THE LONDON STUDENT

SUSTAINABILITY CONFERENCE 2026

Wednesday 25 February 2026

Kingston University London and Online

JOIN THE CONVERSATION

#LSSC26

IN PARTNERSHIP WITH:

City St George's University of London

Imperial College London

King's College London

Kingston University London

LSE The London School of Economics and Political Science

London School of Hygiene & Tropical Medicine

University of Greenwich

University of Roehampton London

University of West London The Career University

University of Westminster

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WELCOME TO THE LONDON STUDENT SUSTAINABILITY CONFERENCE 2026

It is with great pride and enthusiasm that we welcome you to the London Student Sustainability Conference 2026 (LSSC26). We are delighted to bring together students, academics, professionals and partners for this eighth annual event showcasing student innovation, research, creativity and leadership in addressing the world's most pressing environmental and sustainability challenges.

LSSC26 exists to promote knowledge, recognising that today's environmental and social challenges demand collaboration across disciplines, cultures and ways of knowing. Aligned to the United Nations Sustainable Development Goals, the exhibiting students demonstrate both academic excellence and an inspiring commitment to positive climate action, social responsibility and sustainable futures.

A commitment to fostering connection and collaboration is at the Conference's heart. You will find students from universities across London and beyond, from scientists and social innovators to mathematicians, storytellers and changemakers, we are all united by a shared passion for making real-world positive impact.

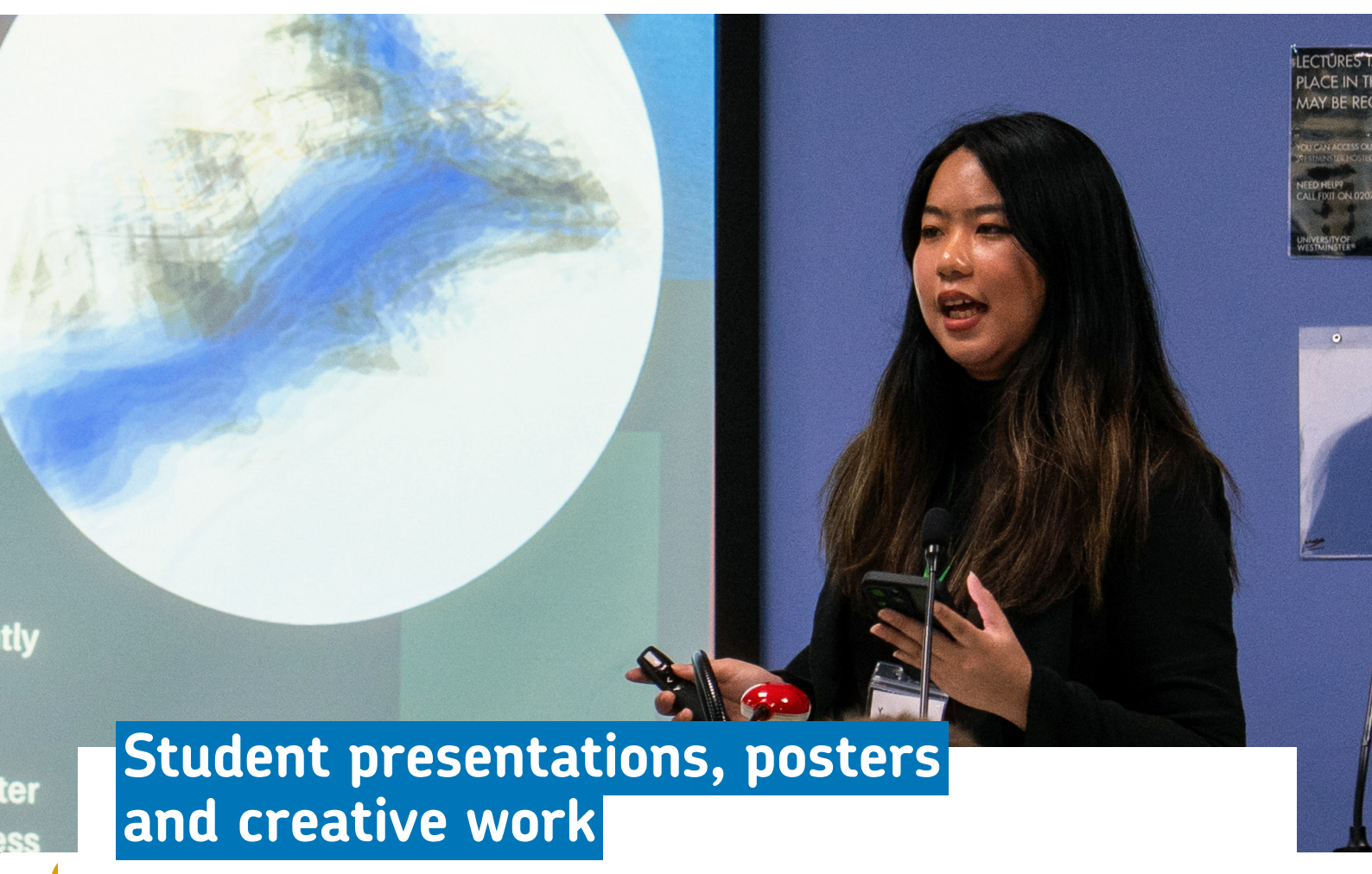
Thank you to all participating students, volunteers, partner institutions, staff, and supporters who helped shape this event. We hope that LSSC26 will deepen your knowledge, spark ideas, create new connections and energise you to make a difference within your communities and careers.

LSSC26 Steering Group

The London Student Sustainability Conference is designed to be an interactive, inspiring and welcoming space for students. We want you to make the most of the day and encourage you to ask questions, join discussions, explore different disciplines, and connect with fellow students, academics and professionals. Whether you are presenting your work, volunteering your time or joining us as part of the audience, this conference is an opportunity to learn, share ideas and become part of a wider sustainability community.

United Nations Sustainable Development Goals

The Sustainable Development Goals (SDGs) sit at the heart of the Conference. Setting student work within this global framework connects diverse disciplines and perspectives and supports vital cross-disciplinary collaboration. We hope the Conference highlights the important contribution of students in driving progress towards a more just, inclusive and sustainable future for our university communities and beyond.

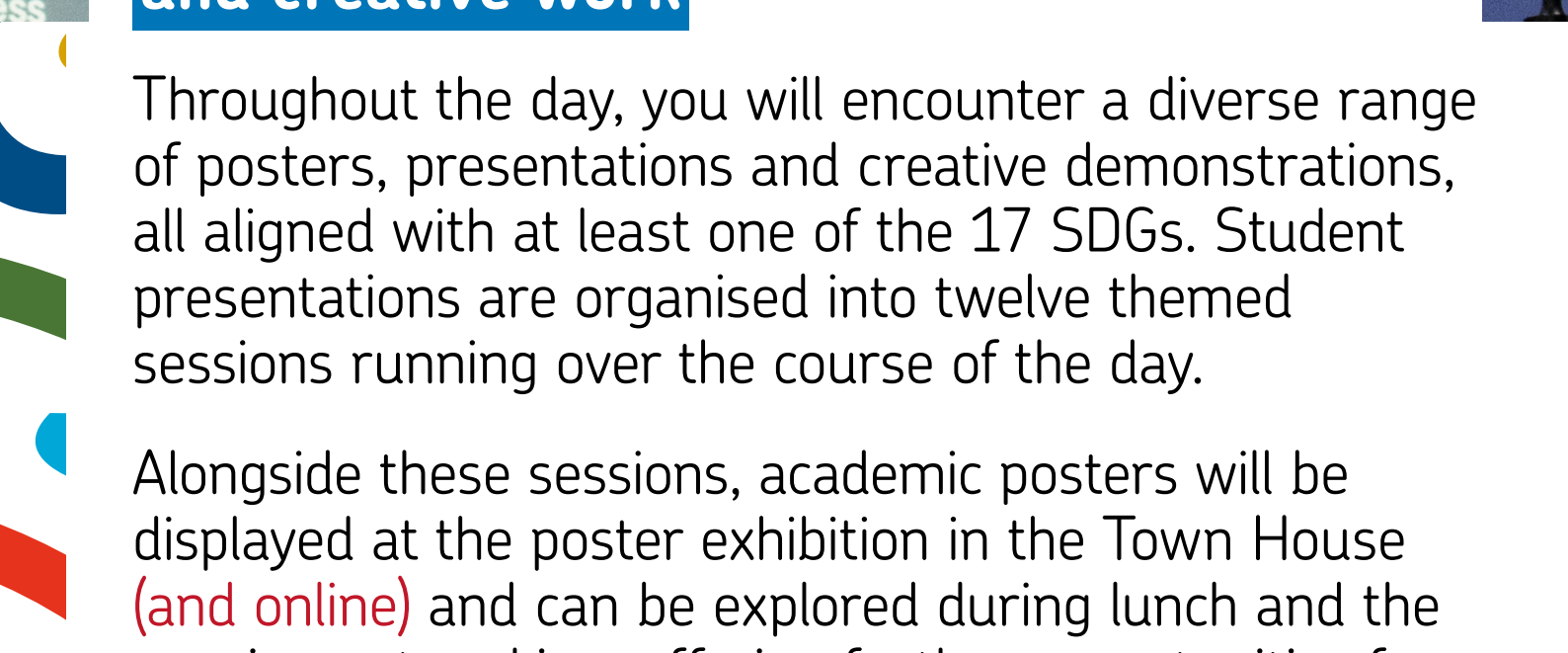


Student presentations, posters and creative work

Throughout the day, you will encounter a diverse range of posters, presentations and creative demonstrations, all aligned with at least one of the 17 SDGs. Student presentations are organised into twelve themed sessions running over the course of the day.

Alongside these sessions, academic posters will be displayed at the poster exhibition in the Town House (and online) and can be explored during lunch and the evening networking, offering further opportunities for informal discussion and learning.

This year's creative programme (located in the Town House) features sustainability-focused games and a documentary, demonstrating how storytelling, play and visual communication can deepen engagement and support a more sustainable future.



Learning, connecting and developing

The Conference offers opportunities to develop skills and insights beyond the classroom. Expert-led workshops from sustainability professionals provide practical perspectives on careers, research and real-world impact. To close the day, a dedicated networking session offers a relaxed space to connect with. We encourage you to share ideas, ask questions and build meaningful relationships.

