochemical engineers and chemists to psychologists, economists and sustainability researchers.

“Each design failure affects and compromises the whole system, leading to leakage of plastic into the environment.”

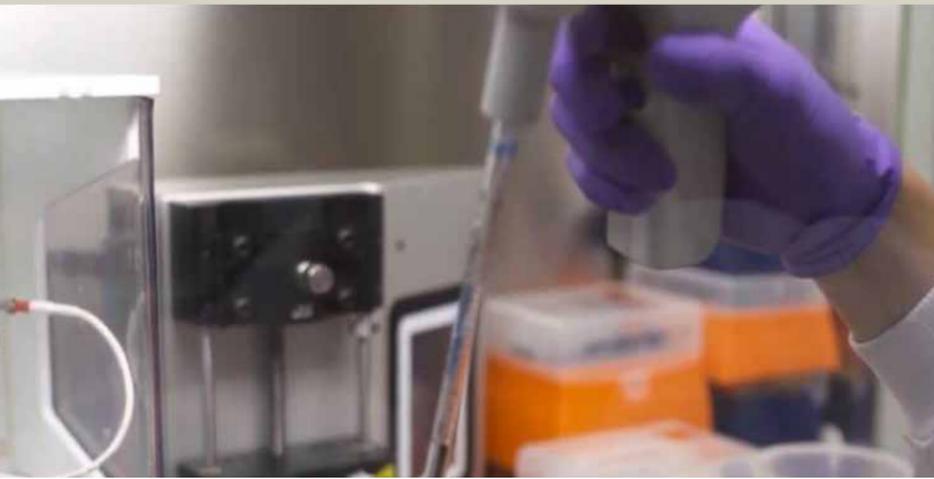
Professor Mark Miodownik (UCL Institute of Making)

“We believe that waste is a failure of design,” says Professor Miodownik. “Each design failure affects and compromises the whole system, leading to leakage of plastic into the environment, and creating an economic burden on the UK.”

The project is identifying changes in design that will make it easier to recycle plastics, as well as developing novel technologies to recycle plastics that currently cannot.

“For example, plastic laminate films have been identified by the retail and manufacturing sector as fundamental to their business, but are currently problematic to recycle,” explains Professor Miodownik. “We’re hoping to develop a new bacteria-based recycling technology that will consume plastics, breaking them down into reusable material.”

Helping to achieve Target 12.5



Surplus items reused across the university

Staff redistribute thousands of items for reuse around UCL, diverting them from recycling and waste and reducing carbon emissions.

Using Warp-it, an online redistribution platform, staff can donate and claim surplus reusable items from elsewhere at the university. They include electrical items, educational resources, thousands of chairs, specialist laser equipment – and even a reed longboat made for a theatre prop.

In 2018–19, UCL staff reused more than 70,000 items, diverting more than 26 tonnes of waste from recycling and waste, and saving almost 167,000kg of carbon emissions – the equivalent of taking 53 cars off the road or planting 203 trees. The effort is contributing to UCL's target of

reducing waste per person by 20% by 2024.

The platform complements other schemes at UCL that encourage staff to reuse chemicals and research equipment, as well as swap shops and repair cafes.

Helping to achieve Target 12.5

Equipping the next generation to manage resources sustainably

UCL's MSc in Sustainable Resources: Economics, Policy & Transitions gives the next generation of policymakers, researchers, leaders of non-governmental organisations and business entrepreneurs a

Helping to achieve Target 12.2

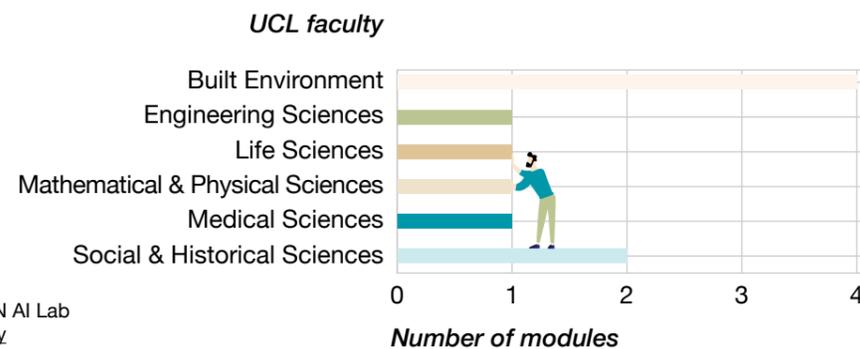
detailed understanding of the key challenges surrounding the sustainable use of the Earth's resources.

The course explores how patterns of use and consumption of resources are shaped, the role of people and governments, and approaches such as the resource nexus and the Circular Economy. The multidisciplinary programme draws on UCL experts in disciplines as diverse as economics, law, political science, development planning, engineering and the natural sciences.

As well as receiving a grounding in the concepts, challenges, policies and economics of sustainable resources, students are able to focus on topics including the impacts of climate change on hydro-ecological systems, sustainable entrepreneurship and resource governance in the Global South.

