THE
LONDON
STUDENT

SUSTAINABILITY CONFERENCE 2022

Thursday 24 February 2022

Join the conversation #LSSC22

Follow us
@cityuniversitylondon
@kings_sustainability
@SustainableUCL
@UniWestminster
@SustainableLSE
@imperialcollege

Follow us
@sustain_city
@KCLSustainable
@SustainableUCL
@UniWestminster
@SustainableLSE
@imperialcollege

In collaboration with:

CITY
UNIVERSITY OF LONDON
—— EST 1894 ——

KING'S
College
LONDON

LSE
THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE

UNIVERSITY OF
WESTMINSTER

UCL

Imperial College
London

" Foreword

Welcome back to the London Student Sustainability Conference, now in its fourth year and once again taking place online. Over the last few years we have seen some fascinating and thought-provoking presentations delivered by students from across London institutions and this year is no different.

Building on our past success and the partnerships forged through previous events, this year's Conference is a collaboration between six London universities; City, University of London, Imperial College, King's College London, London School of Economics, UCL and the University of Westminster. We are each committed to embedding the UN Global Goals for Sustainable Development into our education, research, leadership and operational activities. The Conference provides a valued opportunity to engage with students and connect with others beyond our institutions on the challenges and opportunities highlighted by the Goals.

Throughout the development of this year's Conference, our first Student Delivery Group has bought the student voice to the front and centre of decision making and resulted in some new and exciting aspects of the Conference experience.

We hope these innovations support you in developing your understanding of the Goals, exploring your own interests and connecting with others. While the individual presentations may focus on specific goals, we want to highlight the interconnected nature of the framework and the necessity of working in partnership across disciplines to achieve them, a principle we have sought to embed through the development of the Conference.

Thank you to all the students and colleagues who have been involved this year and to everyone joining us on the day. We hope you enjoy the Conference and are inspired by the student presenters to #Take Action going forward.

Please do join the conversation online (#LSSC22) and we look forward to welcoming you to our in person networking event, taking place directly after the Conference, to continue the conversation.

**London Student Sustainability Conference
2022 Steering Group**

Programme

12.30	**Welcome address** ▶ Join the session here.

Professor Sir Anthony Finkelstein CBE, President at City, University of London
Ms Alyssa Gilbert, Faculty of Natural Sciences, The Grantham Institute for Climate Change at Imperial College London
Julie Molenaar, BSc Philosophy, Politics and Economics at UCL

13.05 Session 1

Goal 11: Sustainable Cities and Communities Chair of session: Robert Compton ▶ Join the session here.	**Goal 13: Climate Action** Chair of session: Julie Molenaar ▶ Join the session here.	**Workshops** Chair of session: Lara Gabbitas ▶ Join the session here.
The Green Enterprise Institute: catalysing a global youth movement in corporate sustainability *Leonard Alf, King's College London*	Come together: The challenge of realigning UK domestic policy with the goals of the Paris Agreement *Olivia Hall, King's College London*	What are the Sustainable Development Goals? *Dain Son Robinson, Sustainable Development Goal Coordinator, University of Westminster 30 mins*
Global city challenges to sustainability: Londoners' attitudes and preferences in adopting sustainable lifestyles. *Rifah Nanjiba, The London School of Economics and Political Science*	Protecting forests: California's best defence against wildfires and climate change *Maimoona Junjunia, King's College London*	Water Warriors: It's not just about water *Workshop with the UCL WASH Society*
Global goals meet local responsibility – climate emergency declarations and the (in)action taken by London boroughs *Environmental Law Policy Clinic, City, University of London*	Cerita Climate Community: knowledge production of climate action from youth perspective in Indonesia *Dhita Mutiara Nabella, UCL*	

14:05	**Changeover**

14:10	***Glasgow Caledonian University London showcase introduction, Professor Titus Kehinde Olaniyi Glasgow Caledonian University London*** ▶ Join the session here.

14:15 Session 2 – Glasgow Caledonian University, London Showcase

Goal 1: No Poverty Goal 8: Decent Work and Economic Growth Goal 7: Affordable and Clean Energy Goal 9: Industry, Innovation and Infrastructure Goal 11: Sustainable Cities and Communities Chair of Session: Lara Gabbitas ▶ Join the session here.	**Goal 11: Sustainable cities and communities Goal 13: Climate Action Goal 16: Peace and Justice Strong Institutions** Chair of session: Yu Xua ▶ Join the session here.	**Goal 3: Good Health and Well-being Goal 9: Industry, Innovation and Infrastructure Goal 11: Sustainable Cities and Communities Goal 16: Peace and Justice Strong Institutions** Chair of session: Julie Molenaar ▶ Join the session here.
Closing the SDG financial gap in Africa: Identifying and addressing systemic barriers to Blended Finance interventions *Akingbehin Kehinde Oyelowo, Glasgow Caledonian University London*	International Environmental agreements and state Duty of Care to adapt to climate change in Westphalian societies: Focusing on the legal complexities in the Global South *Adekunle Oyelusi, Glasgow Caledonian University, London*	Development of a sustainable corporate governance and earnings management framework of quoted manufacturing firms in Nigeria *Jephter Amadi, Glasgow Caledonian University London*
People in transitions: Business model for engendering sustainable energy prosumers in the Global South: a case study of Sub-Saharan Africa *Nkechiwetalu Nwankwo, Glasgow Caledonian University, London Campus*	Development of soft power framework using religion an instrument of peace: Lebanon as a case study *Walaa Harb, Glasgow Caledonian University*	Sustainable Development Goals: Using big data to build strong institutions and partnerships in Global South public agencies *Andrew Ogonna Ozumba, Glasgow Caledonian University, London*
Development of sustainable Enterprise Risk Management (ERM) framework for transport sector in the Global South: A model of inclusive society *Hassan Kareem, Glasgow Caledonian University*	Sustainable megacities planning and its assessments in Global North and South: A case study of Federal Republic of Nigeria *Abraham Rasheed Adeyemi, Glasgow Caledonian University, London.*	Stakeholder outreach of risk-based process safety management: Panacea to good health and wellbeing in Niger – Delta, Nigeria *Akeem - Akorede - Sulaimon Glasgow Caledonian University, London*

15:15	**Changeover**

15:20 Session 3

Goal 3: Good Health and Wellbeing Goal 7: Clean and Affordable Energy Goal 11: Sustainable Cities and Communities Chair of session: Titus Kehinde Olaniyi ▶ Join the session here.	**Goal 5: Gender Equality Goal 10: Reduced Inequalities** Chair of session: Georgia Cavanagh	**Workshops** Chair of session: Yu Xuan ▶ Join the session here.
The impact of waste metals on waste-to-energy technology *Abbey Kollar, City, University of London*	The fight for freedom: Combatting modern slavery and human trafficking *Ishaan Shah, King's College*	What are the Sustainable Development Goals? *Dain Son Robinson, Sustainable Development Goal Coordinator, University of Westminster 30 mins*
Behavioural symptoms in severe dementia and environmental light: how wearable devices can improve our knowledge about dementia and quality of care? *Ta-Wei Guu, King's College London*	Speak out: Why 'Otis' SECRET counselling centre', not 'Sex Education' in South Korea? *Jeong Yeon Cho, King's College London*	Water Warriors: It's not just about water *Workshop with the UCL WASH Society*
The management of transboundary movements of electrical waste *Nedal Harris-Ghosheh, University of Westminster*	Tabu.id: Empowering Indonesian youth through media-based comprehensive sexuality education *Levina Adiputri, UCL*	

16:20	**Changeover**

16:25 Session 4

Goal 9: Industry, Innovation and Infrastructure Chair of session: Titus Kehinde Olaniyi ▶ Join the session here.	**Goal 12: Responsible Consumption and Production** Chair of session: Scarlet Prentice ▶ Join the session here.	**Workshops** Chair of session: Georgia Cavanagh ▶ Join the session here.
Smart and sustainable shipping *Nikhail Vaswani, City, University of London*	Fashion Entrepreneurship as a pathway to poverty alleviation in Sub Saharan Africa: A case study of AfDB fashionomics initiative *Jane Obonyilo, Glasgow Caledonian University*	What are the Sustainable Development Goals? *Dain Son Robinson, Sustainable Development Goal Coordinator, University of Westminster 30 mins*
The un-sustainability of electric vehicles *Livia Kappus, King's College, London*	Sustainable textile: Reusing and repurposing clothing *Jessica Abdul Matin, University of Westminster*	How to collaborate *Kaye Song and Negar, Taatizadeh Architecture MArch students, Bartlett School of Architecture, UCL*
Revolutions in the automotive industry: A better understanding of fuel cells *Irene Mavrantonaki, UCL*	The implementation of hydroponics system in Maharashtra; Solving India's agricultural crisis with sustainable technology *Rajlakshmi Patil, UCL*	

17:25	**Closing remarks** ▶ Join the session here.
17:30	**Conference end**

Sustainable Development Goals

Created by City, University of London to provide an opportunity for students from across London to share their sustainability research and extra-curricular projects, the London Student Sustainability Conference is now in its fourth year. In 2022, the conference is expanding through our collaboration with five partner universities:

Imperial College London
King's College London
The London School of Economics
  and Political Science
University College London
University of Westminster.