09:30 – REGISTRATION (IN PERSON)
TOWN HOUSE

10:00 OPENING SESSION
TOWN HOUSE
JOIN ONLINE

Martin Baxter,
Deputy CEO, the Institute of Sustainability and Environmental Professionals (ISEP)

Professor Amir Alan,
Provost for the Faculty of Business and Social Sciences and the Faculty of Engineering, Computing and the Environment, Kingston University London

Dr Ayşe Demir,
Associate Professor and Principal Investigator, University of Roehampton

Milán Páczai,
Sustainability Scientist and Secondary School Educator, Imperial College London

11:00 SESSION 1 STARTS

Stream 1 – Title: Behaviour change
JG3003
JOIN ONLINE

SSRC Guest Speaker: Inherent sustainable practices in Indonesian micro and small enterprises: Understanding motivations, challenges, and cross-contextual potential
Rosie Willis

CarbonQuest – Gamifying low-carbon living for people
Anshul Yadav

Saving the world, one meme at a time
Roberta Cojocaru

Stream 2 – Title: Bringing people closer to nature
J3004
JOIN ONLINE

SSRC Guest Speaker: Assessment of the impact of land use and land cover on the ecosystem services of Apoi Creek Ramsar Site, Nigeria
Michael Osagie

AquaShelter: A community driven approach to sustainable aquatic restoration through XR and bioengineering
Sinae Song

Rebirth: Play, learn, and drive reforestation for climate action
Rayan Bhuyan, Neeraj Sahu

Stream 3 – Title: Local action for global impact
JG3006
JOIN ONLINE

Man's best friend; A rabies prevention project
Kingsley Okeke

Food, culture and recipe design: A nutrition and sustainability study
Shannon Bu

Algorithm of desire: Rethinking digital consumer culture together
Shynara Nygmetova

Stream 4 – Title: Education for a greener future
JG4002
JOIN ONLINE

The sustainable flow
Lito Shen, Ryan Wen

Scouts leading the way: Non-kerbside recycling education
Georgina Horwich

Invisible ink: Making hidden sustainability visible through creative learning
Maliha Noor Siddique

12:00 SESSION 2 STARTS

Stream 1 – Title: The circular shift
JG3003
JOIN ONLINE

The circular ascent: Crafting a sustainable future for climbing
Marta Massarini

Brewers' grain in muffins: Optimising a sustainable wheat alternative
Anu Gurung

Circular creation
Junting Che, Qianwen Xing

Stream 2 – Title: The true cost of what we use
J3004
JOIN ONLINE

Using maths to turn the tide on plastic
Lydia Bangura

Rethinking health and waste in pharmacy: A cabinet with a past and a future
Davina Addo-Boadu, Rio Bragança, Hasan Chowdhury, Dikchya Gurung

Behind the scenes of sustainable chemistry: Tracing the hidden footprint of a simple chemical
Hayeon Lee

Stream 3 – Title: Confronting pollution, decarbonisation, and social equity
JG3006
JOIN ONLINE

Can the least developed countries win under the International Maritime Organization decarbonisation measures?
Sharifu Jirani

La lucha es por la vida: Towards a Lima without pollution and insecurity
Caoline Arteaga

A breath stolen: Human cost of New Delhi's air pollution
Mahima Malpani

Stream 4 – Title: Innovations driving a low-carbon world
JG4002
JOIN ONLINE

Harnessing the sun for sustainable fisheries in Indonesia
Mufty Sumarto

Beyond net zero: Optimising renewable pathways for critical material sustainability
Thashmika Bandara

Extending the life of offshore wind farms: A sustainable pathway for the UK's net zero future
Pavel Ivashchenko

13:00 LUNCH
TOWN HOUSE
JOIN ONLINE
DOCUMENTARY – VIEW ONLINE

Enjoy a sustainable lunch while exploring the student poster exhibition. Take the opportunity to learn more about the projects and engage with presenters.

14:00 SESSION 3 STARTS

Stream 1 – Title: Building fair and resilient societies
JG3003
JOIN ONLINE

Can we call it justice if the poor drown first?: Strengthening climate finance equity in the Philippines
Patricia de Guzman

Feeling is believing: How misinformation hijacks our emotions
Edward White

Outbreaks, outsiders, and the politics of protection: How pandemics fuel border controls and anti-immigration agendas
Liliana Sisto

Stream 2 – Title: Closing the green skills gap
J3004
JOIN ONLINE

Mind the gap: Green skills and London's future workforce
Kazi Tasnimul

'Beyond the formula': Embedding sustainability and ethics in the teaching of mathematics
Malmi Mahagamage, Meherun Soud

Bridging the gap for women in the AI and technology sector
Kamya Agal, Yejin Seo

Stream 3 – Title: Healthy people, healthy planet
JG3006
JOIN ONLINE

Weight, wealth, and health: A story of global inequality
Lakshya Jain

CRISPR interference versus persistence: preventing relapsing salmonella infections
Daphne Armengol

SSRC Guest Speaker: Vibro-acoustic properties of recycled materials made from automotive polymeric waste
Busola Popoola

Stream 4 – Title: Nature-tech solutions for a resilient planet
JG4002
JOIN ONLINE

GreenPulse: Urban ecosystems and wellbeing
Neel Santilal, Eveline Cooper, Aditi Hari Balaji

Green builders: Phytoremediation and the power of plants
Arif Ainlade

Spraying drones for wildfire control: Field evidence using wet firebreaks in savannah-type vegetation (Brazilian Cerrado)
Pedro Magalhaes

15:00 WORKSHOPS START

Step into the doughnut
Doughnut Economy
SU Student Event Space

Transferable skills for sustainable leadership
Institute of Sustainability and Environmental Professionals (ISEP)
JG3003

Student voices for sustainability: Be the Change, drive the impact
London Higher
JG3004

Climate Fresk taster session: From emotions to actions
LSSC26 partner universities
JG4002

16:00 CLOSING SESSION
TOWN HOUSE
JOIN ONLINE

Batool Wajiha,
Student of Education and International Development MA, University College London

Professor Amir Alan,
Provost for the Faculty of Business and Social Sciences and the Faculty of Engineering, Computing and the Environment, Kingston University London

Awards giving

16:30 NETWORKING EVENT
TOWN HOUSE

Join us for drinks and networking in the poster exhibition.

18:00 CLOSE
TOWN HOUSE

Partner universities

Every London university contributing to LSSC26 shares a strong commitment to embedding the UN Sustainable Development Goals across education, research, operations, and leadership. This year's conference is a collaborative effort between 10 London universities, all represented on the Steering Team. From this group, the Project Delivery Group was formed to bring the Conference to life. Their collaboration has been instrumental in shaping an event that reflects the shared vision, expertise, and ambition of all participating universities.

Steering Group (SD) and Project Delivery Team representatives (PGT)

City St George's, University of London
Eleanor Ramulu Simes
(SD/PDT)

Caroline Ubrei-Joe
(SD/PDT)

Katharine O'Dwyer
(SD/PDT)

Imperial College London
Jess Money
(SD)

King's College London
Rosa Roe Garcia
(SD)

Kingston University London
Victoria Pontifex
(SD/PDT)

Tania Fonseca
(SD)

London School of Economics & Political Science
Beatrice Clementel
(SD/PDT)

London School of Hygiene & Tropical Medicine
Izzy Murray
(SD)

University of Greenwich
David Jackson
(SD)

University of Roehampton
Amelia Iswariah
(SD/PDT)

University of West London
Rachel Carrer Irvine
(SD)

University of Westminster
Dularee Goonetilleke
(SD/PDT)

Morgan Lirette
(SD/PDT)

Student leads

Working closely with the Project Delivery Team, the Student Leads contribute to planning, decision-making and the overall delivery of the Conference. In doing so, they draw on and develop a range of hands-on experience and skills, including project management, teamwork, communication, and leadership. Their insight, creativity and dedication help make the Conference engaging, inclusive and relevant to the student community.

Venue Lead
Rahema Abbas
Kingston University London

Rachel Roth
Kingston University London

Olusegun Jeremiah
Kingston University London

Media Lead
Patrick Orji
University of Roehampton

Caitlin Baber
University of West London

External Engagement Lead
Avantigaa Subramaniam
City St George's, University of London

Sara Muhammed-azeem
Imperial College London

Workshop Lead
Imogen Mould
Imperial College London

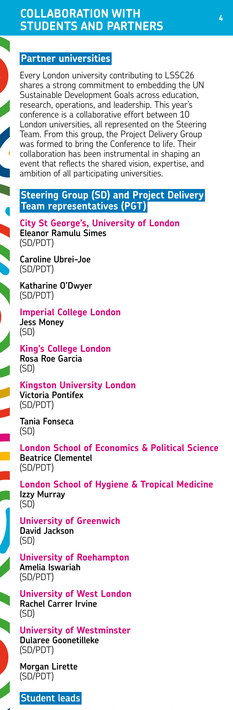
Jonah Clotfelter
London School of Economics & Political Science

Communications Lead
Loretto Aiello
City St George's, University of London

Gurbani Kaur
King's College London

Student event volunteers

This year, we are pleased to introduce new volunteering opportunities that play a vital role in delivering the Conference on the day. Student volunteers support the smooth running of the event by chairing sessions, guiding attendees, welcoming speakers and MCing the Conference. Their enthusiasm, professionalism and teamwork are essential to creating a well-coordinated, inclusive and successful conference experience for all.



Selection and awards panels

The presenters, poster creators, and creative demonstrators at LSSC26 were selected by our panels to showcase the very best of student-led sustainability work. Every effort has been made to ensure the Conference is diverse, inclusive, and multidisciplinary, featuring students from a wide range of London universities and across many fields of study.

City St George's, University of London
Dominic Pates
Senior Educational Technologist

Avantigaa Subramaniam
External Engagement Lead

Imperial College London
Charlene Tai
President, Environmental Society

Sara Muhammed-azeem
External Engagement Lead

Imogen Mould
Workshops Lead

King's College London
Adithi Sathiyan
BA International Relations Student

Rosa Roe Garcia
Sustainability Engagement Manager

Kingston University London
Laura Stott
Senior Lecturer in Academic Skills

Sahand Hosouli
Senior Lecturer in Renewable Energy

Dr Purva Tavri
Senior Lecturer in Environmental Management

London School of Economics & Political Science
Beatrice Clementel
Sustainability Officer

Jonah Clotfelter
Workshops Lead

London School of Hygiene & Tropical Medicine
Rosie Green
Co-Director of the Centre on Climate Change and Planetary Health

Izzy Murray
Sustainability Strategy Coordinator

University of Greenwich
Caroline Troy
Senior Strategy Support Manager within the Natural Resources Institute

Klairoong Phairor (Hawa)
Academic Portfolio lead in Marketing

Michelle Kossowski
BA Law Student

David Jackson
Sustainability Manager

University of Roehampton
Gabor Sarlos
Associate Professor in the Faculty of Business Law

Cecile Reed
Head of Employability
Senior Lecturer, Life Sciences

Patrick Orji
Media Lead

University of West London
Peter Sheppard
Chair of the ESD Working Group at UWL

Caitlin Baber
Media Lead

Rachel Carrer Irvine
Senior Sustainability Manager

University of Westminster
Rayne Mickele Reed
Postgraduate Fashion Lead for MA Sustainable Fashion

Trophy creators

We are delighted to showcase student craftsmanship through the London Student Sustainability Conference Medal Set, thoughtfully designed and created by Cloudy Nguyen and Hajnalka Gőlya from Kingston University London. Their work demonstrates creativity, technical skill, and a strong sustainability mindset. Rooted in circular principles, the medals feature elements made from repurposed materials, reflecting the Conference's commitment to sustainable practice.

Student Sustainability Research Conference

Building on our commitment to collaboration and cross-institutional learning, LSSC26 continues its partnership with the annual Student Sustainability Research Conference, hosted by the University of Leeds, featuring students from across the twelve member institutions of Yorkshire universities. As part of this exchange, students from LSSC26 will have the opportunity to present their work at the SSRC in March 2026, while we welcome SSRC students to share their research and insights at our event. This partnership broadens the reach of student-led sustainability work and fosters connection, dialogue, and learning across institutions and regions.