Taught modules at UCL supporting SDG12 in 2021–22

Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)



885

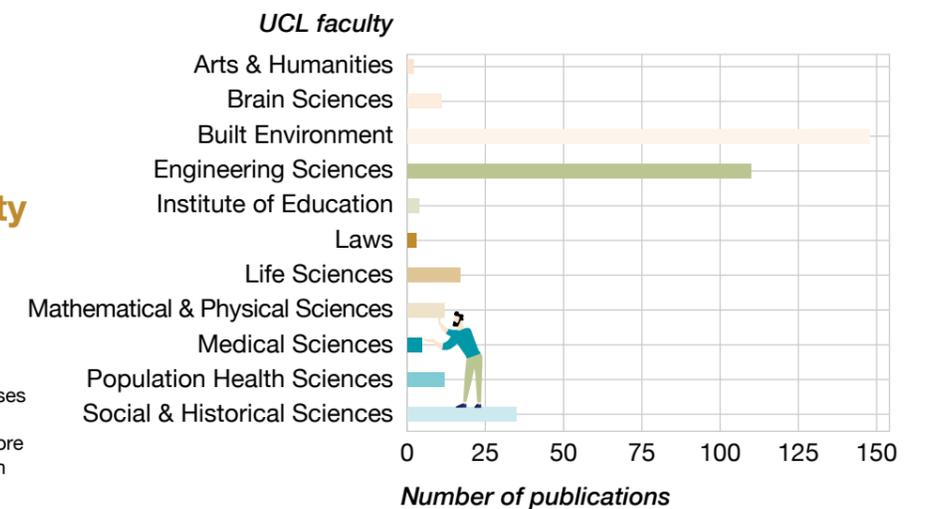
SDG12-related policy citations in 2016–20

Source: Overton – see [methodology](#)



Number of UCL's research publications supporting SDG12 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



Student reduces glass bottles going to landfill

After founding a company to address the dumping of glass bottles in New Delhi, India, a UCL student became one of the UN's 17 Young Leaders for the SDGs.

Then a 16-year-old student at The British School, New Delhi, Udit Singhal (Management Science student 2) discovered that collecting glass bottles for recycling was no longer viable for the city's army of

informal waste collectors (kabadis) because demand was dropping, they needed large storage spaces and transport costs were high.

It was this realisation that motivated Udit to found Glass2Sand, a company that prevents glass bottles being sent to landfill by crushing them into commercially valuable silica sand.

Udit was selected from more than 8,000 applications to become one of the UN's 17 Young Leaders for the SDGs, 2020–22. Convened by the

UN Secretary General's Envoy on Youth, the Young Leaders are chosen for their leadership and contribution to creating a more sustainable world.

Helping to achieve Target 11.6

Helping to achieve Target 12.5

Helping to achieve Target 17.16

25.7%

of UCL's SDG12-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

63.5%

of UCL's SDG12-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG12 are on the [UCL SDGs Initiative website](#).

Take urgent action to combat climate change and its impacts



Sessions for schoolchildren raise awareness of the climate crisis

In 2019, after discovering a non-governmental organisation that was organising climate education workshops in France, Maë Faugere (Philosophy 2019), with the help of Barbara Léger (Geography 2019), established the Climate Collage student volunteering project at UCL.

The science-based workshops help the public understand the causes and consequences of the climate emergency. Based on Intergovernmental Panel on Climate Change (IPCC) reports, the workshops explain climate change and what happens when human impact disrupts the climate.

They brought the idea back to the UCL, where student volunteers are rolling out the workshops in London schools and within UCL.

Participants in the workshops play a game with 42 cards, each representing an element, a cause and/or a consequence of climate change. Guided by a facilitator,

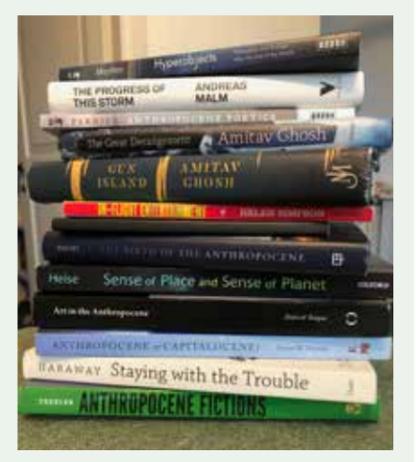
teams have to find the cause-effect relationships between the different components of climate change.

In 2019/20, the project ran workshops at schools, including Brindishe Manor Elementary School in south-east London, where 60 Year 6 students attended the sessions. The project also ran workshops on campus for more than 60 UCL students, 10 of whom were trained to facilitate future workshops.



Climate change literature

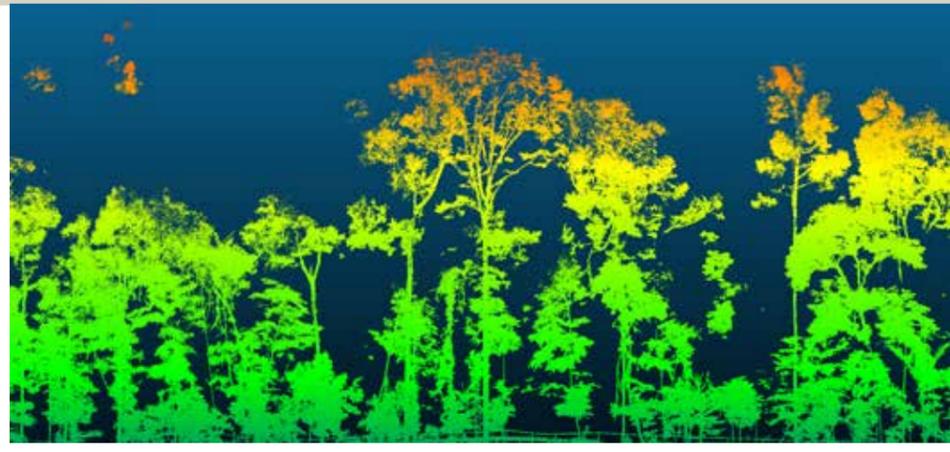
In a second-year Comparative Literature module, UCL students are examining how literature has risen to the challenge of representing global climate change and other impacts that humanity is having on the planet.