The conference features as a key part of all institutions' work to support the Global Goals.

The Steering Group which represents all six partner Universities consists of:

Georgia Cavanagh, *Green Impact Kick Starter Intern, UCL*

Alexandra Hepple, *Sustainability Officer, King's College London*

Sam Lee, *Deputy President, Finance & Services, Imperial College Union*

Professor. Paul D. Lickiss, *Professor of Organometallic Chemistry, Academic Leader for Sustainability, Imperial College London*

Scarlet Prentice, *Sustainability Communications and Engagement Officer, The London School of Economics and Political Science*

Dain Son Robinson, *Sustainable Development Goal Coordinator, University of Westminster*

Arthur Shearlaw, *Sustainability Engagement Coordinator, City, University of London*

Eleanor Simes, *Head of Sustainability, City, University of London*

Student Delivery Group

The Student Delivery Group was formed for the first time for 2022 in order to feed into the planning and delivery of the conference. This has bought the student voice to the centre of the decision making process and resulted in some innovative aspects of the Conference. The Student Delivery Group members come from across London and have contributed innovative ideas and perspectives to this year's Conference.

Meet the team:

Katy Baker, *UCL*

Zsofia Bekker, *UCL*

Lydia Chen Qi Yue, *UCL*

Camille Darbo, *King's College London*

Trizzha Feliciano, *UCL*

Tsz Fung chiu, *UCL*

Lara Gabbitas, *UCL*

Joosung Ha, *UCL*

Aanchal Jain, *King's College London*

Merve Karabeyeser, *UCL*

Dian Kharisma, *UCL*

Chelsea Lear, *University of Westminster*

Yilin Lei, *King's College London*

Eirini Mavrantonaki, *UCL*

Kshitija Mishra, *King's College London*

Julie Molenaar, *UCL*

Dhita Mutiara Nabella, *UCL*

Rana Nafisa Nurdina, *UCL*

Isabelle Osborne, *UCL*

Ella Rickers, *King's College London*

Sai, *University of Greenwich*

Angelina Samanya, *King's College London*

Disha Takle, *UCL*

Ugne Vilkeviciute, *UCL*

Cheng Yu Xuan, *UCL*

Speakers

Ms Alyssa Gilbert

Faculty of Natural Sciences, The Grantham Institute for Climate Change at Imperial College London

Alyssa Gilbert is the Director of Policy and Translation at the Grantham Institute – Climate Change and the Environment at Imperial College London where she connects relevant research across the university with policy-makers and businesses. She is also the Chair of the COP26 Universities network, which brought together academic expertise on climate change ahead of the international negotiations in November 2021. Prior to joining the university, she worked at a specialist energy and climate consultancy for 12 years on a range of climate change mitigation and adaptation topics. Alyssa has worked with the UK and many other national governments and at the international level. She is a previous member of the Natural Environment Council's Advisory Network.

Julie Molenaar

BSc Philosophy, Politics and Economics, UCL

Julie is currently a first year Philosophy, Politics and Economics student at University College London. As a committee member for the Climate Action Society and on UCL's Student Sustainability Council, she is passionate about ensuring the youth voice is heard in bringing about a sustainable future. This passion inspired her to become a member of the Student Delivery Group for the London Student Sustainability Conference 2022, in which she has worked to elevate the student voice within the delivery of the Conference as well as to ensure a wider platform for its presenters.

Professor Titus Kehinde Olaniyi

Professor of Sustainable Energy Planning and Management, Glasgow Calendonian University London

Professor Titus Kehinde Olaniyi is the Academic Lead, Engineering, Environment and Sustainability and a Professor of Sustainable Energy Planning and Management at the Glasgow Caledonian University London. His PhD from London South Bank University is entitled 'Decision Support Systems for Sustainable Energy Planning in a Developing Economy'. He adopts System Thinking/ System Dynamics as sustainable decision support paradigm for planning and policy formulation. His teaching, research and consultancy services include energy, aerospace, information, communication technology and systems.

Workshops

Water Warriors: it's not just about water

Workshop with the UCL WASH Society

London is a dry city with half the annual rainfall of Sydney.

Living in cities, we know so little about our own relationship with water and how it interplays with other aspects of our life.

Join UCL Water, Sanitation and Hygiene ('WASH') Society to critically explore Global Goal 6: Clean Water & Sanitation. We will emphasise the importance of promoting universal access to WASH and note its relevance to issues including climate change, human and women's rights and public health.

We'll also highlight the work conducted by our partner charity – WaterAid UK – as well as upcoming volunteering opportunities, within the charity sector, for you and even your university society.

What are the Sustainable Development Goals?

Dain Son Robinson, Sustainable Development Goal Coordinator, University of Westminster

At the six partner universities hosting the London Student Sustainability Conference we are committed to empowering our students to making a positive social, economic and environmental impact through their actions. We do this by using the 17 Global Goals for Sustainable Development set out by the United Nations as a blueprint to contribute towards building a sustainable future.

Join us to find out more about the Goals and how each one must be achieved in order to secure a fair and just society for all.

How to Collaborate

Kaye Song and Negar Taatizadeh Architecture MArch students, Bartlett School of Architecture, UCL

Two Architecture MArch students from the Bartlett School of Architecture (UCL) present their collaborative work and lead a collaborative drawing workshop on the theme of sustainable land use.

It's clear that working together is fundamental to tackling the complex and interrelated issues of our times, so what tools do we have to ensure we can collaborate in fair, productive and meaningful ways? Far from simply dividing the work, collaboration requires designing frameworks for multiple people to work within and is also a critical ground for inspiring creative results. Having collaborated for a year in their master's programme in Architecture at UCL, Kaye and Negar are students who will present their methods for designing a collaborative project, and what wider relevance it has to cross-disciplinary practice. The session will conclude with making a collaborative Land Drawing.

Networking Event

Thursday 24 February, 6:30pm − 8:30pm at University of Westminster, 309 Regent Street, London W1B 2HW

All presenters, delegates and speakers are invited to the London Student Sustainability Conference networking event taking place following the conference.

We hope to use this event as an opportunity to exchange knowledge, network, celebrate the endeavors of our fantastic student presenters and reflect on the great progress we are making across London universities towards sustainable development.

Posters from our student presenters will be exhibited across the partner university campuses. There will be opportunity to view the posters at the event, with interactive elements to inspire discussion and networking.

We look forward to seeing you there.

Student presentations

11 SUSTAINABLE CITIES AND COMMUNITIES

▶ Join the session here.

13:05 – 14:05

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS

The Green Enterprise Institute: Catalysing a global youth movement in corporate sustainability

Leonard Alf, King's College London

The Green Enterprise Institute, is a student-run organization which believes that business can catalyse the restoration of harmony between humankind and planet earth, instead of perpetrating its irreversible degradation. Our mission is to accelerate the transition to a humane, equitable, climate resilient and socio-environmentally sustainable world economy, by providing a platform for stakeholders at the intersection between enterprise and the environment.

Since our founding, in October 2020, we have produced a podcast, blog and a webinar series to bring environmental enterprise themes to the general public. We have also designed a Green Leadership workshop for secondary school students, conducted research at the National University of Singapore and partnered with several world-class organisations that aim to help businesses become carbon-neutral and future-fit. We see ourselves as a think-and-do-tank that conducts cutting-edge research, and passes it on to future green change makers.

In 2022 we are radically expanding community engagement, leveraging our current foundation to educate, inspire, inform and empower action. In particular, we want to engage with students young entrepreneurs, assisting in the ideation, enactment and certification of their Green Enterprises. First, we are coordinating our six research departments (energy, policy, law, finance, healthcare and agriculture) to release twelve professionally produced reports which will serve as the cornerstone for sector-specific engagement. In addition, we are launching several full-scale workshops for secondary school students, conducted by our volunteer staff. Lastly, we are planning a green enterprise consultancy and incubator, to support green business leaders in developing and scaling their projects.

We envision the transformation of our community into one of climate warriors striving to use business to fulfil the Global Goals for Sustainable Development. While placing a particular emphasis on the Global Goal 13: Climate Action, we value a holistic approach which addresses all goals in safeguarding the equal rights of all social groups, living beings, ecosystems and landscapes.

Beyond studying Philosophy, Politics, and Economics at King's College London, Leonard is the founding director of The Green Enterprise Institute, a researcher at Oxford University's Net Zero initiative and president of Alf Green Enterprises PBC, a public benefit corporation dedicated to mainstreaming socio-environmental corporate sustainability. For more information visit, www.leonardalf.com.