Martin Baxter

Martin Baxter is Deputy CEO at the Institute of Sustainability and Environmental Professionals (ISEP).

He works in the UK and internationally to accelerate the transition to a sustainable future and support people in the development of sustainability skills and green careers. Martin has national and international experience in developing and negotiating global and European environmental management standards and developing capacity for effective and widespread implementation. Martin heads the UK delegation to the International Organisation for Standardisation (ISO) on environmental management and chairs the ISO environmental management systems committee of ~100 countries. Martin is a Board member of ISEP, and a non-exec director of the Society for the Environment (SocEnv) and the Broadway Initiative. He is a visiting professor at Cranfield University and was awarded an honorary doctorate from the University of Derby.

Professor Amir Alani

Professor Amir Alani is Provost for the Faculty of Business and Social Sciences and the Faculty of Engineering, Computing and the Environment, a position he assumed in August 2025. He provides strategic leadership across both Faculties, promoting cross-disciplinary collaboration and strengthening the student learning experience.

Amir joined the University in 2022 as Dean of the Faculty of Engineering, Computing and the Environment before becoming Pro Vice-Chancellor for Industry Relations. An internationally respected civil engineering researcher, he has built a strong culture of high performance, interdisciplinary working, and impactful industry partnerships. Under his leadership, the Faculty has seen major investment in teaching, learning, and research infrastructure.

As Dean, he plays a pivotal role in advancing educational innovation, research, and knowledge exchange and contributed significantly to delivering the University's transformative Town House Strategy. A committed advocate for sustainability, Amir serves as Co_SLT sponsor for sustainability, championing environmental ambition across the institution.

Milán Páczai

Milán Páczai is a Hungarian-born Imperial College London Electrical Engineering graduate. Milán is an intrapreneur, Sustainability Scientist, and researcher in Transformative Pedagogy.

Currently training as a high school Science Educator, he returns to LSSC for his fourth year with a firm conviction: sustainability is more soulful, interdisciplinary, and accessible than mainstream media suggests.

He is driven by a fascination with the "human bottleneck" of progress, often asking: Why is profound change happening so slowly? What subconscious shadows prevent us from upgrading our individual and collective operating systems? Recently, he has been exploring the hidden dialogue between our outer environments and inner landscapes, asking what role both play in letting go of our old ways of operating. Known among friends as an extraterrestrial being for his relentless habit of challenging the status quo, he balances this provocative edge with deep curiosity and a simple, adventurous mission: to leave a genuinely positive mark on Earth.

Dr Ayşe Demir

Dr Ayşe Demir is an Associate Professor and Principal Investigator at the University of Roehampton.

Dr Ayşe Demir specialises in clean energy transitions, gender inclusion, and sustainable development. She has led a four-phase programme in Kenya (2022–25) that worked with solar providers, NGOs, ministries, and over 200 women's groups to embed SDG-aware clean energy adoption into everyday community practice. Her work has influenced the Kenya Off-Grid Solar Access Project (KOSAP), informed UNFCCC regional dialogues, and will be featured on the UNFCCC global portal. In 2025, she was invited to join the Government of The Gambia's delegation to COP30 as a clean energy expert.

Batool Waijiha Zaidi

Batool Waijiha Zaidi is an Education and International Development MA student at UCL, and a member of the COP Working Group of the UK Youth Climate Coalition (UKYCC).

Batool attended COP30 in Brazil to campaign for a conflict-of-interest policy in the UNFCCC to limit fossil fuel lobby influence. She conducts research on young people's priorities for sustainability in higher education. This year, she founded and leads a faith-based community for climate action called ABSoc for Earth.

STREAM 1 – TITLE: BEHAVIOUR CHANGE
11:00 - 11:50
JG3003
JOIN STREAM 1

Inherent Sustainable Practices in Indonesian Micro and Small Enterprises: Understanding Motivations, Challenges, and Cross-Contextual Potentia

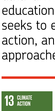
Rosie Willis (she/her) is a final year student studying Sustainability and Environmental Management at the University of Leeds. Her course has been eye opening, and exploring the many dimensions of sustainability has broadened her understanding of the world. She has always been interested in other cultures and ways of life, so being able to connect her curiosity with sustainable practices in different contexts has been especially meaningful to her.

The research explores the naturally adopted sustainable practices within rural Indonesian micro, small and medium enterprises (MSMEs). It examines how these practices emerge from cultural norms, economic necessity and community traditions rather than how they link to formal sustainability frameworks. While sustainability and Circular Economy (CE) concepts are often formed through Global North perspectives, the research highlights how sustainability is already embedded in everyday business practices in the Global South, even when it is not labelled as such.

Using semi-structured interviews and participant observations with participants in the Sustainability Business Programme (SBP) at an educational and conservation NGO in North Sumatra, the project investigates four key areas: existing sustainable behaviours; cultural motivations; barriers to adopting or maintaining sustainable practices; and how community-based programmes such as the SBP influence opportunities for more sustainable business models.

This research directly engages with several Sustainable Development Goals. 8, Decent Work and Economic Growth - explores how sustainability strengthens business resilience and local livelihoods. 12, Responsible Consumption and Production - looking at resource efficiency, waste management and locality in low-resource contexts. 11, Sustainable Cities and Communities - recognises the role of cultural knowledge and community networks. 4 and 17, Quality Education and Partnerships for the Goals, respectively - has a focus on NGO-led education and inclusive opportunities.

This research matters because it highlights sustainable practices that are already happening in rural Indonesia, even if they are not formally recognised. It shows that sustainability can come from, and be influenced by, culture, tradition and daily practices, not just from policies or technical measures. These findings can help NGOs and organisations design programmes that fit local realities and support MSMEs more effectively.



CarbonQuest - Gamifying low-carbon living for people

Anshul Yadav (he/him) is an AI Engineer and a recent Computer Science graduate from the University of Westminster. He developed CarbonQuest, a multiple-award-winning sustainability platform focused on carbon tracking, behaviour change, and gamified emissions reduction. His work bridges AI, environmental impact, and student-driven innovation.

CarbonQuest is a user-centred digital platform designed to help individuals understand, reduce, and actively offset their carbon footprint through engaging, game-based experiences. Developed initially as a university project, it tackles a key challenge faced by many young people: sustainability often feels important but difficult to measure, track, or act upon in daily life. CarbonQuest makes this process simple, visual, and motivating.

The platform enables users to calculate their personal emissions across categories such as travel, diet, energy use, and consumption. Instead of presenting sustainability as a checklist, CarbonQuest transforms the experience into a journey. Users earn points by completing low-carbon tasks, receive personalised recommendations powered by machine learning, and watch their "virtual garden" grow as they reduce or offset emissions. This approach connects behavioural change with visible progress, making climate action feel achievable and rewarding.

Early findings show that students are more likely to engage with sustainability when progress is personalised, visual, and tied to achievable goals. The next stage of the project involves expanding the recommendation system, strengthening emissions accuracy through validated datasets, and piloting the platform with universities to measure real-world impact on student behaviour.

CarbonQuest aims to make sustainability accessible, data-driven, and genuinely enjoyable. By combining education, technology, and behaviour design, the project seeks to empower students to take meaningful climate action, and inspire institutions to adopt more innovative approaches to sustainability engagement.

Saving the world, one meme at a time

Roberta Cojocaru (she/her) is a MA Journalism student at City St George's, University of London. She researches science and climate communication across social and legacy media. She aims to become an international science journalist, translating complex research into accessible, compelling stories for global audiences.

This research examines whether a single internet meme can encourage climate action and increase concern about global warming. While memes may appear to be simple, lighthearted images scrolling across social media feeds, the study explored whether that moment of humour can nudge individuals toward greater climate engagement.

The experimental study, conducted in Germany as part of a bachelor's thesis, found that memes can influence climate action. Participants who viewed a meme highlighting the negative consequences of climate change reported a higher willingness to take part in climate related campaigns. The effect of a single meme was small, but the cumulative impact may be significant given the volume of memes people encounter daily.

The second part of the study investigated how the framing of the meme affected its impact. The researcher varied the humour by changing the text and compared two sources: a random meme page and the official German Ministry of the Environment. The meme page generated a stronger response, even though participants rated the ministry as more credible and knowledgeable. This suggests that memes feel approachable, familiar, and authentic, appearing to come from "people like us" rather than institutions.The findings indicate that memes can motivate and inspire climate engagement. Their humour and simplicity can make a global issue like climate change feel personal and relevant to everyday life.

While memes alone will not solve the climate crisis, they may serve as an effective starting point for broader action.

STREAM 2 – TITLE: BRINGING PEOPLE CLOSER TO NATURE

11:00 - 11:50

JG3004

JOIN STREAM 2

Assessment of the Impact of Land Use and Land Cover on the Ecosystem Services of Apoi Creek Ramsar Site, Nigeria

Michael Osagie (he/him) is a Research Master's candidate at York St John University, UK, investigating the impacts of land use and land cover (LULC) changes on ecosystem services in Ramsar wetlands in Nigeria. His current study focuses on Apoi Creek, a key wetland supporting biodiversity, local livelihoods, and flood regulation. Using GIS, remote sensing, and community surveys, he assess LULC changes and their effects on ecosystem services, integrating geospatial analysis with community perceptions to inform sustainable wetland management, policy development, and environmental resilience.

The proposed research will investigate how human-driven land use changes are affecting the ecological functioning and ecosystem services of one of Nigeria's most significant wetland environments. The Apoi Creek Ramsar site provides vital ecosystem services, including water purification, flood regulation, carbon storage, biodiversity support, and livelihood resources for nearby communities. Growing pressures from agriculture, settlement expansion, logging, and oil-related activities have raised concerns about the long term health and resilience of the ecosystem.

Once underway, the project will employ geospatial analysis, historical land cover datasets, and established ecosystem service assessment frameworks to evaluate patterns of land use transformation. The study aims to identify which ecosystem services are most vulnerable and the specific human activities driving potential degradation. This methodological approach is expected to generate forward looking insights that can inform sustainable management planning.

The research will provide essential baseline knowledge for policymakers, conservation organisations, and local communities, supporting long term environmental sustainability and the protection of crucial ecosystem services within the Apoi Creek Ramsar site.

AquaShellter: A community driven approach to sustainable aquatic restoration through XR and bioengineering

Sinae Song (she/her) is a PhD design researcher at the Royal College of Art and a Design and Communications Analyst at the United Nations Development Programme's Sustainable Energy Hub. An international award-winning designer, she explores human–non-human collaboration through material and technological approaches to advance sustainable and resilient systems.

AquaShellter is a research project developed with the UNESCO Ocean Decade and the Royal College of Art to address hidden forms of aquatic degradation in the Hillingdon river network near Heathrow Airport. Field observations and existing environmental reports indicate elevated concentrations of copper and lead in river sediments at levels known to cause stress in fish and invertebrates. These pressures remain largely unrecognised by local residents, highlighting the need for greater awareness, community participation, and accessible restoration approaches.

The originality of AquaShellter is in the integration of bioengineered materials with immersive digital engagement. The shelter is made from recycled crustacean shells, a biomaterial documented to bind heavy metal ions such as copper and lead while remaining safe for aquatic species. Its surface form is inspired by a Helmholtz structure, helping reduce underwater noise and creating more stable microhabitats. Together, these features demonstrate the potential of low cost, nature based interventions for urban river systems.