New campaign tackles the big climate questions of today and tomorrow

GenerationOne, a campaign launched by UCL in 2021, is turning science and ideas into climate action to help create a positive, fair and progressive future.

The campaign is part of the UCL Climate Hub, a website that sets out how UCL's community is addressing the climate crisis through its diverse research, teaching and operational activity. The Climate Hub also demonstrates how the university intends to be a net-zero-carbon institution by 2030. ▶



◀ The Climate Hub showcases UCL's breadth of climate change research and how it is working in partnership with policymakers, entrepreneurs and local communities on climate-related issues.

"We can't address the climate emergency with a single idea, so we are bringing together perspectives and expertise across disciplines and communities to foster the innovation needed to face the world's greatest challenge," says Professor Geraint Rees, Chair of UCL's Sustainability Steering Group.



Accurate 3D maps of forests are helping scientists assess carbon stores

A new laser scanning method that sizes up live trees in three dimensions is providing accurate measures of the world's carbon stores and highlighting the value of trees in tackling climate change.

To estimate the size of forests and the amount of carbon they can store, scientists use ground-based measures and data collected by satellites in space.

"Until now, accurate measurements have been hampered by the difficulties of assessing the mass of live trees," explains Professor Mathias Disney (UCL Geography).

Professor Disney has adapted a technology called terrestrial laser scanning to measure forests' structure and the amount of material within them capable of storing carbon.

To provide a detailed 3D 'picture' of the forest, laser pulses are directed up to a million times a second at different parts of the forest, generating detailed 3D maps with accurate information on the shape and volume of trees, branches and leaves.

This information, combined with data from space agencies, provides more detailed and accurate information on the world's carbon stocks.

Through quantifying the extent and benefits of forests, Professor Disney is helping planners and policymakers make better land management decisions to conserve and extend forests.



Taught modules at UCL supporting SDG13 in 2021-22

UCL faculty

Faculty	Number of modules
Built Environment	1
Institute of Education	2
Laws	1
Mathematical & Physical Sciences	4
Social & Historical Sciences	10

Source: PPML, a partner in the UN AI Lab – more details in the [methodology](#)

984

SDG13-related policy citations in 2016–20

Source: Overton – see methodology

Investigating connections between public health and climate change

The link between health and climate change is being explored by an international collaboration led by the UCL Institute for Global Health (IGH).

The Lancet Countdown: Tracking Progress on Health and Climate Change provides an ongoing independent assessment of the delivery of the commitments in the UN Framework Convention on Climate Change.

It brings together 43 leading academic institutions and UN agencies from every continent. It also draws on the expertise of world-class researchers from multiple disciplines within UCL.

“Climate change threatens to undermine the last 50 years of gains in public health, intensifying heat waves and extreme weather events, worsening flood and drought, altering the spread of infectious diseases, and exacerbating poverty and mental ill-health,” says Professor Anthony Costello (UCL IGH). “Crucially, our response to climate change could

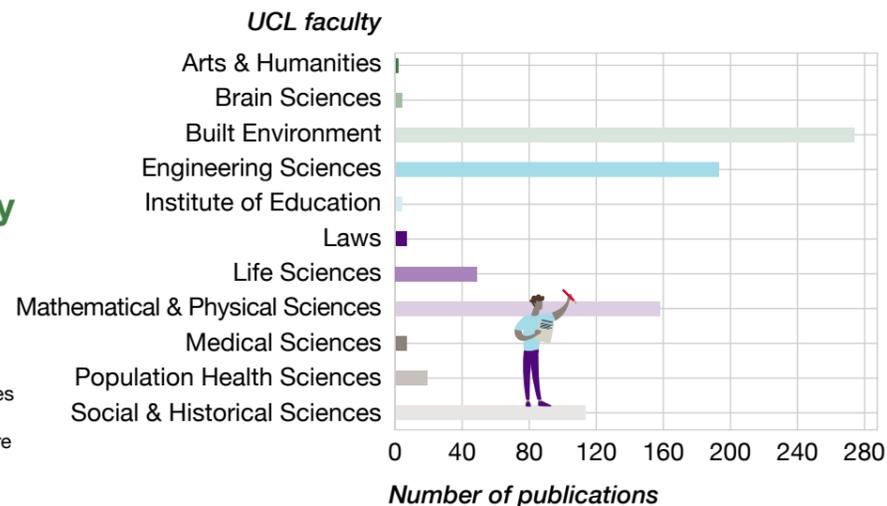
bring immense benefits for human health, with cleaner air, healthier diets, and more liveable cities.”

“We formed The Lancet Countdown on Health and Climate Change to monitor this transition from threat to opportunity and to demonstrate the benefits of realising the commitments made under the Paris Agreement,” he adds.



Number of UCL’s research publications supporting SDG13 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



30.7%

of UCL’s SDG13-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

66.1%

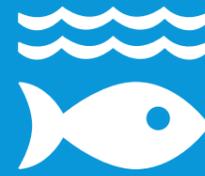
of UCL’s SDG13-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG13 are on the [UCL SDGs Initiative website](#).

14 LIFE BELOW WATER



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

Tackling the ocean’s plastic problem through engineering

UCL Faculty of Engineering Sciences asked incoming 2020–21 students to spend some of their summer before starting university taking part in the UCL Ocean Health Challenge: to devise a world-changing idea that will reduce the amount of plastics entering the world’s oceans.



