THE LONDON STUDENT SUSTAINABILITY CONFERENCE 2021

Wednesday 24th February 2021

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Presidents’ foreword

We are delighted to be back hosting the London Student Sustainability Conference for the third year. This time, the conference is a collaboration between City, University of London and King’s College London.

While the circumstances this year are a little different to usual and the conference has moved online, we have been pleased to see such enthusiasm for it. Our virtual world offers new opportunities, as well as challenges, for sustainability and the conference will showcase a tremendous range of sustainable research and initiatives developed by students from across London.

Both City and King’s are committed to embedding the UN Global Goals into our education, research, leadership, operations and engagement activities. This conference will bring together our communities of students, staff and alumni to share our knowledge about how we can collectively #TakeAction on the issues which will enable us to build a sustainable future for all. We very much hope you enjoy the event.

Professor Sir Paul Curran
President
City, University of London

Professor Evelyn Welch
Interim President & Principal
King’s College London
### Welcome address
- **Join the session here.**
- **Welcome address**
  - **Professor Bronwyn Parry**, Interim Vice President & Principal (Service) at King’s College London
  - **Professor Sir Paul Curran**, President at City, University of London
  - **Daniel Hartz**, founder at Sustainability Champions

### Session 1
**13.05**
- **Goal 7: Clean and Affordable Energy**
  - **Join the session here.**
  - The Implementation of Solar Energy Exploitation in Europe and Middle East
  - **Christofer Papiris**, City, University of London

### Session 2
**13.45**
- **Changeover**

### Session 3
**14.00**
- **Goal 11: Sustainable Cities and Communities**
  - **Join the session here.**
  - Modern Methods of Construction – Resolving the Housing Deficit with Sustainable Construction Techniques
    - **Vatsal Anarkat**, City, University of London
    - **Reina Landa+</is-diagram>
Created by City, University of London to provide an opportunity for students from across London and beyond to share their sustainability research and extra-curricular projects, the London Student Sustainability Conference is now in its third year. In 2021, the Conference is expanding through our collaboration with King’s College London and features as a key part of both institutions’ work to support the Global Goals.

Join the conversation and find out more about our sustainability work
#CityGlobalGoals #KCLsustainable.

Speakers

Yik Kei Leung

Yik Kei Leung is currently studying Geography at King’s College London. As President of the Geography Society and King’s Sustainability Champion, he has a keen interest in his peers’ work on sustainability and helping them reach a wider audience. After being inspired at the London Student Sustainability Conference 2020 held at City, University of London, he has worked with both the City and King’s Sustainability teams and played a key role in developing and delivering this year’s conference as a collaboration between the two institutions.

Daniel Hartz

Daniel Hartz is the founder and host of the Sustainability Champions podcast and Instagram channel, where he interviews entrepreneurs, innovators and community leaders around the world who are working hard to protect and heal the planet. A Silicon Valley native living in London, Daniel is an optimist who believes we can all do well by doing good.

@sustainabilitychampions
www.sustainabilitychampions.com
The Implementation of Solar Energy Exploitation in Europe and Middle East

Christofer Papiris, City, University of London

My research primarily involved the analysis of different locations by theoretically replacing 1% of annual electricity produced by each country studied, using a solar power plant. In order for this to be executed, a lot of factors were considered, including the collection of solar irradiation data using GIS, ideal tilting and orientation of the panels using university research, wind tendencies and soil and dust accumulation using forecast services and technical aspects including inverter efficiency, cable thicknesses and panel efficiencies.

Findings identified that smaller countries, like Cyprus, are more attracted towards these renewable energy applications, whereas bigger countries, like France, had a longer payback time.

Christofer is a Cypriot student, who has studied mechanical engineering and joined City, University of London this year for his postgraduate studies. He is passionate about engineering and business while discovering new paths towards a more sustainable future.

Proposing the Implementation of Hydrogen Fuel Cells with CHP at King’s College London

Jone De Roode Jauregui, Robyn Lees, Yik Kei Leung, Phoebe Phillips, King’s College London

With ambitious targets of net-zero carbon emissions by 2025, the implementation of renewable energy is vital in reducing the carbon footprint of King’s College London campuses and helping to limit climate warming. Here we propose the potential use of hydrogen fuel cells in combination with combined heat and power (CHP). This innovative technology would use hydrogen gas to generate electricity producing only heat and water as waste products. CHP would capture and utilise the waste heat to heat buildings, replacing natural gas. These two technologies in conjunction have the potential to produce zero-waste heat and electricity for 5 campus buildings at Denmark Hill, with both environmental and economic benefits.

As the integration of hydrogen into the UK’s energy mix is expected to soar in coming years, this proposal has great potential for reducing King’s environmental footprint and transitioning towards greener energy production, which will overall contribute to meeting sustainability targets.