To involve communities, the project uses an extended reality (XR) experience that allows residents to explore underwater environments, observe pollution effects directly, and understand the ecological role of AquaShellter. Research shows that immersive simulations can strengthen environmental understanding and support pro-environmental behaviour, and the XR format builds on this by making normally invisible conditions perceptible. Participants then assemble and install a small shelter kit, translating experiential learning into practical restoration.

Early research outcomes confirm both the promise of the biomaterial and the value of XR supported engagement. Next steps include pilot installations with environmental partners, structured monitoring of water quality and biodiversity, and refinement of the design for wider adoption in airport adjacent and industrial regions. AquaShellter has been recognised with an iF Student Design Award for its potential impact and design excellence.

Rebirth: Play, learn, and drive reforestation for climate action

Neeraj Sahu (he/him) brings over five years of mobile game design experience and is completing a Master's in Game Design at Kingston University London. Growing up around hills and forests informs his focus on accurate reforestation awareness. Abu Rayan Bhuyan (he/him) holds a Bachelor's in Computer Science and Engineering and is pursuing Master's in Game Development Programming at Kingston University London. His previous work includes a project on the environmental and social impacts of tobacco farming. Together, they combine design, technical skill, and a shared commitment to sustainability-focused game development.

This interactive project combines environmental science with immersive technology to engage participants in tackling real-world sustainability challenges. Designed as a first-person camera experience, it empowers players to step into the role of an Environmental Field Officer and make strategic decisions that impact carbon capture and biodiversity.

The game places participants in the role of an Environmental Field Officer tasked with planning a major reforestation drive that would increase carbon dioxide absorption in the atmosphere. Identify priority areas for planting trees, find traces of the local flora and fauna and collect soil samples to identify the best tree species for the drive. Negotiate with local community leaders and drive the reforestation project!

The game draws its inspiration from the Northern Forest Program of the UK which plans to plant 50 million trees over 25 years across 10,000 miles of land stretching from Liverpool to Hull. Through research, we identified key steps that should be followed for planting trees and through first person virtual reality gameplay experience aims to deliver the knowledge. This game aims at creating awareness among communities that want to increase forest cover in their regions but lack the information to execute them with high success.

STREAM 3 – TITLE: LOCAL ACTION FOR GLOBAL IMPACT

11:00 – 11:50

JG3006

JOIN STREAM 3

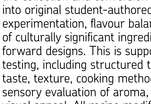
Man's best friend; A rabies prevention project

Kingsley Okeke (he/him) studies Clinical Neuroscience at the University of Roehampton with interests in public health, neurology, and sustainability. His work focuses on promoting good health and well-being through a deeper understanding of the brain and mental health. Kingsley is passionate about neuroscience, lifelong learning, and advancing holistic approaches to human well-being.

Rabies remains one of the world's deadliest yet most preventable diseases, taking tens of thousands of human lives every year – mostly in communities where dogs and people live in close contact. Man's Best Friend is a community-driven project focused on preventing rabies through education, vaccination, and awareness. By working with local veterinarians, schools, and households, the project promotes responsible pet ownership and ensures that both people and animals can live together safely and healthily.

This project aims to demonstrate that small, locally led actions (such as organising free dog vaccination drives, teaching children about safe animal interactions, and training volunteers to recognise rabies symptoms) can have a lasting public health impact. Our early findings show that when communities are informed and involved, vaccination rates rise and fear of stray dogs decreases, leading to stronger trust between people and animals. The project envisions a future where no one dies from rabies, and every dog is valued as part of a healthy, compassionate society.

The next steps of the project include expanding to neighbouring communities, developing simple digital tools for tracking vaccinations, and sharing educational materials that other regions can adapt. Through collaboration, compassion, and science, Man's Best Friend is proving that protecting animals means protecting people too.



Food, culture and recipe design: A nutrition and sustainability study

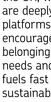
This project is led by a multidisciplinary student team united by a shared passion for food, nutrition, and sustainability. Shannon Bu (she/her) is a Culinary Arts Management undergraduate with a strong interest in sustainable food innovation and plant-forward cooking. Lina Kontrimaite (she/her) and Kaung Hein (he/him) are Nutrition undergraduates, contributing expertise in nutritional analysis and public health. Shamiso Chinembiri (she/her) is a Master's student in Nutrition, Health and Wellbeing, bringing advanced insight into dietary behaviour. Together, the team integrates culinary practice with nutritional science to create culturally inclusive, sustainable recipes that translate evidence-based research into practical solutions for healthier, more environmentally responsible everyday eating.

This university-supervised project centres on the creation, development, and validation of original recipes informed by culturally diverse food knowledge. Recipes have been sourced from international students at the University of West London and residents in Ealing, ensuring representation of global cuisines, heritage dishes, and everyday cooking practices.

The core of the project is recipe development, which involves recipe creation and prototyping through the collection and conversion of traditional dishes into original student-authored recipes, ingredient experimentation, flavour balancing, and the adaptation of culturally significant ingredients into accessible, plant-forward designs. This is supported by iterative recipe testing, including structured testing cycles to refine taste, texture, cooking methods, and usability, alongside sensory evaluation of aroma, flavour, mouthfeel, and visual appeal. All recipe modifications and development decisions are systematically documented.

Alongside recipe development, each recipe is analysed through two supporting evaluation strands. Nutritional analysis is conducted using MyFood24 to assess macro- and micronutrient profiles, justify ingredient choices based on health relevance, and evaluate contributions to balanced diets and dietary suitability. Sustainability analysis examines ingredient seasonality and sourcing logistics, evaluates energy, water, and land use using MyFood24 sustainability tools, and identifies opportunities to reduce avoidable waste through recipe design.

By placing culturally familiar dishes at the starting point and applying structured recipe development, sensory evaluation, nutritional profiling, and sustainability analysis, this project supports more equitable access to nutritious food. The work contributes to food security by improving ingredient efficiency, reducing avoidable waste (SDG 12), and maximising meal yield to help stretch food budgets (SDG 2). It also supports public health outcomes (SDG 3) by translating diverse cultural food knowledge into nutritionally balanced recipes that encourage practical, sustainable, and health-supporting cooking practices. The final output is a student-owned recipe collection supported by documented testing logs, nutritional interpretation, and sustainability insight, produced under academic guidance.



Algorithm of desire: Rethinking digital consumer culture together

Shynara Nygmetova (she/her) is a multidisciplinary designer and researcher pursuing a dual masters degree at University of the Arts London and Kyoto Institute of Technology. She explores sustainable behaviour and participatory design for responsible, community-focused alternatives. Her recent projects involve reframing the Sustainable Development Goals (SDGs) 2 and 12.

This project explores how social media and marketing shape the way people consume and express identity. In the UK, where online shopping and targeted advertising are deeply embedded in everyday life, social media platforms, driven by algorithms and social comparison, encourage frequent consumption as a route to belonging. They do this by subtly manufacturing needs and escalating desire. This manufactured desire fuels fast consumption and creates a gap between sustainable intentions and everyday temptations.

Using participatory design methods, Algorithm of Desire develops creative interventions that invite participants to rethink value, identity, and connection beyond consumption, directly relating to SDG 12: Responsible Consumption and Production, particularly target 12.5: Substantially Reduce Waste Generation and target 12.8: Promote Universal Understanding of Sustainable Lifestyles.

In the first stage, the research explores the psychological forces that drive attention. Through conversations and hands-on activities, the project invites participants to examine what shapes their desires online, including influencer culture, targeted advertising, and the pressure to keep up with trends. The goal is to help people reflect on how these forces influence their sense of identity both online and offline.

The second stage focuses on challenging the consumerist logic embedded in digital culture through speculative "What if?" scenarios. It invites participants to work together to imagine and prototype alternative ways of living that are more ethical, sustainable, and community-oriented, including but not limited to Buy Nothing Day promotions and active repair circles.

By opening up these conversations, the project aims to show how art and design can help move from habits of constant consumption toward shared forms of identity and collective action that value connection, creativity, and care. The project's impact lies in fostering critical awareness and collective practices that support reduced waste, more sustainable lifestyles, and long-term cultural shifts toward responsible consumption.

STREAM 4 – TITLE: EDUCATION FOR A GREENER FUTURE

11:00 - 11:50

JG4002

JOIN STREAM 4

The sustainable flow

Lito Shen (she/her) is asecond year BA International Development student at King's College London. Ryan Wen (he/him) is currently studying law at King's College London. Lito began this project series in August 2025. She brings her experience making her family business and student lifestyle more sustainable and believes menstruation shouldn't come at an environmental cost. Ryan has a background in teaching college-level environmental science and brings a strong interest in broader sustainability impacts.

The Sustainable Flow is a hands-on, eco-friendly reusable pad initiative running at King's College London from February to March 2026. The project brings students together for a series of workshops where participants can make their own reusable pads or create them for donation.

The project aims to spark meaningful conversations about menstruation, reduce stigma, and introduce people, especially students, to sustainable and affordable menstrual options. By giving participants the chance to create reusable pads and waterproof storage bags using upcycled materials, the project removes the cost barrier that often prevents people from trying eco-friendly alternatives. Although the UK government provides menstrual product schemes, the initial price of reusable products can be four times higher than disposable ones, making them inaccessible for many. The workshops offer a practical, supportive way to bridge that gap.

With a large student population at King's and recognition that menstruation begins as early as primary school, the project hopes to inspire long-term, sustainable habits early on. By combining awareness-raising, hands-on skills, and open dialogue, The Sustainable Flow encourages a shift toward environmentally friendly menstrual care while offering an accessible, empowering experience for all participants.

Scouts leading the way: Non-kerbside recycling education

Georgina Horwich (she/her) is a postgraduate student at City St George's, University of London, studying Project Management, Finance and Risk. She is an award-winning Scout leader passionate about youth engagement in sustainability, with experience in engineering, mentoring, and community-led recycling initiatives.

This project explores how youth-led education can transform understanding and engagement with non-kerbside recycling. Through the Scouts of the World Award, Georgina developed and delivered a nationwide programme for young people aged 4-25, focusing on what can be recycled beyond standard household bins. The initiative included interactive sessions, printable guides, and a custom-built map of recycling points in Ealing, helping families and Scout groups identify local options for items like batteries, textiles, and crisp packets.

The originality lies in its integration with existing Scout badge criteria, making sustainability accessible and actionable. Activities ranged from sorting games for Beavers to programme planning and leadership for Explorers, encouraging critical thinking and community involvement. The project revealed significant gaps in practical recycling knowledge, especially among young people who understood the theory but struggled with real-world application.

By highlighting inconsistencies in council recycling systems and the lack of clarity around symbols like the Mobius loop and plastic resin codes, the project advocates for clearer education and infrastructure. The aim is to use this platform to share findings, inspire collaboration, and push for standardised youth recycling education. The next steps include expanding the resource toolkit, engaging with local authorities, and exploring how technology like optical sorting can support more inclusive recycling systems. Ultimately, the project aims to empower young people to become sustainability champions in their communities.