11 SUSTAINABLE CITIES AND COMMUNITIES

▶ **Join the session here.**

13:05 – 14:05

Global city challenges to sustainability: Londoners' attitudes and preferences in adopting sustainable lifestyles

Rifah Nanjiba, The London School of Economics and Political Science

Increasing and intensifying climate disasters around the globe has shifted the world's attention on how to address the issue of climate change. The majority of the focus often lies with the world leaders, as seen at COP26 and their discussions around ending large-scale environmental harm such as deforestation and fossil fuel use, but little attention goes to the individuals who have the power to drive change through their everyday lives: citizens.

My project acknowledges the agency of ordinary London citizens in enhancing their own health and wellbeing (Goal 3) while taking climate action (Goal 13) through responsible consumption and production patterns (Goal 12). Using questionnaires that include topics ranging from general waste and recycling practices, car ownership and use of the TFL, to shopping preferences and food consumption, 50 London citizens from diverse backgrounds were interviewed to examine what their attitudes and preferences are regarding sustainable living in London. More specifically, the project sheds light on the socio-cultural barriers that exist in global cities which prevent the transition of cities and communities around the world to becoming truly sustainable (Goal 11). The focus on London's citizens is significant as this global hub resides and engages with people and their practices from around the world. Therefore, the findings are applicable to many cities around the world, including other global cities such as New York and Paris – which have similar living standards and lifestyles found in London. The findings of this work not only provide a deeper understanding of what sustainability means to individuals but also have policy implications as it is essential to consider the needs and perspectives of individuals when planning for an inclusive, sustainable future.

Rifah is a London School of Economics and Political Science Master's student (Human Geography and Urban Studies) and a 2021 graduate from Royal Holloway, University of London with a First-Class Honours in BA Geography. She is aspiring to work in research and policy, with a particular interest in Sustainability and Development.

11 SUSTAINABLE CITIES AND COMMUNITIES

▶ **Join the session here.**

13:05 – 14:05

Global goals meet local responsibility – climate emergency declarations and the (in)action taken by London boroughs

Environmental Law Policy Clinic, City, University of London

In 2020, City Law School has teamed up with the Environmental Law Foundation to launch an Environmental Law Policy Clinic (ELPC). Student researchers reviewed and analysed public information available on climate emergency declarations (CEDs) made by public authorities in London since 2019 and any action taken prior to or post-CED. The published report (**www.city. ac.uk/__data/assets/pdf_file/0006/641229/ CU-CED-London-4.10.21.pdf**) serves the purpose of gaining a deeper understanding of climate emergency commitment across London boroughs.

Students were assigned a number of local authorities and carried out a desktop analysis of online information readily available on their respective Local Authorities' (LAs) climate change engagement based on a standardised Climate Action Survey. This analysis was followed by a rather qualitative research approach, i.e., using the tool of Environmental Information requests seeking to clarify the LAs' work and efforts regarding the climate emergency and fill in some of the identified research gaps.

Despite some systematised action plan structures, it was not always evident how specific actions would account for emission reductions and gaps were identified regarding monitoring mechanisms or compliance with goals set in the CED or by other means. As a result, researchers have found that there is still considerable work to be done to ensure that LAs are not only taking action but also effectively secure carbon reduction through these actions.

With regard to community involvement, it was notable that many LAs have held public consultations on climate change or allowed the public to feed into their climate action plan or strategy but had no provisions for community involvement when it comes to implementing climate action plans. This year the clinic will build on these findings. Students are now focusing more on the areas of community involvement and green decision-making and analyse how climate action aligns with the outcomes of COP26.

The ELPC consists of a group of law students from City, University of London, who all have a strong interest in environmental law and policy. Most students worked in sustainability-related projects before, but for some this is an area that they have just recently found a strong interest in.

13 CLIMATE ACTION

▶ **Join the session here.**

13:05 – 14:05

Come Together: The challenge of realigning UK domestic policy with the goals of the Paris Agreement

Olivia Hall, King's College London

This project focuses on identifying the factors that have led to some UK domestic policies not being in alignment with the goals set in the Paris Agreement to meet Goal 13: Climate Action. Through the case study of the proposed third runway at Heathrow airport, these root causes will be contextualised, providing an explanation of this misalignment.

Particularly in the run up to and during COP 26, much non-academic and academic literature focussed on the UK's success in this field. Declaring the nation a 'climate leader', the instances of policy success have been frequently highlighted. However, to become a true leader, failures must also be interrogated to highlight available areas of improvement. This project aims to bridge the gap and suggest the next steps for rectification. From uncovering the drivers of policy misalignment, the project aims to create a set of recommendations for policymaking at the national scale.

Emerging themes from the data suggest that a fundamental factor at play is the imbalance of weightings of stakeholder voices. Drawing on academic theories such as the Advocacy Coalition Framework and Policy Network Analysis, the research shows that the business case and short-term voices are often prioritised over long-term environmental commitments. This project therefore aims to create a framework of guidance, advising national policymakers on how to rebalance the power between stakeholder views and create successful policies for all stakeholders. Alongside a retrospective use, these recommendations can guide the development of future UK domestic policies to ensure they meet Goal 13: Climate Action. With this reframing of policy at the top-level, the context framing businesses and the UK will be geared towards reducing the UK's climate impact, helping to create a sustainable society in the UK.

Olivia is a third-year Business Management student at King's College London. She is interested in creating practical solutions to balance conflicting stakeholder needs in environmental scenarios. She has secured a graduate role at Deloitte and is looking forward to helping organisations overcome the challenges associated with their climate impact.

13 CLIMATE ACTION

▶ **Join the session here.**

13:05 – 14:05

Protecting Forests: California's best defence against wildfires and climate change

Maimoona Junjunia, King's College London

In recent years, exacerbating effects of climate change, poor forest management and human activities have changed the characteristics of forest vegetation, altering fire regimes in many regions. This increase of wildfires in ecosystems that are not adapted to fire could have immense impacts on the biodiversity, ecosystem services, livelihoods and national economies which are dependent on them (IUFRO, 2018). Scientists have estimated that wildfires emitted approximately 8 billion tonnes of carbon dioxide per year for the past 20 years (NFPA, 2020). Therefore, considering the current climate crisis, it is imperative to address wildfires and current forest protection practices.

The worldwide attention regarding recent wildfire trends has focused on Western USA, California as the increases in state-wide burned areas were dramatically punctuated in recent years. While California's climate has always been fire-prone, its annual wildfire extent has increased five-fold since the early 1970s.

Land ownership and primary management objectives in pertaining economic/carbon benefits play an integral role in wildfire probability. Therefore, the report focuses on California's largest private landowner and timber provider, Sierra Pacific Industries (SPI). The dominating form of forest management at SPI is clearcutting; replacing mature forests with dense plantations that create highly flammable fuel conditions.

Empirical research has made it evident that the best way to minimise the threat of wildfires is to improve California's best defence against the effects of climate change: forests (UN DESA, 2021). However, with stakeholders ranging from communities, US Forest Service and private landowners, priorities vary drastically. As a highly interconnected problem, a qualitative approach (interviewing experts at California Fire Science Consortium) is undertaken to interpret the wildfire phenomena in social reality. The project aims to produce a policy brief for SPI to assist California in their efforts to reduce the risk and impacts of wildfires.

Maimoona is a final year student studying Business Management at King's College London. Being acutely aware of the current climate emergency she developed a keen interest in human-nature interactions with sustainable practices. She has worked over three years at a social-impact startup with a focus on Global Goal 4: Quality Education.

13 CLIMATE ACTION

▶ Join the session here.

13:05 – 14:05

Cerita Climate Community: Knowledge production of climate action from youth perspective in Indonesia

Dhita Mutiara Nabella, UCL

Cerita Iklim (Climate Stories) is a community of young people in Indonesia that moves to understand climate change issues through a digital platform. The Cerita Iklim Project started in May 2020 and has more than 10 thousand followers on Instagram. There are three products available from Climate Stories: Journal Review, Podcasts, and Active Discussions. The idea of the Journal Review was inspired by the many exciting findings of climate change, but unfortunately, there are still many young Indonesians who do not understand this information. One of the biggest obstacles is language, therefore, we aim to review journals about the latest climate developments in an engaging, easy-to-understand way using the Indonesian language. We strive to make Cerita Iklim an inclusive platform so that anyone can learn about the issue of the climate crisis.

Therefore, we also provide audio through podcasts where we invite experts to discuss their interests. The third product is an active forum for youth discussions with relevant stakeholders to examine current issues. Cerita Iklim is working to involve and engage with various sectors, including the government, private sector, NGOs and indigenous peoples. One thing that distinguishes the Cerita Iklim discussion from other webinars is a breakout room led by a facilitator as a forum for youth to express their opinions. Cerita Iklim community has also collaborated with more than 150 organisations, both locally and internationally. We hope that the Cerita Iklim community can continue developing educational products related to the climate crisis to motivate future generations to continue taking climate action.

Dhita Mutiara Nabella, founder of the Cerita Iklim community, is currently studying for a Master's degree in the Environment and Sustainable Development programme, at UCL. She graduated with a Bachelor's degree in Biology at the University of Indonesia and works at the Research Centre for Climate Change. She is also the Chairperson of the Indonesian Student Association.