By the end of August 2020, more than 250 prospective students across the faculty’s ten departments had engaged with the course.

The innovative solutions proposed included a self-recycling bin, which scans and sorts rubbish to improve rates of plastic recycling, and a beach cleaning app that rewards people for collecting waste. Other participants proposed creating alternative materials using recycled plastics for the construction industry and a machine that converts plastics into oil for reuse.



Combining use and conservation of marine resources

Research by UCL’s Marine Protected Area (MPA) Governance project informed UN Environment guidance published in 2019 on ensuring the effective and equitable management of MPAs.

The guidance focuses on achieving conservation objectives, while fairly sharing the costs and benefits through participative approaches that respect local traditions, customs and cultures.

The guidance draws on 34 case studies from 15 countries across the world, each facing different challenges, from illegal fishing targeting endangered or threatened species, to rising levels of mass tourism damaging coral reefs. ▶

“We need to combine the need for conservation with a recognition that we have to work with the local communities to fairly share the costs and benefits of human use of the areas.”

Professor Peter Jones (UCL Geography)

Promoting sustainable fishing in Greenland

Online game Tricky Trawling was among the outreach activities undertaken by UCL PhD student Stephen Long and UCL Honorary Research Fellow Chris Yesson to educate communities in Greenland about sustainable fishing, in collaboration with the Zoological Society of London.



Helping to achieve Target 14.4

“In each case, we need to combine the need for conservation with a recognition that we have to work with the local communities to fairly share the costs and benefits of human use of the areas,” adds Professor Peter Jones (UCL Geography), who is leading the project. “Rather than assuming that MPAs are set aside from use, the guidance recognises that MPAs should be seen more as vehicles for promoting their integrated and sustainable use.”

Helping to achieve Target 14.2

Helping to achieve Target 14.5

Restoring the world’s coral reefs

Researchers at UCL are part of the Mars Assisted Reef Restoration project, which is working with local communities, organisations, conservationists, scientists, governments and business to implement and support the restoration of the world’s coral reefs.

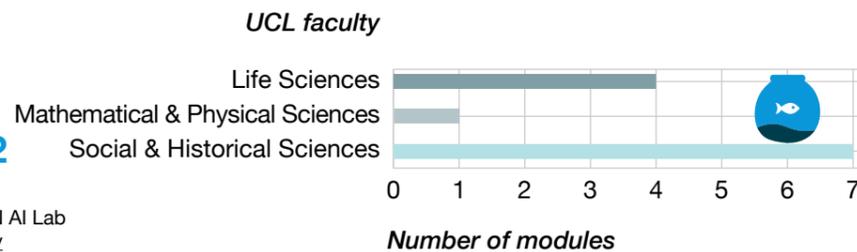
At the centre of the restoration are ‘Reef Stars’, hexagonal structures made by local communities using

locally sourced materials. The team then deploys the reef stars in extensive webs that stretch across large areas of dead coral rubble.

“These webs of Reef Stars stabilise loose rubble and provide a strong platform on which planted out coral can grow,” explains Ben Williams, (PhD UCL Centre for Biodiversity & Environment Research), who is developing acoustic sensors and using machine learning analysis to monitor the progress of the restoration. ▶

Taught modules at UCL supporting SDG14 in 2021–22

Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)



151

SDG14-related policy citations in 2016–20

Source: Overton – see [methodology](#)

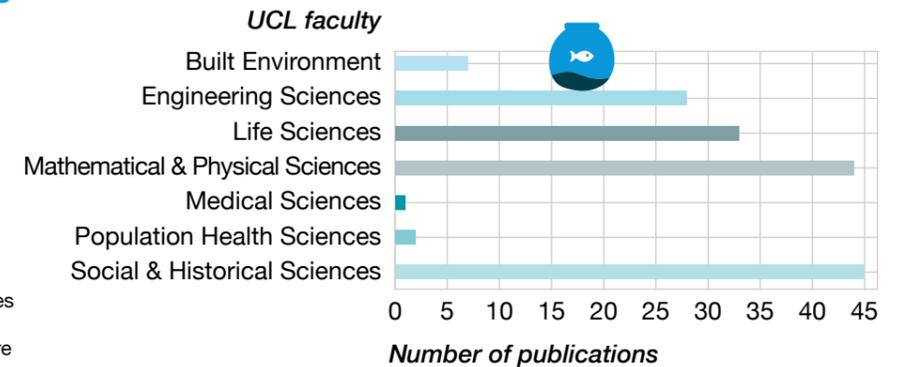
◀ After a few years, the coral completely overgrows and engulfs the Reef Stars, which become fully integrated into the reef structure. This creates new habitats for fish and invertebrates and encourages the settlement of additional native corals.

Helping to achieve Target 14.2



Number of UCL’s research publications supporting SDG14 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



31.5%

of UCL’s SDG14-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

75.3%

of UCL’s SDG14-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG14 are on the [UCL SDGs Initiative website](#).



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

Designing buildings that protect biodiversity

A UCL team is devising ways to encourage construction companies to consider the benefits of incorporating the natural environment within building design and project delivery.

Dr Alex Opoku (UCL Bartlett School of Sustainable Construction) worked with the University College of Northern Denmark and UK construction industry practitioners to understand the perspectives of industry on tackling land degradation and biodiversity loss in their work.

“Some developers are already including green infrastructure, such as living walls, green roofs and green space in their designs, but many others are unaware of the advantages biodiversity can bring,” says Dr Opoku.