Invisible ink: Making hidden sustainability visible through creative learning

Maliha Noor Siddique (she/her) is studying a Masters in Education at the University of Roehampton and an educator and mental-health practitioner dedicated to embedding sustainability in learning environments. She promotes inclusive, wellbeing-focused education and explores how schools can foster climate awareness, responsible citizenship, and community engagement through people-centred practices.

Invisible Ink is a creative, arts-based pedagogical activity that helps students explore sustainability through imagination, sensory learning, and reflective practice. The activity uses low-impact, natural materials, such as oak galls soaked in water and recycled paper, to create messages that remain hidden until iron water reacts with tannins and oxygen in the air.

This process symbolises the often unseen values present in educational settings, including environmental responsibility, social awareness, and collective wellbeing. Although these values exist, they only become "visible" when intentionally engaged with. By framing sustainability as an experiential and embodied concept rather than an abstract one, the workshop encourages students to write personal reflections or commitments and later discover their messages through a natural transformation.

The activity prompts discussion on how small, frequently overlooked choices can lead to wider ecological impact. Grounded in social pedagogical principles, Invisible Ink fosters community, shared purpose, and reflective engagement. Through multisensory learning, students feel better equipped to embed sustainable principles into their own practices. The workshop concludes by demonstrating how small but deliberate actions can make sustainability tangible, combining creativity, critical thinking, and ecological awareness.

STREAM 1 – TITLE: THE CIRCULAR SHIFT
12:00 - 12:50
JG3003
JOIN STREAM 1

The circular ascent: Crafting a sustainable future for climbing

Marta Massarini (she/her) is an MSc student in Sustainability Management at the University of Westminster. She holds an undergraduate degree in Linguistic Mediation and Intercultural Communication, focusing on business, law, and sociology. She moved to London to pursue new opportunities in sustainability and its wider applications.

Climbing has always been a primal human instinct, either to discover new landscapes or escape from danger; we have always entrusted rocks to help us reach novel heights. The silent respect between nature's laws and human capabilities has evolved over the years. Now, as rock climbing becomes a growing global sport, it faces a critical sustainability challenge, evident in both its equipment and its culture.

Physically, the sport generates significant waste contributing to the growing problem of global footwear waste, where materials like rubber and plastic take decades to decompose. After being worn out from intensive indoor and outdoor climbing activities, the rubber sole, made from virgin materials, is compromised, holes are created in the inner toe box, and ultimately, the entire shoe has to be discarded. Culturally, climbing has lost its connection with nature. It is often framed by a "conquest" mentality, treating the environment as a "gymnasium" rather than a mentor.

This project aims to tackle these issues through innovative product design and a cultural shift. The first goal is to create the first fully modular climbing shoe with detachable, recycled rubber soles and heels, allowing climbers to replace only worn parts, thus reducing waste. Secondly, it seeks to redefine climbing as a "craft", fostering a deeper connection between climbers and nature to promote pro-environmental behaviours.

Brewers' grain in muffins: Optimising a sustainable wheat alternative

Anu Gurung (she/her) recently earned her MSc in Food Business Management from the University of West London. She conducted research on optimising use of brewers' spent grains in bakery products to reduce waste in the brewing industry, highlighting the potential of food by-products for sustainable practice and circular economy.

Brewer's spent grain (BSG), the primary by-product of the brewing industry, is produced in large volumes yet remains underutilised despite its rich nutritional composition. The study aimed to examine the effects of partially substituting wheat flour with BSG flour on the textural and sensory properties of muffins, with the broader objective of evaluating BSG as a functional ingredient in bakery products to promote sustainable food practices and valorise agro-industrial waste. Its incorporation into bakery products offers the dual advantage of supporting environmental sustainability along with nutritional quality enhancement and contributing to the circular economy.

Circular creation

Qianwen Xing (she/her) and Junting Che (she/her) are Textile students at the Royal College of Art. Their joint research focuses on translating and re-contextualising modular design thinking in sustainable products. Drawing on sustainable design innovation, they seek to expand conventional approaches to textile product design, using product–service system design to examine community relationships with sustainable products from a systemic perspective. Through their brand, they experiment with circular product systems and conduct field research and real-world pilots to study how sustainable innovation enters, grows within and influences communities, promoting sustainable and low-carbon values on campus and in wider society.

The project responds to growing policy and societal attention to textile circularity and low-carbon lifestyles. It aligns with the UK's broader policy direction on waste prevention and the circular economy, emphasising waste reduction, resource efficiency, and reuse and repair. It also resonates with initiatives such as WRAP's UK Textiles Pact and London's Textiles Action Plan, which promote a zero-waste, low-carbon transition in fashion and textiles. At a global level, the project aligns with UN SDGs 11 (Sustainable Cities and Communities) and 12 (Responsible Consumption and Production), particularly their focus on participatory and sustainable living systems.

Academically, the project builds on recent shifts in sustainable textile design that move beyond material- or product-centred innovation. While much industry-facing research has focused on improving materials or individual products, scholars such as Kate Fletcher argue for connecting products to wider social and systemic contexts. Following this perspective, the project adopts a Product–Service System approach, drawing on sustainable design research including Manzini's work, and positions design as a social catalyst that enables participation, learning and behavioural change.

The project begins with a series of modular products, such as bags, accessories and home items. Modular design allows components to be assembled, repaired and replaced, enabling products to evolve with users rather than be discarded. Around these products, the brand develops a service layer including material take-back and repair, customisation and upcycling workshops, and storytelling that traces material journeys and makes circular knowledge visible in everyday life.

The originality of the project lies in using a personal brand not simply to market "green" products, but to test a self-sustaining circular system at a small scale. Starting from a campus community as a controllable pilot context, the system integrates design, service, education and income generation into a reinforcing circular loop.

STREAM 2 – TITLE: THE TRUE COST OF WHAT WE USE
12:00 - 12:50
JG3004
JOIN STREAM 2

Using maths to turn the tide on plastic

Lydia Bangura (she/her) is a first year Mathematics student at the University of Greenwich. She became interested in sustainability after becoming vegan and taking a module called 'Our Mathematical World'. She volunteers with Action Tutoring and hopes to pursue further study in number theory when she graduates.

Marine plastic pollution poses a significant threat to ecological stability and economic well being, particularly in Asia's ocean ecosystems. This project examines the impact of plastic waste on marine life in countries including Indonesia, China, and the Philippines, focusing on rivers and coastal systems such as the Pasig River, the Klang River, and the Agno River. It also considers the wider consequences of large scale plastic waste on the climate and evaluates different strategies for reducing this pollution.

The aim of the project was to identify and assess the effectiveness of various approaches to mitigating plastic pollution. Its novel contribution is the use of simple mathematical models, including exponential and linear growth models, to analyse trends in plastic waste. Although mathematics is rarely discussed in relation to sustainability, this work demonstrates its fundamental role in analysing and communicating critical environmental data.

The modelling estimated that by 2040, approximately 77.6 million tonnes of plastic waste could enter the world's oceans. However, the model showed that with increased recycling, this figure could be reduced to around 28.4 million tonnes, almost three times lower. The study acknowledges limitations in assuming exponential growth, and highlights that effective mitigation will require substantial increases in recycling and waste management efforts.

The primary impact of the project lies in showing how mathematical models can be used to predict future levels of marine plastic pollution. It underscores the power of mathematics in illuminating key sustainability challenges and informing action to protect ocean ecosystems.

Rethinking health and waste in pharmacy: A cabinet with a past and a future

Dikchya Gurung (she/her), Rio Bragança (he/him), Hasan Chowdhury (he/him), and Davina Addo-Boadu (she/her) are MPharm students at Medway School of Pharmacy who share a mission: to transform the way medicines meet the planet. Together, they lead a student sustainability collective tackling one of healthcare's hidden challenges – pharmaceutical waste. From running eco-themed installations to designing behaviour-changing campaigns, the group turns climate concern into practical action on campus and beyond.

This presentation explores the environmental impact of pharmaceutical waste and practical strategies for a sustainable pharmacy future. Examining how unused medicines, single-use packaging, and overprescribing contribute to pollution, carbon emissions, and water contamination. It highlights pharmacy-led interventions such as take-back schemes, greener procurement, reusable packaging, and patient education.

Complementing their presentation, they will be showcasing their installation A Cabinet With a Past and a Future transforms research into an interactive experience. One side reveals unsustainable habits; the other envisions eco-friendly alternatives. Attendees are invited to open the cabinet and choose which version of pharmacy they want to support.

Our project combines an academic poster "Rethinking Health and Waste in Pharmacy" and a creative installation "A Cabinet With a Past and a Future" to expose the environmental impact of pharmaceutical waste and present practical solutions for a more sustainable pharmacy future.

The aim of the project is to educate, provoke thought, and inspire behaviour change – especially among future healthcare professionals who have never been taught to consider medicines as environmental pollutants. Our goal is not to present data and walk away, but to start conversations about the role of pharmacists in climate action.

Behind the scenes of sustainable chemistry: Tracing the hidden footprint of a simple chemical

Hayeon Lee (she/her) is pursuing a Master's in Green Chemistry at Imperial College London, researching for a more sustainable chemical industry. She previously graduated in Chemical Engineering from the University of Manchester. Her work aims to support cleaner, more innovative processes for environmental responsibility in the sector.

Sustainability is often associated with images such as renewable energy, recycling, and electric vehicles. However, the environmental impact of everyday chemicals used in laboratories, medicines, and manufacturing is less visible but equally important. This project explores this hidden dimension by tracing the environmental story of a common laboratory chemical from raw materials to the final product.

The research focuses on Tris, a widely used buffer in biomanufacturing processes, examining how its production affects energy use, waste generation, and overall environmental impact. Rather than working at a laboratory bench, the study was conducted using computer based process simulation tools. A complete chemical production process was built step by step as a virtual factory, allowing estimates of resource consumption, waste outputs, and emissions.

With the virtual model complete, the results were translated into a Life Cycle Assessment to understand the chemical's environmental footprint from start to finish. The analysis addressed questions such as energy requirements, carbon emissions, and the key stages where environmental impact is greatest.

The findings show that even simple, familiar chemicals can carry complex environmental burdens. Identifying the stages with the highest impact can support the development of cleaner designs, more efficient processes, and greener choices in the future.

This work demonstrates how digital tools combined with sustainability thinking can uncover the hidden footprint of chemical products and help guide the chemical industry toward more responsible and environmentally conscious practices.

STREAM 3 – TITLE: CONFRONTING POLLUTION, DECARBONISATION, AND SOCIAL EQUITY

12:00 - 12:50

JG3006

JOIN STREAM 3

Can the least developed countries win under the International Maritime Organization decarbonisation measures?

Sharifu Jirani (he/him) is a recent graduate of MSc Maritime Safety and Security Management at City St. George's, University of London. He is enthusiastic about sustainability, with a background in occupational safety and health and over 10 years professional experience. His current research focuses on maritime decarbonisation.

The International Maritime Organization's (IMO) strategies on reducing greenhouse gas emissions from ships stipulate that the international shipping sector should assess their impacts on states prior to adopting proposed mitigation measures. This assessment should be undertaken urgently, with special emphasis on Least Developed Countries (LDCs) and Small Island Developing States (SIDS), where disproportionately negative impacts must be identified and addressed appropriately.