1 NO POVERTY | **8 DECENT WORK AND ECONOMIC GROWTH**

▶ Join the session here.

14:15 – 15:15

Closing the SDG financial gap in Africa: Identifying and addressing systemic barriers to Blended Finance interventions

Akingbehin Kehinde Oyelowo, Glasgow Caledonian University, London

The Global Goals for Sustainable Development are widely acknowledged as a vital component of the 2030 Agenda. At the development level, Africa nations will need to accelerate economic growth in sustainable manner. However, according to the United Nations, the financial requirement for achieving the Goals in Africa by 2030 is estimated at $1.3 trillion annually whereas the capacity of the countries' is just 53 per cent. Yet, the region is facing the widest funding for the Goals.

Framed as a concept to strategically use development finance and philanthropic funds to mobilise private capital funds for the Goals in developing countries, it is believed that Blended Finance (BF) has the potential to provide de-risking component and mobilise private capital from 'billions to trillions' and thus catalyse the flow of financing to the Goals in Africa.

However, the local dimension remains the most significant challenge for BF actors (Convergence, 2020). This explains the insufficient local involvement in BF solutions in developing economies and why Bilal (2019) argues that the

local dimension is the raison d'etre and rationale for BF intervention. Whilst some research has been carried out on the subject matter, previous studies have failed to investigate the leverage points within which the approach can deliver scale and impact in Africa.

While sustainability research necessitates the need for complex thinking and collaboration across sectors, the structuring of finance through blended vehicles is also complicated with legal, culture and tax issues and the prevalence of autonomous actors with different mandates. Therefore, this research proposed the adoption of a Systems Thinking/System Dynamics methodology. It argues that the problems under exploration is not only complicated and trans-disciplinary in nature but also non-linear with feedback loops, two-way interconnections and interrelationships. Thus, by proactively and systematically identifying potential sensitive intervention points within the BF architecture in Africa, it will define changes that are feasible and desirable.

Kehinde is a doctorate researcher at Glasgow Caledonian University, London, where he completed his MBA in Energy and Sustainability in 2020. His research interests include: impact investing, blended finance, development finance and monitoring and evaluation.

7 AFFORDABLE AND CLEAN ENERGY

▶ Join the session here.

14:15 – 15:15

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE   **11 SUSTAINABLE CITIES AND COMMUNITIES**

▶ Join the session here.

14:15 – 15:15

People in Transitions: Business model for engendering sustainable energy prosumers in the Global South: A case study of Sub-Saharan Africa

Nkechiwetalu Nwankwo, Glasgow Caledonian University, London

Energy is one of the key factors enabling the achievement of Global Goals for Sustainable Development. The development of the energy sector plays an important role both in ensuring access to electricity and stimulating economic growth by increasing the country's export potential. It is also important in creating employment, eradication of poverty through advancements in health, education, water supply, reducing inequality and industrialisation to combating climate change. However, the current energy system is dominated by fossil fuel (which has negative effect on the environment and is finite), calling for a global shift to a more sustainable energy system. The role of individuals and local communities' prosumers (producing energy for their own consumption) in the Global North has been used as a conduit for developing these low-emission economies through decentralised production, consumption of renewable energy, greater participation and decision-making roles in energy production.

Sub-Sahara Africa has one of the lowest access rates to modern forms of energy. Over 600 million Africans lack access to adequate electricity and 890 million still depend on unsafe traditional fuels which significantly inhibits further economic growth and socio-economic development.

Nkechi Nwankwo is a PhD student at Glasgow Caledonian University, London, where she currently lectures on the MSc. Environmental Management Programme. She holds a BSc in Oil and Gas Management from Plymouth University. Her research interests include Energy Transition and Planning, Sustainability, Systems Thinking/System Dynamics and Global South.

Development of sustainable Enterprise Risk Management (ERM) framework for transport sector in the Global South: A model of inclusive society

Hassan Kareem, Glasgow Caledonian University, London

This paper proposes the development of a sustainable Enterprise Risk Management (ERM) framework for Transport Sector in the Global South (GS) and addresses the role of inclusive society. Sustainable transport systems make a positive contribution to the environmental, social and economic sustainability of the communities they serve, in fact, transportation is key to the economic development and growth of any country as it connects people and places through cultural, political, social and economic interactions, however, the transport sector in GS is dominated by road transportation (Onokala and Olajide, 2020). Departments of Transports manage a multitude of human, technological, political, technical and natural resources in an environment that is fraught with uncertainty. To ensure success, these agencies must be able to manage risks at multiple levels (Hallowell, et al, 2013). Among the complexities noted in the GS include under-investment in critical transport infrastructure; high population growth; lack of maintenance and diversity in mode of transportation; urbanisation-induced congestion, lack of planning tools to enhance transport logistics. These complexities create non-linearity, feedback and delay resulting in transport planning challenges and associated uncertainties in the GS. The main objectives of this paper are to highlight the main transportation challenges in the Global North (GN) and compare it with that of GS countries using a holistic systemic thinking paradigm. This will include examinations of the various sustainable framework within the context ERM deployment for the GS and synthetisation of key stakeholders' public opinion. The paper contributes to knowledge and literatures by developing a model for viable transport infrastructure in the pursuit for economic growth in the GS and thereby aligning with Goal 9: Industry, Innovation and Infrastructure and Goal 11: Sustainable Cities and Communities.

Hassan is first year PhD student at Glasgow Caledonian University, London. He has a mathematical background and has completed MBA with distinction from Anglia Ruskin University. He is an advocate of SDGs and is combining his knowledge, expertise and mentoring skills working with his supervisors to develop his project further.

Join the session here.

14:15 – 15:15

Join the session here.

14:15 – 15:15

International Environmental agreements and state Duty of Care to adapt to climate change in Westphalian societies: Focusing on the legal complexities in the Global South

Adekunle Oyelusi, Glasgow Caledonian University, London

This presentation explores the role that a state Duty of Care to implement international environmental agreements has on minimising the impact of climate change through adaptation. It considers a special focus on the legal complexities in the Global South (GS) using Nigeria as a case study. Managing the legal complexities while addressing climate change adaptation requires a different approach from mitigation, more so in the GS given the dynamics of the judiciary. Resolving the legal complexities will require an implementation framework in conjunction with international environmental agreements as described in Goal 13: Climate Action. However, the political will to implement this (for a diverse range of reasons) is absent in some GS societies. As citizens are no longer content with government inertia, there is the opportunity of holding these

States accountable by imposing a duty of care through litigation or as a consequence of ratifying international environmental agreements due to the legal complexities. In resolving the above, this presentation reviews relevant literature to identify the inherent complexities in respect of the implementation of international agreements, with a focus on duty of care in a sovereign GS. A methodological paradigm that addresses issues and complexities of imposing a state duty of care is proposed, with the object of proffering lasting solutions that encompass collaborative efforts to tackle the issue of climate change adaptation in the GS. It concludes by making informed recommendations for policymakers and their advisers in the utilisation of the proposed framework.

Ade Oyelusi is a PhD student at Glasgow Caledonian University, London, where he researches Law and Climate Change in the GS. He graduated from Plymouth University in 2018 with an LLB(Hons) and a MBA from Glasgow Caledonian University, London, in 2020. Ade previously worked in the IT industry in Ireland.

Development of soft power framework using religion as an instrument of peace: Lebanon as a case study

Walaa Harb, Glasgow Caledonian University, London

This presentation helps to reach Goal 16: Peace, Justice and strong Institutions, since it aims to find out how religion can be used as instrument of peace in order to improve the state of Lebanon and it's governance.

This research will study how religion can be used as a soft power in order to establish peace in Lebanon. Lebanon officially recognizes 18 religious sects. The diversity of these sects are

among Muslims, Christians, Druze and Judaism. The parliament seats are divided between all the sects and the main political positions are also set according to the majority of religions. This diversity made the country a target for countries with external power and allowed the interference of Western and Eastern powers into the country. This research highlights the multiple actors and factors which influence the politics of Lebanon.

Walaa Harb, a PHD student at Glasgow Caledonian University, London. Walaa is an instructor of Communication Arts at the Lebanese American University in Beirut. She teaches Journalism, Public relations and Oral Communication courses. Her Masters was obtained from the University of Westminster in International Communication and Liaison. She has knowledge in the Middle East Region conflicts and is living in Beirut. Walaa is interested in the work of politics, peace, and Diplomacy.