Dr Opoku is helping bring biodiversity to the heart of policies and strategies to create a sustainable built environment, by encouraging architects and engineers to consider including green infrastructure and use more sustainable building practices.



Photo: Hugh Clark / www.bats.org.uk

“Green spaces help to purify the air from pollutants and access to such green areas offers psychological benefits including improved mental health,” he adds.



A smart approach to biodiversity monitoring

World leading experts at the UCL People and Nature Lab are joining forces with urban land managers to devise new ways to monitor bat species, with a pilot deployment across Queen Elizabeth Olympic Park, in Stratford, East London.

The centre is a cross-disciplinary hub that brings together ecologists, computer scientists, city planners, economists and social scientists, to gather evidence on how natural resources can be best managed for a sustainable future.

The centre has devised a novel smart sensor to monitor bat populations in the park. It captures high-frequency sounds, such as bat calls, and converts them into an image called a spectrogram. Computer algorithms built into the sensor then scan the images to identify the presence of different bat species by their calls.

“Bat species are a good indicator of the general health of the natural environment in a particular area,” explains Professor Kate Jones (UCL Centre for Biodiversity & Environment Research), Director of the People and Nature Lab. “They are the top predator of nocturnal insects, so the impact of any changes in land use on the insect species has a knock-on impact on bats.”



“The project is delivering and supporting pond restoration in Norfolk, so that its agricultural landscape supports more and better-quality ponds to help boost local aquatic biodiversity.”

Professor Carl Sayer
(UCL Geography)



Restoring Norfolk’s farmland ponds to support biodiversity

Geographers at UCL are working with farmers and conservation groups across Norfolk to restore farmland ponds.

The county once had over 31,000 ponds, many of which were in farmland and date back to the 17th and 18th centuries. But thousands of these small waters have been filled in, or fallen into disrepair and become overgrown by trees.

The Norfolk Ponds Project was established by the UCL Pond Restoration Research Group in partnership with several wildlife conservation groups to restore neglected pond habitats for a wide variety of plants and animals, including amphibians, farmland birds, bats, rare fishes and even pollinators.

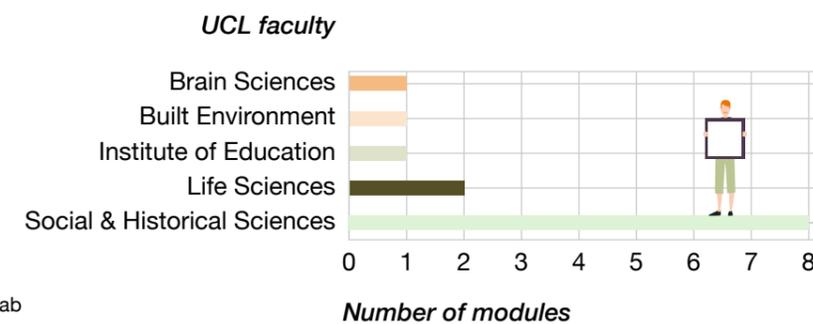
“The project is delivering and supporting pond restoration in Norfolk, so that its agricultural landscape supports more and better-quality ponds to help boost local aquatic biodiversity,” says Professor Carl Sayer (UCL Geography), the project’s lead researcher.



Evidence-based solutions to prevent biodiversity loss

In partnership with the World Wildlife Fund, UCL experts are studying some of world’s most precious ecosystems to understand how conservation interventions can help reduce the impacts of human activity on the world’s biodiversity. ▶

Taught modules at UCL supporting SDG15 in 2021–22



Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)

383

SDG15-related policy citations in 2016–20

Source: Overton – see methodology

◀ The project is exploring the effects of human activities on four distinct biomes (large areas of interconnected ecosystems that can be characterised by local climate and environmental conditions). The team is studying: sub-tropical dry forest in Nepal; coral reefs in Fiji; tropical forest in Malaysian Borneo; and savanna grassland in Kenya.

“Complex ecosystems of vegetation and wildlife around the world are under pressure from human influences such as climate change and land management,” says Guilherme Braga Ferreira (UCL Centre for Biodiversity &

Environment Research), who is overseeing the data collection and analysis from the four sites.

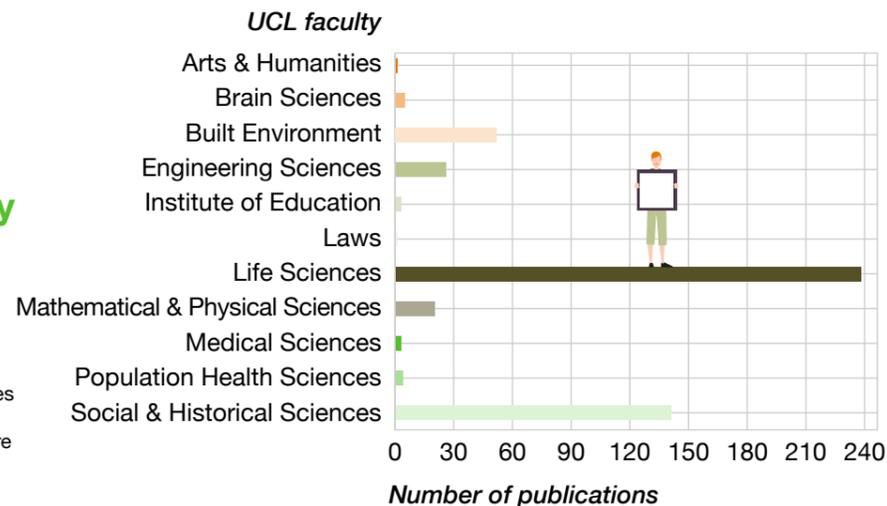
In collaboration with local partners, the team is designing a field-based study system that will help uncover how biodiversity responds to human influence, and how conservation activities can help reduce the impacts of these pressures.