This study contributes to this discussion by assessing the socioeconomic impacts of greenhouse gas mitigation measures on the United Republic of Tanzania, a typical LDC in the global south. Specifically, the study: (i) assesses the awareness and readiness levels of Tanzanian maritime administration and stakeholders regarding IMO decarbonisation measures, (ii) reviews maritime transport's contribution to Tanzania's socioeconomic development, (iii) analyses the socioeconomic implications of IMO GHG emission reduction measures on employment, government revenue, consumer markets, and economic development, and (iv) develops policy measures enabling the country to comply with IMO decarbonisation requirements with minimal socioeconomic disruptions.

The study employed document analysis and empirical data collection through questionnaires and semi-structured interviews with Tanzania's maritime sector stakeholders.

The research findings reveal that:

- there is reasonable understanding of IMO GHG measures within Tanzania's maritime community,
- the maritime sector is highly significant to Tanzania's social and economic development, with any negative sectoral impacts likely to affect the nation adversely,
- adopting and implementing the IMO GHG strategy will likely negatively impact government revenue, consumer market prices, and overall socioeconomic development.

These findings call for the LDCs to take serious initiatives with the IMO to ensure the disproportionate negative impacts are avoided or mitigated prior to their adoption in order to ensure sustainability takes onboard economic and social development of their people.

La lucha es por la vida: Towards a Lima without pollution and insecurity

Caroline Arteaga (she/her) has four years of data analytics experience in the nonprofit sector. Now pursuing her MSc in Urbanisation and Development at the London School of Economics and Political Science, she is applying her data background to development and sustainability goals in her home country of Peru.

Lima is home to more than one-third of Peru's population and has been under constant protest, not only in response to government instability, but also to the state's apathy toward persistent violence and inequality. The average commute for an urban Limeño is nearly two hours, travelling from the outskirts to the city centre and relying on informal transport to reach the public bus system, the Metropolitano. These informal buses, cars, and taxis face ongoing threats of extortion and violence. The Metropolitano itself is underfunded and was designed to serve a much smaller pool of riders, resulting in long queues and high fares for people simply trying to reach work or university.

Spatial segregation in Lima reproduces economic conditions that sustain stratification in both labour and education. Only the poor are forced to rely on informal and unsafe transportation because the state has largely abandoned meaningful improvements to infrastructure. Lima also has the highest levels of air pollution in Latin America. This means that, in addition to facing potential violence during their four-hour daily commutes, everyday Limeños are increasingly exposed to harmful pollution that compounds already severe health disparities.

Addressing Lima's transportation system alongside expanding green spaces is an urgent call to action. This project first draws on fieldwork in Lima's working-class neighbourhoods to understand how people use and perceive their transport options and the true financial and physical costs of their commutes. It then proposes best-practice public–private partnerships to expand urban forestry and improve transportation, fostering greater urban equity and dignity.

A breath stolen: Human Cost of New Delhi's air pollution

Mahima Malpani (she/her) is an MSc Environmental and Social Governance Management student at King's College London and a Chartered Accountant from India. Inspired by early involvement in environmental initiatives, she works at the intersection of finance and sustainability, helping organisations adopt responsible practices for societal value and the planet.

New Delhi's air pollution has reached levels where the simple act of breathing has become a daily struggle, and the city's Air Quality Index frequently surpasses levels considered dangerous as per the global standards.

Masks have become a constant companion, outdoor activity has been restricted, and families relied on expensive air purifiers to survive indoors. Clean air has become a luxury, and the cost of simply breathing is rising every day.

This project investigates the urgency and severity of Delhi's air crisis, examining how a mix of seasonal factors, stubble burning by farmers, vehicle emissions, industrial pollution and construction dust contribute to an atmospheric blanket of toxic smog. The situation is no longer an environmental problem alone; it is a social, economic, and humanitarian challenge.

It blends personal experience with research to highlight both the human cost and the urgent need for sustainable solutions. Key recommendations include expanding public transport and electric mobility, enforcing stricter industrial and construction regulations, providing farmers with viable alternatives to stubble burning, and increasing green cover through urban forests. Long-term change also requires stronger policy enforcement, community engagement, and continuous awareness campaigns. By framing Delhi's smog crisis through both human stories and actionable strategies, this project aims to inspire collective responsibility for a future where clean air is a right, not a luxury.

STREAM 4 – TITLE: INNOVATIONS DRIVING A LOW-CARBON WORLD

12:00 - 12:50

JG4002

JOIN STREAM 4

Harnessing the sun for sustainable fisheries in Indonesia

Mufty Sumarto (he/him) is a Masters student in Sustainable Energy Futures at Imperial College London and former Junior Researcher at the Indonesian Institute for Energy Economics. With a background in Electrical Engineering, he focuses on renewable energy planning, energy modelling, and sustainability, aiming to support global energy transition strategies.

This project aims to boost the productivity of a Fishing Village in Indonesia by replacing fossil fuel-powered boats with electric alternatives and supporting them with solar-powered infrastructure. Indonesia's fishing sector is vital to its economy, yet many coastal communities rely on outdated, fuel-dependent boats and lack access to cold storage, clean water, and energy-efficient processing tools. These limitations reduce catch quality, increase costs, and harm the environment.

The originality of this initiative lies in its integrated approach: combining electric fishing boats with solar-powered facilities such as ice makers, cold storage units, electric fish dryers, and seawater reverse osmosis (SWRO) systems. These tools help fishermen preserve their catch longer, reduce waste, and increase income.

Findings from the desk study suggest that switching to electric boats not only cuts fuel costs and emissions but also improves operational efficiency. Solar energy is abundant in Indonesia, making it a reliable and clean power source for coastal communities. The project also found that placing solar panels above jetties saves space and provides shade, adding further value.

The impact of this project goes beyond technology, it empowers the Fishing Communities to support sustainable fishing practices, and contributes to climate goals. By turning sunlight into energy, this initiative offers a practical, scalable solution for a more sustainable and productive future in Indonesia and possibly for other countries.

Beyond net zero: Optimising renewable pathways for critical material sustainability

Thashmika Bandara (he/him) is a PhD student at City St George's, University of London researching critical material sustainability in energy transitions. He develops multi-objective optimisation frameworks integrating life cycle assessment with renewable energy deployment planning. His work focuses on copper, zinc, and lead constraints in offshore wind and solar systems.

The race to net zero hides an overlooked paradox: while renewables cut emissions, they also demand over three billion tonnes of critical materials such as copper, zinc, and lead for wind turbines, solar panels, and energy storage systems by 2050. This raises a new sustainability challenge, balancing the reduction of fossil-fuel use with the rising environmental costs of mining and processing these materials.

Current transition plans assess whether we have enough critical materials to meet net-zero targets but rarely examine whether extracting them causes more harm than the fossil fuels they replace. This is the central challenge of critical material sustainability: mining three billion tonnes of materials can undermine the very climate gains renewables promise. Yet planners lack tools to determine whether these burdens are justified, treating materials as simple supply constraints rather than environmental trade-offs.

The key innovation of my work is treating material sustainability as an optimisation objective rather than merely a constraint. The aim is to develop a framework that addresses a fundamental question long overlooked in energy planning: which renewable deployment pathways deliver genuine environmental progress, and which simply shift environmental harm from burning fossil fuels to extracting materials?

Applied to UK renewable scenarios, the framework demonstrates that strategic deployment can reduce peak copper demand by 39–62% while still achieving identical net zero targets. Critically, it identifies when renewable expansion creates net environmental benefits, guiding evidence-based decisions on project prioritisation and circular economy interventions. By reframing critical materials as part of the solution rather than a hidden cost, this work helps ensure that the journey to net zero is truly sustainable.

Extending the life of offshore wind farms. A sustainable pathway for the uk's net zero future

Pavel Ivashchenko (he/him) is an MSc student in Energy and Environmental Technology and Economics at City St George's University of London. Pavel has over a decade of experience in power systems, renewable energy and energy policy and focuses on sustainable energy transitions, integrating technical and economic solutions for net-zero. Irina Volodina is an MSc student in Energy, Environmental Technology and Economics at City St George's, University of London. Her academic interests focus on offshore wind, energy transition and sustainable end-of-life strategies for renewable energy infrastructure, with emphasis on technical, environmental and policy perspectives supporting the UK's net-zero goals.

Offshore wind has a strong impact on the UK clean energy transition. A considerable percentage of the current offshore wind farms will have reached the end of their original operational life by 2025. The UK risks losing gigawatts of renewable capacity, in the most essential moment when demand for clean energy is growing, without an effective end-of-life policy framework. This raises an important sustainability question: should these wind farms be fully decommissioned, partly removed, or repowered and updated?

This project explains how effective end-of-life strategies could extend the lifespan of offshore wind assets, cut waste, and assist the UK's progress toward net-zero targets. To analyse the technical, environmental and economic implications of various end-of-life pathways, the project illustrates how repowering and life-time extension can offer greater sustainability benefits rather than full decommissioning. These approaches could decrease material waste, save marine ecosystems and continue delivering clean and affordable energy.

The future findings will indicate that offshore wind end-of-life decisions are not only engineering choices but also key sustainable decisions with lasting social and environmental impacts. To achieve this, the government should provide clearer regulations and a more coherent national framework in order to avoid unnecessary removal of ongoing infrastructure and accelerate renewable energy deployment.

The project offers practical insights for policy, developers and communities which are working to create a resilient and low-carbon energy network for the future.

STREAM 1 – TITLE: BUILDING FAIR AND RESILIENT SOCIETIES
12:00 - 12:50
JG3003
JOIN STREAM 1

Can we call it justice if the poor drown first?: Strengthening climate finance equity in the Philippines

Patricia de Guzman (she/her) is an MSc Environment and Development student at the London School of Economics & Political Sciences. Driven by her roots in the Philippines, she advocates for climate finance literacy and equitable sustainability action. Patricia strives to amplify Filipino voices and push for inclusive, accessible environmental governance.

For 17 consecutive years, the Philippines has been ranked the world's most disaster-prone country, facing extreme risks from typhoons, floods, droughts, and earthquakes that disproportionately endanger its poorest citizens.

This presentation examines how the Philippine Climate Change Act of 2009, the first comprehensive climate law in Southeast Asia, can be optimised to improve equitable access to climate finance for vulnerable communities. Despite strong policy frameworks emphasising community-based adaptation, significant barriers remain in implementing effective action due to bureaucratic inefficiencies, limited local capacity, and political challenges. Through clear identification of these obstacles, the research proposes actionable solutions such as decentralising finance mechanisms and strengthening the technical and administrative abilities of local governments to ensure that funding reaches those most at risk.

The research paper received international academic recognition at Ewha Womans University's Sustainable Development Student Conference in 2024, earning an A+ for its insights on sustainable communities and climate financing. It also fostered policy discussions when presented to Senator Loren Legarda, the Philippines' foremost environmental advocate and international champion of green development, who encouraged sharing its insights widely within her community to strengthen grassroots involvement in national climate policy. It offers a replicable model for enhancing climate finance effectiveness in developing countries facing comparable vulnerabilities.

This work underscores the ethical imperative to ensure that no community drowns first and that climate justice guides all efforts to strengthen resilience in the Philippines and beyond.

Feeling is believing: How misinformation hijacks our emotions

Edward White (he/him) is a PhD researcher at Kingston University London, specialising in fake news, decision-making, and emotional regulation. His research explores sustainable digital literacy, policy engagement, and AI ethics. Edward collaborates with NGOs and academic institutions to advance media literacy, resilience, and sustainable approaches to combating fake news.