11 SUSTAINABLE CITIES AND COMMUNITIES

▶ **Join the session here.**

14:15 – 15:15

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

▶ **Join the session here.**

14:15 – 15:15

Sustainable megacities planning and its assessments in Global North and South: A case study of Federal Republic of Nigeria

Abraham Rasheed Adeyemi, Glasgow Caledonian University, London

Through a literature review focusing on Goal 11: Sustainable Cities and Communities (and cutting across many other Goals) the study aims to provide a conceptual framework to analyse the global concept of a sustainable city. Considering whether the concept, produced as a goal in the cities of the Global North (GN), will be equally suitable in the cities of the Global South (GS). The author affirmed that sustainable city should not be a goal, but a principle of effective and efficient service provisions based on social equity and justice. As more than half of the world's population lives in urban areas, cities are the focus of attention for researchers, policy makers, government authorities and international organisations. Sustainable city making and remaking is a great challenge predominantly in the cities of the GS, where urban population growth is unpredictable and even uncontrollable. It is predicted that with the current pace of urbanisation, approximately 65 per cent of the global population will live in the cities by the year of 2025 and almost 90 per cent of urban population will be in the GS. The pursuit of a sustainable city has emerged as a challenge, along with uncertainty on whether development policies are broadly applicable in the GS, as well as the GN. The major constraints are the dynamic nature of cities and the dependency on fit-for-all solutions based on sustainability goals for all the cities in the world. The literature revealed that, despite the main principle that a sustainable city aims to attain environmental, social and economic sustainability, the concept is broadly criticised as a result of its application in the cities of the GS. The sustainable city concept faces numerous social, environmental and economic problems in the region. Realising this fact, it is imperative to examine the root-causes of the problems. This study offers a systems thinking approach to analyse urban development policies in numerous megacities in the GN and GS.

Abraham Adeyemi was born in Africa and is currently studying for a PhD at Glasgow Caledonian University, London. He did his first degree at Greenwich School of Management then obtained an MBA on sustainable energy management at Glasgow Caledonian University, London. His interest in sustainability is a result of the extremely and urgent concern to fight the climate crisis. Abraham believes the challenge of sustainable transformation is balancing the need to keep business in motion while making changes to reach sustainability ambitions.

Development of a sustainable corporate governance and earnings management framework of quoted manufacturing films in Nigeria

Jephter Amadi, Glasgow Caledonian University, London

Over the years, studies in corporate governance have noted that stakeholders are interested in placing their businesses in the custody of those who can manage them efficiently (Abbott et al 2004; Agrawal & Chadha, 2005; Appah & Emeh, 2013). However, the amount of corporate and accounting scandals occurring in the recent decades has prompted the need to research ineffective corporate governance that has led to corporate collapse (Adewuyi & Olowookere, 2008). Some corporate governance problems are owing to financial irregularities or deliberate circumventing of ethics or regulations. Typically, corporate governance is an internal system encompassing policies, processes and people that serve the needs of shareholders and other stakeholders by directing and controlling management activities with good business practices, objectivity and integrity (Chi-Keung Man, 2013).

Jephter attained his MSc in Finance and Business from Manchester Metropolitan University and also holds MBA in International Marketing from Lagos State University Nigeria as well as BSc in Finance and Banking (Second Class Upper) from University of Port Harcourt, Nigeria. Jephter has over 10 years' experience in Finance and Banking Industry, working in various Banks within and outside the United Kingdom. A PhD Candidate at Glasgow Caledonian University and Payments and Cards specialist with a UK bank. His interests include Corporate Governance, Management, Finance and Business.

Sustainable Development Goals: Using big data to build strong institutions and partnerships in Global South public agencies

Andrew Ogonna Ozumba, Glasgow Caledonian University, London

This paper discusses innovations, leadership and management as key success factors in Global South (GS) Public Agencies. Goal 16 touches on the need for strong institutions in fostering peace and justice. Effective leadership should therefore, translate into prudent, effective governance and transparent public service delivery in meeting the needs and aspirations of citizens. A coherent implementation plan and engagement of all government departments and diverse stakeholders are equally essential.

Regrettably, this is not the norm in the public agencies in the GS (Nigeria inclusive), as most of the agencies lack quality management and leadership, there is no accountability and transparency, lack of infrastructure among others. Most of the public agencies in the GS have dysfunctional and unsatisfactory governance systems, institutions are weak and ineffective and there is lack of transparency and accountability. All these lead to low productivity and poor performance in the public agencies.

Big data technologies have been found as a suitable instrument in building strong institutions. Big data has the potential in the area of processing, organizing and analysing data in healthcare, finance, transportation, cybersecurity, energy and utilities. Potential of big data can also be found in government agencies by employing sufficient method through the collection, transformation and processing information that are generated from various sources. Big data technologies can therefore help reduce crimes and fraud, improve effectiveness and productivity, accountability and transparency in public agencies in the GS which will ultimately lead to sustainable growth and development.

The aim of the paper is therefore to use big data technologies to build strong institutions and partnerships in the GS public agencies towards attaining sustainable development goals. The research will adopt a deductive approach which aligns with positivism philosophy. Data will be collected through the use of questionnaires.

Andrew is a PhD student of Glasgow Caledonian University, London having got an MSc from University of Law in Strategic Business Management. He was a banker for over 15 years. He is a Nigerian and very interested in having strong institutions in Nigeria and the GS.

Stakeholder outreach of risk-based process safety management: Panacea to good health and wellbeing in Niger – Delta, Nigeria

Akeem Akorede Sulaimon, Glasgow Caledonian University, London

Over the years, Crude oil has been the economic mainstay of Nigeria with enormous contributions to the GDP (NNPC, 2019). However, its supply chain challenges has caused appalling damages going against Goal 3: Good Health and Wellbeing, causing ill health, deaths and other conditions of social deprivations (Oyinkepreye, et al, 2020) of the host communities due to non-adherence to international best practices. These growing challenges have persistently threatened their ecosystems; thus, the area has become a hot bed of anarchy in retaliation (Uduji et al, 2019). Unfortunately, decades of oil companies' efforts through layers of safety management system and social investments to cushion the effects are perceived by local communities as merely palliative, due to their poor engagement (Afolasade & Olatunbosun, 2015). This is coupled with weak government enforcement mechanisms of various legislative instruments (Olujobi, 2020; Zabbey et al, 2017).

Akeem is a full-time PhD student at Glasgow Caledonian University, London, and is an astute Health, Safety and Environmental professional. He completed a MSc (Hons) in Energy and Environmental Management (Oil and Gas) from Glasgow Caledonian University, London, followed by a Professional Graduate Certificate in Education and City at UCL, and a Guilds Level 5 Diploma in Occupational & Safety Practice.

3 GOOD HEALTH AND WELL-BEING	7 AFFORDABLE AND CLEAN ENERGY	11 SUSTAINABLE CITIES AND COMMUNITIES	▶ Join the session here.
			15:20 – 16:20

The impact of waste metals on waste-to-energy technology

Abbey Kollar, City, University of London

The world generates about 2 billion tons of municipal solid waste annually of which a substantial amount is landfilled. The overcrowding of landfills is a major issue because of limited space, long degradation times and potential of environmental contamination. Alternatives include environmentally harmful methods of burning, but waste conversion can be a renewable energy source. Hydrothermal Liquefaction (HTL) converts organic waste including food and plastics into energy-dense oil— a valuable fuel and chemical source— by using water and high temperatures.

Previous studies have used metals and more expensive, complicated catalysts. This study focused on industrial waste metals as potential catalysts for HTL. By using waste metals, the cost of HTL catalysis would drop and the waste would be repurposed instead of innovating new catalysts. The metals were evaluated for efficacy by the additional increase in oil yield.

The metals that positively affected oil yields were further analysed to help explain their catalytic effect. These analyses investigated elemental composition of the oil and metal particles, surface texture and size. These processes were also used to determine if the metals undergo purification after HTL, which is valuable for metal recycling purposes. Due to variability, quantitative conclusions were difficult to make. However, the project's findings indicated that HTL can be improved to increase its desirability as a landfill alternative and support future analyses of other potential catalysts to fully optimize the process.

Implementation of HTL as a renewable energy source would satisfy the United Nations' Sustainable Development Goal of Affordable and Clean Energy. In HTL, the source of energy is waste rather than fossil fuels. The crude oil can be upgraded as a fuel source for the heating and transport sectors, which currently lack renewable energy sources. Finally, the repurposing of waste metals as catalysts for the process increases efficiency while minimizing cost.

Abbey is a third year Chemical Engineering student with a minor in Economics currently studying abroad for the semester at City, University of London. She plans to pursue her PhD after graduation to continue her studies in sustainable engineering, economics and policy.

3 GOOD HEALTH AND WELL-BEING	7 AFFORDABLE AND CLEAN ENERGY	11 SUSTAINABLE CITIES AND COMMUNITIES	▶ Join the session here.
			15:20 – 16:20

Behavioural symptoms in severe dementia and environmental light: How wearable devices can improve our knowledge about dementia and quality of care

Ta-Wei Guu, King's College London

As the global population of older people increase, patients suffering from dementia are expected to rise to 78 million in 2030 and 139 million in 2050 according to WHO's statistics. However, dementia is far more than cognitive decline and studies show that the 'behavioural and psychological symptoms of dementia (BPSD)' are far more dangerous and burdensome to both the patients and their caregivers.