Helping to achieve Target 15.9



Number of UCL's research publications supporting SDG15 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



29.3%

of UCL's SDG15-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see methodology

77.9%

of UCL's SDG15-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see methodology

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG15 are on the [UCL SDGs Initiative website](#).

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



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

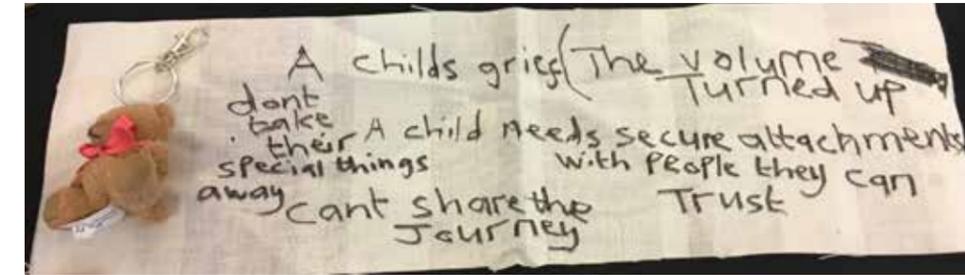
Law students put research into practice to support international human rights protection

Postgraduate Laws students at UCL are addressing real-world human rights protection issues by providing cutting-edge legal research to organisations working to protect human rights around the world.

Each year, the Public International Law Pro Bono Project, which began life as a PhD and LLM student initiative, brings together a competitively selected group of students, who collaborate and offer their expertise on a pro bono (for free) basis.

The project helped the organisation Redress, which seeks justice for survivors of torture, to prepare reports on the UK's compliance with its obligations, which were submitted to the UK Parliamentary Joint Committee on Human Rights and to the UN Committee Against Torture.

In addition, the project has prepared a case study on compliance with international humanitarian law for the International Committee of the Red Cross, posted on its 'IHL in Action' webpage.



Since 2017, more than 60 UCL students have participated in the project, with support and supervision provided by faculty members and UCL Laws doctoral students.

Helping to achieve Target 16.3

Developing an SDG Target that puts people at the heart of legal frameworks

Experts from UCL Laws have helped to define the UN's SDG Target on civil justice and provided guidance on ways to measure progress towards people-centred justice systems across the world.

Professor Pascoe Pleasence (UCL Laws) and colleagues have played a pivotal role in developing

Target 16.3, which calls on countries to 'Promote the rule of law at the national and international levels and ensure equal access to justice for all'.

“To meet this target, countries must develop justice systems that consider the needs of the people they are designed to serve,” explains Professor Pleasence.

To help them achieve this, Professor Pleasence has advised on and helped to develop clear guidelines and frameworks to enable countries to provide better access to civil justice, and mechanisms to measure progress. These include providing a framework for countries to carry out surveys that help understand people's everyday legal problems and experiences of their local justice system.

Helping to achieve Target 16.3



UCL clinic provides access to justice for local community

Legal problems and ill-health often coincide. Without intervention, problems can escalate – with deteriorating health leading to financial difficulties, worsening living conditions and further stress and anxiety.

In 2016, the UCL Centre for Access to Justice established an integrated legal advice clinic, which provides free and legally aided advice to the local community in Stratford, East London, close to the university's new UCL East campus on Queen Elizabeth Olympic Park.

“Often the people who need legal help most are unsure of their rights and can ill-afford the advice they need,” explains Rachel Knowles (UCL Laws), the centre's Head of Legal Practice and a practising solicitor.

At the clinic, UCL Laws students, with supervision from qualified lawyers, provide free legal advice on a range of social welfare issues to the local community. In the seven years since the clinic was established, almost 200 UCL Law students have supported more than 500 people with legal advice and casework.

Among the people the clinic has helped are a woman struggling to obtain a disabled parking permit to support her son with autism, and a local resident who was left without accommodation and had to appeal to the courts to access housing benefit.



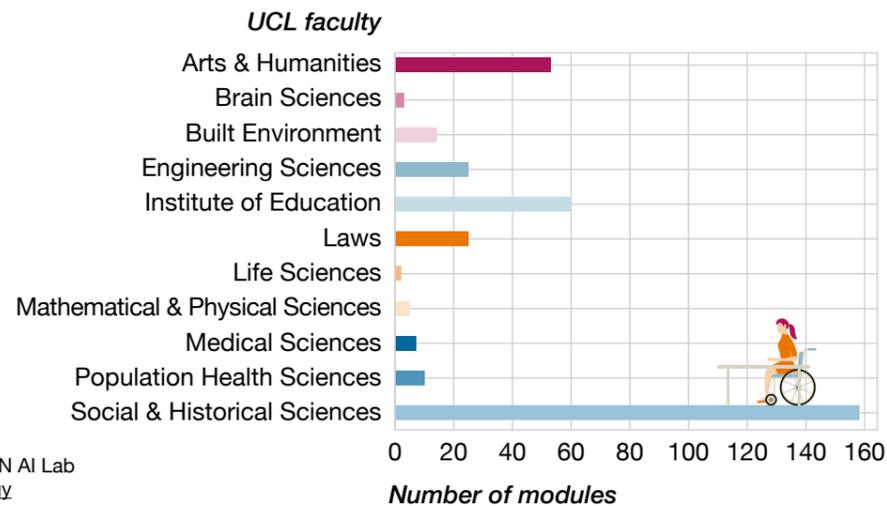
Helping people who lived in care as children to understand their past

UCL information researchers are exploring how child social care records are recorded, stored and accessed, so they can help to enhance the memories and sense of self of individuals who have been in care.