Understanding how emotionally charged messages influence our decision-making abilities is critical in the context of false climate narratives. Research on misinformation mainly focuses on interventions promoting critical thinking, but understanding message characteristics and their effects on emotions and decisions remains limited. The research, therefore, investigates how individuals become susceptible to emotionally charged content.

With studies totalling over 3,000 participants using various methods showed that misinformation exploits our brain through positivity bias – a tendency to favour positive over negative info. When individuals see positively framed messages, they become physiologically aroused (measured by skin conductance), which hampers their ability to assess the information's accuracy. This impacts climate education because false narratives like "clear coal technology will solve emissions" or "we have decades to act" exploit positivity bias, triggering responses that override critical scientific evaluation. Furthermore, the results demonstrate that across different demographics, individuals are vulnerable to the same positive messaging, as our brains respond more quickly to positive information, often overriding our capacity to regulate emotions or analyse information critically.

The impact extends beyond individual differences, posing a significant challenge to achieving the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 16 (Peace, Justice, and Strong Institutions). This climate crisis creates a dual problem: students and citizens struggle to distinguish genuine solutions from misleading false information that downplays risks or promotes unproven technologies. Meanwhile, decision-makers' judgment is impaired when evaluating climate policies, risking compromised education and governance.

Understanding how emotions influence susceptibility to misinformation helps develop targeted interventions. In climate education and media literacy, instead of just teaching fact-checking, solutions should focus on emotional regulation and psycho-physiological responses that make us vulnerable. This project promotes evidence-based strategies to help people recognise emotional exploitation, fostering resilient societies that can distinguish truth from manipulation.

Outbreaks, outsiders, and the politics of protection: How pandemics fuel border controls and anti-immigration agendas

Liliana Sisto (she/her) is completing an MSc in Control of Infectious Diseases at the London School of Hygiene & Tropical Medicine. She focuses on social determinants of infectious disease and health policy. She has worked on women's health projects in East Africa, and with Women Rise in South Africa.

This project examines how infectious disease outbreaks create political opportunities for governments to introduce or strengthen restrictive border policies that push anti-immigration agendas. Drawing insight from three modern pandemics (including HIV/AIDS, H1N1, and COVID-19), the project highlights a recurring pattern: during moments of public fear, policymakers often frame diseases as foreign threats, justify extraordinary border controls, and reinforce narratives that link outbreaks to racialised or immigrant groups. These responses rarely reflect scientific evidence and instead amplify existing inequalities.

This project will result in a policy brief that aims to show how these political decisions undermine progress toward the Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-Being), SDG 10 (Reduced Inequalities), and SDG 16 (Peace, Justice, and Strong Institutions). Border closures and exclusionary policies can restrict access to healthcare for migrants and refugees, fuel stigma, erode trust in public institutions, and disrupt international cooperation – all of which weaken health systems and heighten social inequities.

By analysing the political impacts of three major pandemics, this project offers new insight into how public health crises are used to promote nationalist agendas. Early findings indicate that mobility controls implemented during outbreaks are often ineffective at limiting disease spread but highly effective at advancing political goals unrelated to health. These patterns threaten global solidarity and can leave marginalised communities more vulnerable during future emergencies.

The project's next steps will involve translating these insights into concrete, evidence-based policy recommendations aimed at preventing the misuse of public health powers. These will include assessments for border policies and their compliance with international law, improvements to public health messaging strategies, and proposed oversight mechanisms. Ultimately, this work advances a vision of pandemic response that protects public health without reproducing discrimination, contributing to a more equitable and sustainable global society.

STREAM 2 – TITLE: CLOSING THE GREEN SKILLS GAP
12:00 – 12:50
JG3004

JOIN STREAM 2

Mind the gap: Green skills and London's future workforce

Kazi Tasnimul Hassan Afif (he/him) Sadia Afrin (she/her) are postgraduate International Relations students at the University of Greenwich whose study is based on sustainability, global governance and inclusive policymaking. Kazi cares about linking the importance of environmental awareness and community participation in order to create meaningful global collaboration. Sadia is a keen learner who cherishes teamwork and learning. She wants to work with NGOs and IGOs supporting social and environmental development. Afif and Sadia are allies in their effort to investigate new and policy-based methods of sustainability and fair global development.

Mind the Gap: Green Skills and London's Future Workforce" explores a defining challenge for London's sustainable future: the growing mismatch between the rising demand for green jobs and the supply of skilled workers. This project examines how education, business, and policy can collaborate to close this green skills gap, ensuring that sustainability efforts also drive greater social inclusion.

This project is unique by being London-specific and youth-oriented. Although the majority of the research done to date covers the subject of green employment at the national or sector level, the current study focuses on the local issues and possibilities of the capital. It highlights how educational institutions, local authorities, and industries should work jointly in creating a linked route between the classroom and the climate-aware job prospects - especially among disadvantaged groups in the London labor market.

The project will find and understand major impediments to young people joining green careers, the dislocations between skills development and labour market requirements, as well as off-load a viable Green Skills Roadmap to inform inclusive workforce planning. Initial research indicates the lack of awareness about green jobs, and the fact that not all educational programmes include sustainability in their programmes.

The next steps involve collaborating with universities and local policy networks to pilot initiatives linking students with green industry placements, fostering a workforce that is both sustainable and socially equitable.

'Beyond the formula': Embedding sustainability and ethics in the teaching of mathematics

Malmi Mahagamage (she/her) and Meherun Soud (she/her) are third year Mechanical Engineering students at Queen Mary University of London. Malmi is passionate about building service engineering, with a particular interest in sustainable design. She aspires to contribute to creating energy efficient and environmentally responsible buildings through innovative engineering solutions. Meherun is passionate about creating innovative solutions within the built environment and is interested in how design innovation can enhance building energy performance to work towards a more sustainable future.

Over the last twenty years, there has been a demand in higher education to integrate both sustainability and ethics into mathematics education. However, universities often find it challenging to embed these themes within mathematical modules, as they tend to focus more on technical formulae rather than on their applicability to real-world problems.

This project aims to address this gap by developing and evaluating inclusive toolkits (co-created by current undergraduate students) that embed both ethics and sustainability to enhance the teaching of mathematics. The toolkits foster students' critical thinking and problem-solving skills while building awareness of sustainability and ethical issues. The toolkits contain visually appealing posters that showcase the importance of ethics and sustainability alongside a brief historical overview and include mathematical problems and solutions linked to the Sustainable Development Goals (SDGs).

Examples of problems include 'Pipeline Construction' (SDGs 7, 9, 14 and 15), 'Mercury Contamination' (SDGs 6 and 12) and 'Simpson's Paradox' (SDGs 5 and 10) that address themes such as industry and innovation, clean water and sanitation and equality respectively.

Following the implementation of the resources within two large first and second year undergraduate applied mathematics modules, feedback gathered through dissemination of dedicated surveys featured responses from 265 students from multiple engineering disciplines with 70% of students strongly or mostly agreeing that the resources inspired them to learn more about ethics and sustainability in mathematics.

The insights gained from this implementation will inform future iterations of this project involving the expanded use of this toolkit across related modules and disciplines as well as inclusion of formative, interactive practice quizzes to improve student engagement and learning. By effectively embedding ethical and sustainable thinking within STEM (science, technology, engineering, and mathematics) education, future cohorts of students can develop the necessary skills to address global sustainability and ethical challenges.

Bridging the gap for women in the AI and technology sector

Kamya Agal (she/her) and Yejin Seo (she/her) are postgraduate students at the Royal College of Art, studying Service Design and Information Experience Design respectively. Kamya focuses on sustainable systems and social equity, drawing on her LEED Green Associate certification, environmental design background, and experience in community health projects and volunteer work in India. Yejin brings a research-led artistic practice that explores how technological and urban infrastructures influence emotional, social, and gendered experiences. Together, they investigate how ethical technology, inclusive design, and social sustainability can support fairer opportunities for women in the UK AI and technology sectors.

This project examines why women still face unfair treatment in the UK's tech and artificial intelligence (AI) fields and outlines what must change to create real, lasting opportunities for them. Currently, women hold only a small share of tech jobs, with even fewer working in AI specialties. Unequal pay, biased recruitment software, and workplace cultures stuck in outdated habits continue to hold women back. These issues do not occur in isolation, they reinforce one another.

Despite progress, gaps remain throughout the AI field, especially when people reach middle stages of their careers. Old data used in algorithms often worsens disparity, especially in hiring and staff reviews. In male-dominated workplaces, fear of pushback reduces women's willingness to negotiate. Stress shaped by gender roles, combined with constant invisibility, harms mental health and increases exhaustion, putting long-term team stability at risk. Rather than seeing bias as only a tech bug or an attitude problem, it shows how tools, office setups, and social norms affect each other. This effort suggests real-world fixes, such as open AI hiring tracked by fairness screens, set pay rates that reduce negotiation disadvantages, visible growth routes that value unseen tasks, and company cultures that monitor mental health and belonging.

The next steps involve developing and testing these proposed interventions with students, industry professionals, and organisations to identify which changes can be realistically scaled across the UK tech sector. By mixing equity, responsibility, and design for everyone, it targets lasting change across Britain's tech scene.

STREAM 3 – TITLE: HEALTHY PEOPLE, HEALTHY PLANET

12:00 - 12:50

JG3006

JOIN STREAM 3

Weight, wealth, and health: A story of global inequality

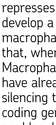
Lakshya Jain (she/her) is a third year PhD student in the School of Public Health at Imperial College London. She is currently working on global trends in non-communicable disease risk factors. She is passionate about equality in healthcare access and health outcomes.

This project examines a key pathway to reducing premature death from non-communicable diseases: identifying and addressing risk factors before severe illness develops. Two major risk factors are body weight and blood pressure. Global trends in body mass index (BMI) are well documented, and blood pressure can serve as a useful indicator of how effectively health systems are managing the obesity crisis.

In high income countries, average BMI is rising slowly while mean blood pressure is declining. In low and middle income countries, BMI is increasing much more rapidly and mean blood pressure is also rising. By analysing blood pressure trends across different BMI ranges and age groups, the project compares how countries are responding to these dual challenges. This global approach highlights which health systems are more effective in supporting people at higher risk.

Findings show that older adults with obesity have benefited from medical treatment, while young adults with obesity remain at elevated risk. Public health efforts should focus more on younger groups, combining early lifestyle interventions with appropriate treatment to prevent long term cardiovascular complications.

The results also show that high income countries with accessible healthcare systems are seeing faster reductions in blood pressure among people in higher BMI ranges and older age groups compared with low income countries. The aim is to reveal these inequalities, identify countries performing well, and support the sharing of effective practices worldwide.



CRISPR interference versus persistence: preventing relapsing salmonella infections

Daphne Armengol (she/her) is a Genomic Medicine student at Imperial College London. Passionate about combatting infectious diseases, particularly in regions where pathogens are spreading increasingly rapidly due to climate change and limited access to clean water and sanitation, Daphne hopes to pursue a PhD exploring communicable disease infection mechanisms.