My study nested within the Sativex® for the Treatment of AgitatioN in Dementia (STAND trial), and aims to extend the scope of pharmacotherapy, exploring environmental and lifestyle factors of Alzheimer's dementia patients living in care homes and how these factors interact with the most injurious BPSD such as agitation and aggression. It uses both proxy reported questionnaires, structured questionnaires, as well as an innovative, objective actigraphy measurement to evaluate the change of sleep, rest-activity rhythm (RAR) to explore interactions between Sativex® treatment, agitation and sleep. It also uses wearable light sensor to detect how human behaviours rhythm can be influenced by ambient light conditions.

With this study, I plan to not only evaluate the feasibility of using wearable devises to monitor specific BPSD, but also provide novel aspects examining light-BPSD-circadian rhythm based on available data to reduce BPSD and improve quality of life in this elderly population.

Ta-wei Guu, M.D. is a certified psychiatrist and sleep medicine specialist, interested in neuroscience, sleep, aging, nutritional psychiatry, medical education and related fields. Since October 2020, he joined King's College London to explore the interactions between light circadian rhythm and agitation in dementia patients with wearable devises.

3 GOOD HEALTH AND WELL-BEING   **7 AFFORDABLE AND CLEAN ENERGY**   **11 SUSTAINABLE CITIES AND COMMUNITIES**   ▶ **Join the session here.**

15:20 − 16:20

The management of transboundary movements of electrical waste

Nedal Harris-Ghosheh, University of Westminster

This project came about when I purchased a new phone and was not sure what to do with the old one. This is a widespread issue among my age bracket and led me to research this issue further. I discovered 5,761 phone screens break every hour worldwide, and over 70 per cent of toxic pollution on landfill originates from electrical waste.

My project is aimed at young people between the ages of 14-25. Research shows this group of people generally change their technology the most to follow trends and updates, disposing of their 'old' phones frequently creating undue waste. Due to the ever-increasing issue surrounding electrical waste and the throw-away culture in a contemporary society, this project aims to address and reverse the issues surrounding shipments of electrical waste to other countries (sometimes illegally).

The pavilion interacts with the local community as it is open to anyone who wants to repair a personal item, learn new skills and be a part of the process

of helping to reverse the cycle of sending waste to other countries, and instead exporting something of use and value. My aim for the pavilion is to create a temporary space that produces useful items and materials from electrical waste. The project will attempt to address the issue of the UK being the biggest culprit in exporting electrical waste illegally and help to meet some of the United Nations Global Goals for sustainability.

The process will include taking apart, breaking down and melting metal components. The design of the pavilion is modular, allowing it to be easily set up and taken down in any location and any number of modules. This allows the proposal to meet the demands particular to any area. Whilst the main aim of the project is to recycle waste electrical items, there is also the intention of educating not only the people who participate but also the general public. This is achieved by using the waste taken from these electrical items as an integral part in forming the cladding of the pavilion exterior.

Nedal was born in London, attending primary and secondary school in West London and currently studying a BA Architecture at the University of Westminster. During research for his latest project, he explored sustainability within an urban context and was surprised to learn the extent of the issue in a contemporary society.

---

5 GENDER EQUALITY   **10 REDUCED INEQUALITIES**   ▶ **Join the session here.**

15:20 − 16:20

The fight for freedom: Combatting modern slavery and human trafficking

Ishaan Shah, King's College London

In 2017, at the age of thirteen, I founded Stolen Dreams, a global human rights organisation working with stakeholders to combat contemporary forms of slavery (modern slavery) and human trafficking. Our work concerns a number of the Global Goals, focusing on Goal 8: Decent Work and Economic Growth and Goal 16: Peace, Justice and Strong Institutions. As the first UN Office on Drugs and Crime (UNODC) Youth Focal Point for the Implementation of the UN Convention Against Transnational Organised Crime and a National Youth Representative at UN Women, Stolen Dreams works closely with the UN (and stakeholders including governments, NATO and civil society) to combat modern slavery. In 2021, Stolen Dreams worked with the Youth 7, G7, UN Conference on Trade and Development and spoke at the 65th UN Commission on the Status of Women (CSW). The current anti-slavery movement is not entirely inclusive of youth. Therefore, as a youth-led organisation, we aim to facilitate the

meaningful inclusion of youth in anti-slavery efforts. We work with educational institutions (primary and secondary schools and universities) to educate young people about modern slavery and how they can act. This year, we will co-launch the first YOUNGO (UNFCCC Official Youth Constituency) Working Group on Modern Slavery, strengthening intersections with climate change at COP27; co-create the UK's first National Youth Advisory Group on Modern Slavery; continue to act as the Youth Focal Point for UNODC; and work with UN Women to prepare for the 66th CSW and subsequent Youth Forum in March. Ultimately, Stolen Dreams is working with partners to ensure internationally coordinated, intergenerational and multi-stakeholder approaches and models are used to combat modern slavery. This means ensuring youth have a seat of equal value in decision-making spaces and are co-creators, co-leaders and co-owners of anti-slavery efforts.

Ishaan Shah is an 18-year-old international human rights advocate and founder of Stolen Dreams, an organisation working to combat modern slavery and human trafficking. He is the UNODC Youth Focal Point for the implementation of the UN Convention Against Transnational Organised Crime and Youth Representative at UN Women.

5 GENDER EQUALITY **10 REDUCED INEQUALITIES**   ▶ Join the session here.

15:20 – 16:20

5 GENDER EQUALITY **10 REDUCED INEQUALITIES**   ▶ Join the session here.

15:20 – 16:20

Speak out: Why 'Otis' SECRET counselling centre', not 'Sex Education' in South Korea?

Jeong Yeon Cho, King's College London

This project aims to reveal the reality of Korea's gender inequality and the culture which supports it. By campaigning with the 'speak out project', it also gives courage to people to speak out about inequality.

South Korea has one of the highest levels of gender inequality in the world. The gender pay gap in Korea is the highest among OECD countries (37.2 per cent in 2017), while Korean women and girls have higher levels of education. Moreover, there are only 17 per cent of female MPs in the national parliament, the fifth-lowest among OECD countries. In addition to the quantitative data, women in Korea have previously experienced invisibility, for example in the Chosen-dynasty, women had to hide their faces to go outdoors. This applied to all women, regardless of societal status.

The sense of invisibility is still present today, reflected in the attitude to many women's issues. In South Korea Netflix's UK 'Sex Education' show is referred to as 'Otis' Secret Counselling Centre'. By comparison, other East Asian countries do not refer to secrecy in the titles.

Furthermore, Korean girls and women do not refer to 'period' or 'menstruation' but use alternatives 'magical day', 'back to the nature day' or 'the day' and sanitary items are often hidden in public.

Speaking up about feminism is difficult for Korean women, as it is framed as a mental health problem. This presentation will consider how and why Korean women are invisible socially and culturally. It will then explore how the 'speak out' campaign could be used to form sympathy and solidarity among the students.

Jeong Yeon is studying BA International Development at King's College London. After she finished her high school diploma in Seoul, South Korea, she moved to London and started her foundation degree at King's College London. Currently, she is a part of KCLID and Global Social Justice Society. Her interests are inequality, education and national state strategy.

Tabu.id: Empowering Indonesian youth through media-based comprehensive sexuality education

Levina Adiputri, UCL

Due to the heavy cloud of stigma and shame regarding the topic of sex, often young people in Indonesia don't know who to ask and/or are too embarrassed to talk to someone regarding sexual & reproductive health (SRH). This has led to putting young Indonesian's SRH at risk through the high number of unsafe sex practices. This is why we created Tabu.ID, a digital initiative that aims to achieve a society who are both educated and aware about the importance of sexual and reproductive health, knowledge and information. Out of the seventeen Global Goals for Sustainable Development, our mission aligns with Goal 3: Good Health and Wellbeing, Goal 4: Quality Education and Goal 5: Gender Equality, to break the stigma around and spread awareness about, the importance of SRH as well as to increase the SRH literacy among young Indonesians. Nearly four years after its founding, Tabu has become the leading, top-of-mind, social media platform for sexual and reproductive health for Indonesian

youth aged 15-24. Since February 2018, Tabu has disseminated comprehensive, evidence-based SRH information to its now-over 117k organic followers and garners thousands of views weekly. Through our 100 per cent youth-led, youth-run, and grassroots organisation, we have been able to successfully leverage the use of social media in order to improve access to evidence-based and comprehensive SRH information, increase awareness about the importance of SRH, and also scale-up demand for SRH services among thousands of Indonesian youth. In designing our programs and content, we use principles and draw insights from a variety of fields, including human-centered design and design thinking, Social and Behavioral Change Communications, digital marketing, and digital advocacy. We create creative, innovative content; from TikTok videos to infographics, memes, tweets, human stories, and many more; targeting knowledge, skills, as well as attitudes.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

▶ **Join the session here.**

16:25 – 17:25

Smart and sustainable shipping

Nikhail Vaswani, City, University of London

There are a number of environmental issues associated with the shipping industry and options for remediation in a manner compatible with corporate objectives and the Global Goals for Sustainable Development. This presentation prioritises a balance between both corporate profits and protecting biodiversity, as the best way to convince firms to move towards a more sustainable approach to Arctic shipping.