An estimated 400,000 adults in Britain have experienced out-of-home care at some stage of their childhood.

“Many people who grow up in care have gaps in their childhood memories, including unanswered questions such as ‘Why was I taken into care?’ or ‘Where did I live?’,” explains Professor Elizabeth Shepherd (UCL Information ▶

Taught modules at UCL supporting SDG16 in 2021–22



Source: PPMI, a partner in the UN AI Lab – more details in the [methodology](#)

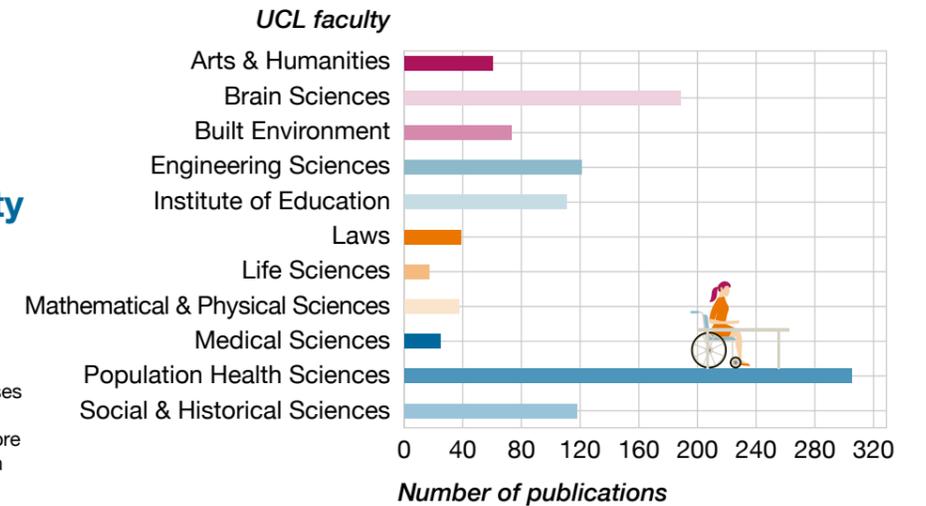
695

SDG16-related policy citations in 2016–20

Source: Overton – see [methodology](#)

Number of UCL's research publications supporting SDG16 by faculty in 2016–20

Graph based on keywords searches of publication databases using a set of SDG keywords developed by Elsevier. Read more about the methodology used on the [SDGs Initiative website](#)



◀ Studies), who leads Memory–Identity–Rights in Records–Access (MIRRA), a participatory research project investigating recordkeeping practices in child social care in England and Wales.

Each looked-after child has a file where social workers, educators, health professionals and others document details of the individual's life. For many care leavers, this is the only ‘album’ they have from their childhood, but the records can be difficult to access, heavily ‘redacted’ and rarely include the child's perspective.

“Individuals who have lived in care have often had difficult experiences as children and making the transition into independent adult life can be tough,” says Professor Shepherd. “Our research highlights the vital role care records can play in helping care leavers to get a better understanding of their past, to help them in the present and future.



Preventing torture in Chile through policy and legal reform

Research on torture prevention in Chile by Dr Par Engstrom (UCL Institute of the Americas) is informing legal and policy reform to reduce violence against prisoners and hold perpetrators to account.



25.9%

of UCL's SDG16-related publications are in the top 10% most cited for all research of similar papers in 2016–20

Source: Scopus and Clarivate – see [methodology](#)

47.3%

of UCL's SDG16-related research publications are international collaborations, 2016–20

Source: Scopus and Clarivate – see [methodology](#)

DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG16 are on the [UCL SDGs Initiative website](#).

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Sharing expertise to ensure high-quality medical education worldwide

To raise standards of medical education globally and encourage more clinicians to build careers within the healthcare systems in their home countries, staff in the UCL Medical School are collaborating with medical educators to support teaching programmes around the world.

“We are working with partner institutions across the globe to adapt elements of UCL’s internationally recognised medical programmes and tailor them to make them relevant to different local cultural, ethical and regulatory contexts,” explains Dr Ahmed Rashid, who leads the UCL Medical School Education Consultancy Unit.

In one partnership, UCL academics worked with colleagues at New Giza University, Egypt, to devise modern and innovative undergraduate medicine, dentistry, and pharmacy programmes, to be taught in Egypt. They used established materials, assessments and processes from the equivalent programmes at UCL as the programme’s basis, and adapted them to Egyptian sociocultural, ethical, professional and regulatory frameworks.

Dr Rashid’s research with students and educators in partner institutions has identified challenges such as language barriers and differing sociocultural traditions, which have been overcome by working with local education leaders to develop personalised programmes that fit the local context.

“These adaptations help to ensure graduates develop a sense of social responsibility and an understanding of local health challenges, making it more likely that they will stay in the healthcare system in their home country, where they are needed most,” explains Dr Rashid.