The project supports the Sustainable Development Goal 3 (Good Health and Wellbeing) by addressing the escalating global challenges of antibiotic persistence and resistance, using non-typhoidal Salmonella (NTS) as a biological model. NTS infects an estimated 93 million people annually and disproportionately affects Sub-Saharan Africa, where limited sanitation infrastructure heightens transmission. While NTS usually causes gastrointestinal illness, it can spread into the bloodstream and trigger severe systemic infections such as sepsis. These invasive cases primarily impact immunocompromised individuals, including newborns and children under five, and carry a mortality rate of around 20%. Although treatable with antibiotics, such infections frequently relapse due to bacterial persisters – cells that survive treatment by residing within macrophages.

To address this, the project uses CRISPR interference (CRISPRi), an epigenome-editing technique that represses gene transcription. The project aims to develop a CRISPRi system capable of silencing human macrophage genes genome-wide to identify those that, when repressed, promote persister formation. Macrophage cell lines containing CRISPRi components have already been established, and initial gene-silencing tests from a pool of 19,839 human protein-coding genes have shown high efficiency. This system enables detailed investigation of Salmonella-infected macrophages and the cellular mechanisms that drive persister development.

Ultimately, the project aims to inform novel immunomodulatory therapies that enhance antibiotic effectiveness against relapsing bacterial infections. Such advances could reduce disease spread, lower mortality among vulnerable populations, and generate insights applicable to other communicable pathogens, contributing to stronger global health resilience.

Vibro-acoustic properties of recycled Materials made from automotive polymeric waste

Busola Popoola (she/her) holds a bachelor's degree in Chemistry and a master's degree in Environmental Control and Management from thr University of Bradford. During her postgraduate studies, she participated in several field trips to waste recycling facilities and landfill sites. These experiences significantly broadened her understanding of waste management practices and revealed the persistent challenges associated with solid waste disposal.

First, by transforming automotive polymeric waste into high value acoustic, thermal, and vibration damping materials, the research aligns strongly with SDG 12 - Responsible Consumption and Production. This will help shift society away from linear toward circular resource use. By demonstrating that complex polymeric waste can be repurposed into advanced engineering materials, the research expands the portfolio of recyclables and reduces the volume of waste directed into landfills.

The research also supports SDG 11 - Sustainable Cities and Communities, and SDG 9 - Industry, Innovation and Infrastructure. Acoustic and thermal insulation materials are essential for sustainable buildings, automobiles, and industrial systems. Developing cost effective recycled alternatives can reduce reliance on virgin materials and help industries meet energy efficiency standards. The new materials can also help contribute to a quieter and safer environment, benefiting public health and quality of life. In addition, by preventing polymeric waste from ending up in landfills where it can release microplastics and harmful chemicals, the research aligns with SDG 13 - Climate Action and SDG 15 - Life on Land. Recycling reduces the environmental burdens associated with raw material extraction, while energy savings from improved thermal insulation help lower greenhouse gas emissions.

In the sustainability field, the research is important because it demonstrates a scientifically grounded pathway for upcycling hard to process waste streams, not just recycling them. It helps bridge the gap between materials science, environmental management, and circular economy policy. By proving that automotive polymeric waste can become functional, high performance materials, the research contributes to sustainable manufacturing, reduces environmental pollution, and creates economic opportunities in the green materials sector.

STREAM 4 – TITLE: NATURE-TECH SOLUTIONS FOR A RESILIENT PLANET

12:00 - 12:50

JG4002

JOIN STREAM 4

GreenPulse: Urban ecosystems and wellbeing

Neel Santilal (he/him) studies Systems Engineering at City St George's, University of London. She is passionate about designing technology that supports smarter and more sustainable cities. Eveline Cooper (she/her) studies Biomedical and Healthcare Engineering at City St George's, University of London. She focuses on how environmental conditions influence the human body, including stress, respiratory health, and overall wellbeing. Aditi Hari Balaji (she/her) studies Mathematics with Data Science at City St George's. She is a WWF ambassador, using her advocacy experience and analytical skills to understand biodiversity and environmental change.

Cities are home to most of the world's population, yet many urban areas continue to lose green spaces, wildlife, and clean air. GreenPulse explores how the health of urban ecosystems, including: air quality, tree cover, and species diversity, influences the wellbeing of the people who live there. Our aim is to show that caring for nature in cities is not only environmentally important but also essential for building healthier, more resilient communities.

This project brings together environmental data and wellbeing indicators to reveal clear links between biodiversity and human health. By analysing open datasets on air quality, green space distribution, and biodiversity across London, and comparing them with trends such as stress levels or reported health outcomes, we aim to demonstrate how environmental decline directly affects people. Research from organisations such as Natural England, the World Wide Fund (WWF), and global public health studies consistently shows that greener neighbourhoods experience lower pollution, reduced stress, and better long-term health outcomes.

GreenPulse focuses on research outcomes by identifying which urban areas are most vulnerable to biodiversity loss and poor environmental health. Our findings highlight increasing green space or protecting existing natural areas have the greatest positive impact on local wellbeing. The next step is to use these findings to guide future urban design, showing councils and planners exactly where nature-based solutions, such as tree planting, wildlife corridors, or green roofs, would support healthier communities and stronger climate resilience.

By creating a clear, visual picture of how environmental health and human health are connected, GreenPulse offers a practical, evidence-based tool for building sustainable, nature-positive cities.

Green builders: Phytoremediation and the power of plants

Arif Akinlade (he/him) is a Civil Engineering graduate and MSc candidate in Engineering Project Management at the University of Roehampton. His passions include sustainable infrastructure and environmental innovation, focusing on nature-based solutions like phytoremediation. His work bridges engineering and sustainability, promoting design for resilient communities and a cleaner environment.

Environmental pollution from industrial, construction, and agricultural activities has contaminated many soils and water bodies with heavy metals and toxins. Conventional clean-up methods are often expensive, energy-intensive, and environmentally harmful. The project explores phytoremediation, a nature-based solution that uses specific plants to remove, absorb, or stabilise pollutants in soil and water.

This project explores how green technology can be integrated into sustainable infrastructure projects to transform contaminated sites into safe, productive land. Focusing on how fast-growing plant species such as vetiver grass, sunflower, and Indian mustard can naturally cleanse polluted environments while improving soil structure and supporting biodiversity.

The project highlights the practical role of engineers in environmental restoration, demonstrating how engineering design can harmonise with natural systems. Findings suggest that phytoremediation can reduce remediation costs by up to 80% compared to mechanical or chemical methods, while also sequestering carbon and enhancing local green spaces.

The aim of this work is to inspire broader adoption of eco-engineering practices and encourage collaboration between engineers, environmental scientists, and local communities – demonstrating that sustainable development begins with working in harmony with nature.

Spraying drones for wildfire control: Field evidence using wet firebreaks in savannah-type vegetation (Brazilian Cerrado)

Pedro Magalhaes (he/him) is a Chevening Scholar at the London School of Economics & Political Sciences. With degrees in Materials Engineering and Disaster Management, he has worked on wildfire prevention, climate-risk reduction and fire-technology research and development. Pedro's interests focus on sustainable adaptation strategies and improving wildfire resilience.

Wildfires are a major sustainability problem. They destroy ecosystems, release large amounts of carbon, damage soils, and affect water and food systems. Fire suppression also has environmental costs. Most water dropped from aircraft is lost to evaporation or drift, especially during intense fires. Large volumes are used when efficiency is lowest. This is a problem because water is often scarce during fire seasons, and aerial drops waste a lot of it.

This project explores a practical alternative: using spraying drones to deliver water and build wet firebreaks ahead of an advancing fire. They can also work at night when fire intensity is lower and firefighting is usually most effective. The study combined standard fire-intensity models with measured water deposition from a commercial spraying drone, allowing to estimate the critical water needed to reduce fire intensity and calculate an efficiency factor.

Controlled burns showed that drone-applied wetlines consistently reduced flame height. More water coverage usually led to stronger reductions. In all tests, the wet firebreak lowered flame intensity compared to pre-treatment conditions. This suggests that targeted application can be effective even with limited water. The results highlight both the potential and the limitations. These drones were designed for agriculture, not fire. They need changes such as pressurised nozzles, angled spray jets, and safer operating distances. Even so, the findings suggest that spraying drones could become a low-cost and precise tool for wildfire control in savannah-type vegetation. This evidence provides a foundation for future work with fire retardants and fire-specific drone designs.

Workshop: Step into the doughnut

15:00 - 15:50
SU Student Event Space

Doughnut Economics is a framework for sustainable living that aims to meet the basic needs of all humanity whilst staying within the ecological limits of the living planet. It does this by looking towards regenerative and distributive approaches to economics and by inviting everyone to think in ways all societies and communities need for living sustainably in the 21st century. For those unfamiliar with economics be assured this is a workshop for everyone, not just economists - and not academic in its approach. Instead we invite you to explore the Doughnut with us through an engaging, practical and physical introduction, actively moving through its different spaces and discovering its relationship with ecological planetary boundaries and the UN Sustainable Development Goals. We think you will find this a fun and engaging way to learn about an overarching framework in which all social and environmental sustainable activities can find their place.

Facilitator: Doughnut Economy

Workshop Transferable skills for sustainable leadership

15:00 - 15:50
J3003

This interactive workshop will explore the essential transferable skills that underpin success in sustainability careers. Drawing on ISEP's Sustainability Skills Map, the session will help students identify, articulate, and apply these skills effectively.

While technical knowledge is vital, sustainability professionals often rely on broad, cross-disciplinary skills to lead change, collaborate across sectors, and solve complex challenges. This workshop will encourage participants to recognise how to identify and present these important skills in CVs, job applications, and professional profiles.

Facilitator: ISEP (Institute of Sustainability and Environmental Professionals)

Workshop: Student voices for sustainability: Be the change, drive the impact

15:00 - 15:50
JG3004

Join this dynamic workshop where your voice shapes the future of sustainability in higher education. This is your chance to move beyond ideas and into action, collaborating with your university to create real change on campuses and beyond.

We'll explore:

- What drives you: Climate action, career ambitions, reputation, emotions or personal values as student's motivations matter.
- How universities can do better: Share your perspective on what works, what doesn't, and where opportunities are being missed.
- Practical strategies for influence: Learn how to engage peers, collaborate effectively, and make your voice heard in decision-making.

Through interactive discussions, group activities, and insights from the London Student Sustainability Conference, you'll discover how through collaboration you can inspire action and amplify impact that can transform sustainability in higher education.

Facilitator: London Higher

Workshop Climate Fresk taster session: From emotions to actions

15:00 -15:50
JG4002

This taster session introduces participants to Climate Fresk, a collaborative, science_based game that helps people understand the causes and consequences of climate change. Together, we'll explore how the tool works, why universities are embedding it across their campuses, and how it supports deeper climate literacy and collective action.

The session creates a space to sit with your emotions and acknowledge the feelings that emerge when confronting the realities of the climate crisis. This reflective pause helps participants process their responses and begin connecting them to meaningful action.

Participants will:

- Get an introduction to the Climate Fresk methodology
- Learn how the game is being integrated into campuses culture and curriculum
- Reflect on emotional responses to climate knowledge in a supportive environment
- Identify individual and collective actions they can take
- Explore their spheres of influence and commit to practical next steps

Facilitator: LSSC26 partner universites

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