With the increase of Arctic shipping routes being used by ships, to save time, there are increased risks to coastal communities and biodiversity. However, the logistic efficiency proposition, is not as optimal as suggested. In fact, using certain Arctic routes may increase journey lengths, risks and associated logistic costs.

Drawing upon research and Arctic knowledge, alternative routes have been outlined which have minimal impact upon biodiversity. By using these routes, impacts upon wildlife can be mitigated. Furthermore, this can bring benefits to isolated communities, such as delivery of daily supplies, job creation and connecting communities to the world. The routes have also been found to reduce journey time and can also remove the need for accompanying ships, reducing costs.

The work focuses on creating a corporate social balance and advocating for spill over benefits for communities. The presentation will conclude by providing some solutions on how these measures can be implemented, on an international scale, through global governance institutions and non-governmental organisations.

Nikhail Vaswani is a final year International Politics student at City, University of London, and holds a certificate in Sustainable Business Strategy from Harvard Business School Online. His passion for socioenvironmental sustainability has led him to research how businesses can contribute to society. He aspires to enter sustainable business consulting.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

▶ **Join the session here.**

16:25 – 17:25

The un-sustainability of electric vehicles

Livia Kappus, King's College London

My project will be based largely on my research for my dissertation which will seek to discuss the unsustainability of the extraction of minerals for use in EV batteries. Reports of human rights violations in association with electric vehicle batteries were first published by Amnesty International, describing child labour in the Democratic Republic of the Congo in mining for cobalt. Research conducted in the "Lithium Triangle" (Argentina, Chile, Bolivia), has similarly uncovered the disastrous environmental impact of cobalt and lithium mining, including the evaporation of over 90 per cent of water in the process and pollution of vital water resources for indigenous communities. The literature has emphasised substantial human rights and environmental consequences of mineral extraction and mining for use in lithium batteries. The existing marginalisation and poverty of people in the South, reminiscent of colonialism, forces people into dangerous jobs and creates a complete disregard for livelihoods. Furthermore, there are economic and developmental concerns due to foreign transnational corporations exploiting mines in the Global South and issues of supply chain transparency. Thus, this project will combine an analysis of human rights and environmental damage as well as the effects on economic development in these regions. The project will further address the (un-)sustainability of EVs in comparison to fuel-based transportation and the necessity for further technological developments in production and recycling. This project will link to Goals 6-9, 12 and 13 to address clean energy and climate concerns in terms of CO_2 emissions but also issues with water, work, economic growth and responsible consumption and production.

Livia Kappus is a third-year student studying International Relations at King's College London. Her interest in sustainability stems from courses on human rights and postcolonial political economics and her dissertation on EV batteries. She strives to focus on the side-lined human rights aspect of climate action undertaking this research.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

⊙ **Join the session here.**

16:25 – 17:25

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

⊙ **Join the session here.**

16:25 – 17:25

Revolutions in the automotive industry: A better understanding of fuel cells

Irene Mavrantonaki, UCL

Energy systems have started playing a key role in our society and renewable energy sources have become crucial for our contemporary world. My presentation will focus on understanding the recent innovations in fuel cell research. The recent research on fuel cells by important scientists will be explained and future applications will be discussed. More specifically, the different types of materials used to build these cells will be compared and insight will be given on how their functionality is tested. Finally, advantages and disadvantages will be highlighted and their future will be considered. Fuel cells have proven to be the next step in our transition to a greener future, as they are directly used to build power tools, chargers and vehicles, thus they are of major

importance for the Global Goals for Sustainable Development. The research presented will be directly linked with Goal 7: Affordable and Clean Energy and Goal 13: Climate Action, as its main focus is the transition to affordable clean energy, which will improve the stance we take towards climate action. Furthermore, there is a link with Goal 9: Industry, Innovation and Infrastructure and Goal 11: Sustainable Cities and Communities, as in the long run, these fuel cells will lead to exceptional innovations, that will support our sustainable cities and communities. All in all, we all need to take a stance and urgent action is crucial from every working sector to combat climate change and its impacts.

Irene is a third-year Chemistry student at UCL. She has a passion for research in energy systems and the future of renewable energy. Irene has various interests and different future pathways, after she graduates, she hopes to work in the United Nations or the automotive industry.

Fashion Entrepreneurship as a pathway to poverty alleviation in Sub Saharan Africa: A case study of AfDB fashionomics initiative

Jane Obonyilo, Glasgow Caledonian University, London

Clothing and textiles are the second largest employer of labor in Africa with a market value of about $31 billion in 2020. A number of Global Goals for Sustainable Development (Goal 1: No Poverty; Goal 5: Gender Equality; Goal 8: Decent Work and Economic Growth; Goal 9: Industry, Innovation and Infrastructure; Goal 12: Responsible Consumption and Production) depend largely on how macroeconomic policies are strategically positioned towards innovative entrepreneurship which supports growth, and not replicative entrepreneurship which fails to produce desired growth.

With African Development Bank's (AfDB) Fashionomics initiative as a case study, this study evaluates the nexus between entrepreneurship, entrepreneurial policy, and economic empowerment contextualized within the fashion industry in sub-Saharan Africa (SSA) to determine how fashion SMEs empower women and youth. Anchored on the Global Goals, growth metrics such as job creation, profitability, export, GDP and gender equality, will be explored in analyzing how entrepreneurial policies can effectively position the fashion industry on the trajectory of innovation.

Despite assumptions in literature that entrepreneurial policies in Africa tend towards replicative entrepreneurship, this study intends to identify the progress made and formative influences impacting the implementation of Fashionomics, as well as the conditions under which such macroeconomic policy and cardinal objectives of the Africa Union's Agenda 2063, leads to innovative or replicative entrepreneurship while predicting the eventual outcome of the entrepreneurial policy after its 10-year agenda in 2025.

The researcher will explore qualitative methods to engage policymakers at the AfDB, Ministries of Trade and Investment, fashion stakeholders and beneficiaries on how Fashinomics has been implemented. The qualitative data will be obtained by way of semi-structured interviews. Since no known study has thoroughly appraised the fashion policy, this doctoral thesis will bring fresh insights into the entrepreneurial policy and contribute new knowledge to entrepreneurship literature. The outcome of the study can make a fair generalization on its performance and develop a framework by which Fashinomics and other entrepreneurial policies may be assessed to yield Innovative Entrepreneurship.

Jane Obonyilo is a second year PhD Candidate at Glasgow Caledonian University, London. With a Master's in Fashion Business Creation, she is a Lecturer and passionate about helping Small and Medium Scale Enterprises maximise their potential, while building sustainable and ethical business models in fashion and related fields.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

▶ **Join the session here.**

16:25 – 17:25

Sustainable textile: Reusing and repurposing clothing

Jessica Abdul Matin, University of Westminster

Stitchgether is a sustainable textile initiative for the residents of Brentford (West London). It will provide a temporary space for residents to donate old clothes and create their own quilts. The sustainable pavilion structure will be created from scaffolding timber and metal framing and takes inspiration from old billboard frameworks.

The Milan Fashion Week riots about the environmental and ethical issues of fast fashion sparked my interest.

Fashion trends encourages overconsumption with clothes being thrown away or given to charity once the trend has past. Unsold clothes are disposed of, often going to landfill or developing countries. Due to the high percentage (60%) of synthetic material derived from petrochemicals, clothes can remain in landfill for 200 years.

These challenges inspired me to address responsible consumption and production by creating a space where old clothes could be reused, as well as serve a new purpose for the community. The project consists of delivering interactive workshops. Donated clothes are displayed on the pavilion façade and are then transformed into quilts during workshops with local residents.

Participants can take home their creation, a memento that can be used as a blanket too. Through our imagination and the Stitchgether pavilion we can create something amazing from unwanted clothes.

Jessica is currently a second year BA Architecture student at University of Westminster. She is interested in sustainable development and constructing green buildings out of bamboo, cork or recycled plastics, helping to build a better future.

---

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

▶ **Join the session here.**

16:25 – 17:25

The implementation of hydroponics system in Maharashtra; Solving India's agricultural crisis with sustainable technology

Rajlakshmi Patil, UCL

This project could potentially change our lives. India today needs food security which entails that all people at all times have physical and economic access to safe and nutritious food to meet dietary needs. India being a largely agrarian economy depends heavily on agriculture for its income. However, extreme weather due to climate change has posed a challenge - severe droughts, unpredictable weather and poor water management have led to disastrous environmental impacts. In order to maintain a balanced paradigm, innovative and more ecologically sound cropping systems are required. This is where Hydro-sauve comes in – it uses hydroponics farming that contributes towards water, land and energy savings promoting Goal 11: Sustainable Cities and Communities and Goal 12: Responsible Consumption and Production. Based in the outskirts of Pune, it uses a soil-less cultivation method of growing plants using mineral nutrient solutions in water. After conducting a consumer and market survey in Pune and

Mumbai, I understood the massive potential this could have in terms of its eco-economic viability. As reflected in Goal 2: Zero Hunger, one of the greatest challenges facing the world is how to ensure that a growing global population will meet its nutritional needs. With the global population estimated to reach 10.9 billion by 2050, Hydro-suave produces high quality yields such as lettuce and avocados whilst using less land, energy and reducing chemical and fertiliser inputs that are used conventional farming. It uses less than $1/10^{th}$ - $1/5^{th}$ of the water used in soil cultivation which saves a lot of water through which it derives its name Hydro-'sauve' which means to save in French. Whilst global consumption is growing, the world's available resources remain finite; Hydro-sauve reduces waste, carbon and ecological footprint. This is not just a project, but life-changing effort that will indeed 'suave' us from reaching the tipping point and exceeding planter boundaries.