UCL hosts global conference on Sustainable Development Goals

A virtual conference at UCL in October 2020 brought together world-leading experts and champions of sustainable development to examine how universities can galvanise research and teaching to support the SDGs. ▶

“The conference was a tremendous opportunity for UCL staff, students and the public to come together to discuss how and if universities, through research and teaching activities, can contribute to the UN Sustainable Development Goals.”



Professor David Price, UCL Vice-Provost (Research, Innovation & Global Engagement)

◀ ‘Beyond Boundaries: Realising the UN Sustainable Development Goals’ was jointly hosted by UCL Grand Challenges and the UCL Global Engagement Office. Thousands of attendees from over 55 countries joined the event online to hear presentations and panel discussions on a range of key topics, including sustainability in a COVID-19 context, achieving inclusive wealth and addressing global inequalities.

Professor David Price, UCL Vice-Provost (Research, Innovation & Global Engagement), said: “The conference was a tremendous opportunity for UCL staff, students and the public to come together to discuss how and if universities, through research and teaching activities, can contribute to the UN Sustainable Development Goals.”

More than 60 speakers joined from countries including Australia, Japan and South Africa and from across government, academia, the media and think tanks. They included former New Zealand Prime Minister Helen Clark, Special Envoy of WHO Director-General on COVID-19 Dr David Nabarro, Delhi-based environmentalist and author Dr Sunita Narain and Professor Mamokgethi Phakeng, Vice-Chancellor of the University of Cape Town.



UCL’s own researchers also presented, including renowned economist Professor Mariana Mazzucato, doctor and former WHO Director Professor Anthony Costello, behaviour-change expert Professor Susan Michie, and climate scientist and author Professor Mark Maslin.



Students address challenges facing Mumbai through virtual teaching programme

An innovative online teaching programme co-created by the Tata Institute of Social Sciences (TISS) in Mumbai, India, and UCL gave students a unique insight into the challenges facing the vast Indian city – which has a population of 20 million, and growing.

The week-long programme was delivered by TISS academics and organisations working with local communities in Mumbai. They explored themes including displacement, climate change, water and marginalised communities. In addition, two UCL academics led virtual sessions.

Students also worked in interdisciplinary teams facilitated by TISS postgraduate coordinators to discuss the topics covered each day and to explore the themes more deeply.

“The coordinators provided further knowledge of the subject area, as well as local insight and perspective, which was particularly useful for students learning about Mumbai from afar,” explains Professor Monica Lakhanpaul, UCL Pro-Vice-Provost (South Asia), who helped to organise the programme.

The teams concluded by presenting the challenges facing Mumbai associated with a particular SDG – including plastic pollution, and educational campaigns and policies for girls – and proposing how they might be tackled locally.

“It was truly an exemplar of how to learn together on global issues and hear the perspective from the local community,” added Professor Lakhanpaul.”





Mobilising science and technology to meet the SDGs

To ensure that investment in science, technology and innovation (STI) is aligned to the SDGs the STRINGS project, led by Professor Joanna Chataway (UCL Science, Technology, Engineering & Public Policy, STEaPP) and colleagues at the University of Sussex, is mapping the synergies, competing priorities and trade-offs between STI and the SDGs at local, national and global levels, particularly in low- and middle-income countries.

“To mobilise science, technology, engineering and policy expertise to help change the world for the better, we must include communities in the research and innovation process at a local level, and steer investments to help ensure the most effective outcomes are achieved for the people most affected,” she explains.

Professor Chataway is also collaborating with the UN Development Programme and a consortium of five other universities and research centres in Argentina, India and South Africa.

The project is creating a worldwide map of the key areas of research and innovation that relate to the SDGs, both now and in the future. The consortium is also looking in depth at specific examples across the world to see where there is alignment (and misalignment) with the SDGs, with a view to applying any lessons learned elsewhere.

In India, a STRINGS review of research into rice identified clusters of research on plant protection, crop yields, use of fertilisers and socio-economic issues. Yet research focused on improving the nutritional value of rice is lacking.

“Our aim is to provide evidence, tools and guidelines that will inform more effective policy actions and debates about the possible roles for science, research, technology and innovation in meeting the SDGs,” adds Professor Chataway.



A network of innovation to deliver the SDGs

“Achieving the Sustainable Development Goals by 2030 will require a concerted effort from everybody on the planet,” says Professor Dame Henrietta Moore (UCL Institute for Global Prosperity, IGP).

“While governments, large organisations and big business inevitably have key roles to play in this, we believe that the most critical contributions will come from the growing number of small, fast-moving, innovative organisations that are springing up all over the world.”

To harness and maximise these contributions, in 2015 Professor Moore established Fast Forward 2030, a network of London-based entrepreneurs hosted by UCL IGP.



“We need to inspire the next generation of leaders who, by 2030, will be the shapers of institutions, directors of businesses, producers of knowledge and inventors of technology,” says Professor Moore. “They will be key to achieving the Goals.”

Professor Moore launched Fast Forward 2030 in partnership with one such entrepreneur, UCL alumnus Arthur Kay (Bartlett School 2013), Chief Executive of bio-bean, a biofuel and biochemical company that recycles waste coffee grounds. Arthur co-founded bio-bean in 2013 while a student at UCL, with support from UCL Innovation & Enterprise.

Through its research, website and workshops, Fast Forward 2030 provides space for policymakers, entrepreneurs and citizens to share and collaborate on new projects and solutions to ecological and social problems.

Following the success of the London hub, Fast Forward has gone on to launch networks in Lebanon and Kenya.



DISCOVER MORE

Read more on these activities and other examples of how UCL is helping to achieve SDG17 are on the [UCL SDGs Initiative website](#).



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