Rajlakshmi Patil is a 18-year-old student pursuing geography at UCL. She is a passionate environmentalist and has undertaken multiple environmental activities in India and Switzerland over the past years. In 2019, she organised a successful Mangrove Cleanliness Drive and has participated in regular beach clean ups and tree plantations in Mumbai. She is the founder of D-CAL - an institutional body that seeks to promote interdisciplinary dialogue in environmental policy action. In 2020, she also received the Environmental Prize from her school in Switzerland. She is involved in social advocacy in India, founding the Charity Soccer League in 2018.

Posters

All student presenters have created an academic poster to explain their project and highlight how the work contributes to achieving the Global Goals. You can view the student posters in the online exhibition space.

Visit the online exhibition space

The posters will also be on display at all of the partner Universities during the week of the Conference and will be judged by a panel of experts across three categories:

- most effective visuals
- most original concept
- best overall conference poster.

Our judging panel for this year's poster presentations:

Alyssa Gilbert, *Faculty of Natural Sciences, The Grantham Institute for Climate Change, Imperial College London*
Julie Molenaar, *BSc Philosophy, Politics and Economics student at UCL and member of the Student Delivery Group*
Dain Son Robinson, *Sustainable Development Goal Coordinator, University of Westminster*

Join us for the announcement of the competition winners at the end of the Conference. All posters will also be on display at the LSSC22 Networking event.

Goal 4: Quality Education

Saving half of the world's languages from extinction

Lucas Tabary, The London School of Economics and Political Science

Among the 7,000 languages spoken around the world, half of them are expected to become extinct by the end of the century. Parents stop or are prevented from teaching their children, most often because of socio-economic pressure to speak a dominant language or political repression. Most of these languages are not sufficiently documented and if nothing is done soon, those will disappear forever.

It is crucial to keep at least a record of this mankind heritage, both from a scientific point of view to study how language can be structured and a cultural point of view to remember the mindset, identities and ideals these languages convey. In Turkey, a language is entirely whistled to communicate through households in a steep mountainous region; in Canada, a language has an incredible variety of adjectives to catch all the nuances of the aspect and colour of ice floe; in Amazonia, a language use different pronouns for aquatic and terrestrial animals to reflect the importance of the river as both a habitat and food provider. These languages are part of our humanity, they question how we think ourselves and analyse our environment. They help us see the world differently.

Goal 12: Responsible Consumption and Production

Goal 3: Good Health and Wellbeing

Goal 7: Affordable and Clean Energy

Goal 13: Climate Action

Second-hand clothing as a sustainable consumption alternative: an analysis of this type of consumption from a cross-generational and cross-geographical perspective

Laurentina Junestrand Leal, University of the Arts, London

My project links to Goal 12: Responsible Consumption and Production, exploring the engagement versus non-engagement with the phenomenon of second-hand clothing. It does so from a cross-geographical and crossgenerational perspective to see how engagement can be promoted and non-engagement transitioned towards more sustainable ways of consuming fashion.

The reason behind the choice of the generation and geographical perspectives to explore the phenomenon lay on the literature gaps found during the review process. There is a lack of second-hand clothing consumption studies across geographies, and a call for research from a generational lens.

What this research claims is that climate issues cannot be solved without profound changes in socio-technical systems. Dependency on fossil fuels and current waste levels contributing to climate pollution are strongly determined by current production and consumption trends in the fashion system. These production and consumption systems have to shift in order to reach environmental impact reduction.

The empirical stage does not aim to find practical solutions for the fashion industry, but the researcher is aware that the findings of the investigation from an academic perspective can be of great help for business and policy practitioners in their journey towards environmental impact reduction in the industry. This is especially the case because of the great attention this phenomenon has had in the sector in the last years within a sustainability context. For this reason, the practical solutions associated with the empirical results will add value to the study.

Development of Environmental sustainability framework for the management of oil and gas operations in the Global South: A case study of Nigeria – Niger Delta

Rasaki Tanimowo James, Glasgow Caledonian University, London

Sustainability has been an overarching theme over the past decades and industries including oil and gas have the responsibility to incorporate sustainable practices in their operations. The report titled ''Our Common future'' chaired by Brundtland (1987) emphasises meeting the needs of the present generation without affecting the ability to meet the needs of future generations. It argued that economic development could be achieved whilst protecting the environment. In tackling climate change, the 2015 COP21 Paris agreement called for member countries to implement measures that would keep global temperature below 2°C (Gao, Gao and Zhang, 2017). In 2015, the member states of the United Nations adopted the 2030 agenda for sustainable development, which includes acting on 17 Global Goals for Sustainable Development (United Nations, 2020). Relating this to the oil-producing countries of the Global South (GS), using the Nigeria, Niger Delta region as a case study, Goal 3: Good Health and Wellbeing), Goal 7: Affordable and Clean Energy and Goal 13: Climate Action must be addressed in the management of oil and gas operations in this region.

However, this is yet to be seen as environmental pollution (land, air and water) which impacts negatively on climate change and people's health and well-being continues unabated. Therefore, these (Brundtland report, COP 21 and Global Goals have formed the basis for environmental sustainability in energy planning and development in recent times. It is against this backdrop that this research develops an environmental sustainability framework, using the Systems Thinking System Dynamics tool to manage oil and gas operations in the GS, using the Nigeria Niger Delta region as a case study. It argues for the continuous production of oil and gas, considering the wealth and security it brings to nations. However, the effective deployment of disruptive technologies in managing oil and gas operations would enhance environmental sustainability.

Goal 16: Peace and Justice Strong Institutions

Goal 9: Industry, Innovation and Infrastructure

Goal 11: Sustainable Cities and Communities

Sustainable framework for managing environmental conflict in oil and gas activities in the Nigerian Niger Delta

Sammy Edun, Glasgow Caledonian University, London

This study focuses on the implication of environmental conflicts resulting from oil and gas activities in the oil producing nations of the Global South (GS) such as Nigeria and Angola (Onyena & Sam, 2020). The oil producing communities in the GS are experiencing underdevelopment as a result of environmental degradation caused by over exploitation, infrastructural decay, unemployment etc. (Prpich, Sam & Coulson, 2019). The indigenous people have been compelled into conflict as a way of objecting against the injustice of the government's failure to provide basic amenities (Ebeku, 2020). The issue has increased dispute between the oil and gas companies and host communities and became a pro-long challenges for the government

to resolve until this present time (Moore, Udom & Ngobri, 2019). As a result of these disadvantages, conflicts arise between oil and gas companies and the host communities in oil producing region (Kaygusuz, 2012). The conflict happening in these oil regions have been tackled with a quick fix approach over the years which is a linear approach such as ADR (negotiation, mediation, etc) (Karl, Susskind &Wallace,2007). These approaches have been unable to capture the nonlinearity, feedback and delays inherent in oil and gas activities in the oil producing nation using Nigerian Niger Delta. This study calls for a change in conflict resolution framework which is capable of tackling complex environmental conflict using Systems Thinking/System Dynamics (Olaniyi, 2008).

Sustainable architecture: Designing structures with zero carbon footprints

Jack Morris, University of Westminster

Architecture plays a significant role in influencing communities by bringing people together or even separating them on global issues. Interactions between individuals is encouraged with growth and society being the primary focus. In fostering these communities and issues, architecture can take the centre stage and play a key role in providing perspectives and highlighting problems we need to resolve.

My project is based around bringing communities together with a unique interactive space that also tackles the ongoing issue of 'waste' in the construction industry. The sector uses 400 million tonnes of material every year, resulting in 100 million tonnes of waste produced. Introducing a sustainable approach, I began designing an interactive space that attaches to the hoarding (temporary boarded fence) of a construction site. This acts as a political statement challenging the industry, highlighting the extreme levels of waste by using 'waste' as the material itself. This

adheres to the global goal of sustainable cities and communities, as the design has in fact no environmental impact at all.

My project includes a range of conceptional drawings and models that lead to a in depth proposal, that is entirely constructed from sustainable - reclaimed resources. These construction/household materials are attached to a bamboo structural frame to build a façade (exterior face) that can constantly be manipulated and changed depending on the levels of public interaction. I introduced the idea that items can be temporarily attached to the frame, so the community can swap items. This provides a sustainable solution for communities in terms of what they do with their waste, encouraging people to look at what is already available rather than consuming new natural resources. This branches out to a larger issue in architecture, we need to start looking at our cities as 'urban mines'. Creating a circular economy in construction.