As part of the new interdisciplinary innovation module ‘Sustainability in Practice’, Jone, Robyn, Yik Kei and Phoebe were teamed up to work on a project addressing issues of sustainability within King’s College London. They began the academic year as strangers and have since become good friends while undertaking this research.
Confronting Known Health Inequalities Impacting the British Afro-Caribbean Community

Alicia Walker, City, University of London

The events of 2020 shone an unavoidable light upon the stark consequences of structurally and culturally inadequate systems. Arguably, one of the most urgent issues governments have had to confront over the last 12 months is the uneven health impact of Covid-19 linked to underlying health conditions that were known to be pervasive amongst certain communities. In the UK, the Afro-Caribbean community is known to be disproportionately at risk of diet-related non-communicable diseases such as type-2 diabetes and cardiovascular disease, both of which are thought to be Covid-19 risk factors. At the same time, emerging evidence suggests disproportionate impacts of Covid-19 on this community in terms of hospitalisation and mortality rates.

However, whilst the elevated rate of diet-related non-communicable diseases is a well-documented issue across the Afro-Caribbean diaspora, research into the socio-cultural reasons for this phenomenon in a UK context remains sparse. Equally, whilst the full reasons for Covid-19’s disproportionate impact on BAME communities remain unknown, the observed link between the severity of the virus’ impact and the known non-communicable diseases disproportionately suffered by these communities cannot be ignored. The aim of this project is to reckon with the disproportionate prevalence of diet-related non-communicable diseases in the British Afro-Caribbean community, which left the community disproportionately vulnerable to Covid-19. The project will delve into the socio-cultural impact of British Caribbean immigration upon the interrelated issues of diet, health and identity and propose a meaningful and culturally effective way forward.

How to Promote Sustainable and Healthy Food Consumption in University Students

Liza Konash, Mia Lewis, King’s College London

We are part of a vegetable bag scheme called Fetch Ur Veg at King’s College London. We offer students weekly zero waste bags full of seasonal vegetables sourced from small-scale organic farms near London. It’s a great sustainable and healthy alternative to meal deals and vegetables bought in large chain stores. Tenderstem TM broccoli imported from Kenya wrapped in unrecyclable plastic vs. seasonal organic neeps from a local farm in reusable packaging. Which has the larger carbon footprint? The faraway broccoli in plastic packaging or the local neep?

We propose for more universities to do the same and for their universities to support the schemes through subsidising these bags to make them affordable to all students, even those on the strictest ramen-only budgets. Our bags currently cost £12.40 for two weeks, subsidising half the cost for 30 people, which would cost £186. That means the student is paying £3.10 a week for vegetables. Students rarely get their 5 a day in the UK, so vegetable bag schemes are a way to facilitate incorporating more healthy, seasonal and affordable produce into students’ diets. An issue that arises is how to cook the vegetables in the bag. In addition to the vegbag scheme, we post plant-based recipes full of colourful veggies that are easy to cook from scratch at home to get all the good stuff after a day of hard work at university.

Liza and Mia are students at King’s College London, concerned about poor diets and their effect on the health of human beings, and the sustainability of the future world.
Garmented
Yoga Barrathwaj Raman Mohan, Bahlia Karim, Dominika Slovenská,
City, University of London

Garmented’s mission is to make adaptive clothing affordable, sustainable and fashionable for people with disabilities, aiming to increase their quality of life by modifying upcycled high-quality clothing. By modifying pre-loved high-quality clothes to make adaptive clothing, we offer fashionable and affordable options which the industry highly needs. The reuse of clothing prevents it from going to landfills and lowers the demand for production of new clothes in the long term.

Garmented is a project of Enactus City and operates based on a social enterprise model. At Garmented, we believe that everyone should have access to quality, comfortable and good looking clothing.
KLABU mZinga

Yoga Barrathwaj Raman Mohan, Thomas Fowler, Connor Knights, Camilla Pezzi, City, University of London

KLABU meaning club in Swahili is a social enterprise that powers sports in refugee camps. ‘KLABU mZinga’ is a solution developed to enable KLABU to expand globally by accurately recording impact data and efficiently tracking inventory. This allows them to sufficiently provide items and services when needed to its members in refugee camps. Currently, the app is built to handle a 10,000 member clubhouse in Kenya with a mission to expand to Rwanda and Bangladesh in the next year. mZinga has transformed life in these communities. It has replaced a predominantly paper-based system with contactless interactions based on NFC. This not only benefits the communities in these camps but also helps KLABU’s executive team to learn and adapt based on the live data generated.


Liberty Makacha, King’s College London

While African transitions to increasingly urbanised lifestyles present opportunities, these have been exchanged for additional challenges from ambient air pollution. The health effects continue to manifest throughout the life course, yet dynamics around causation remain understudied, contributing to double burdens of insufficient evidence and high disease incidences.

Using seasonally-resolved PRECISE and PRECISE-DYAD cohort of 10,000 pregnant African women and babies, the research will:

(i) conduct measurements quantifying dominant sources of ambient and residential air pollution
(ii) establish new methods of characterising personal pollution exposures for linkage to health trajectories
(iii) investigate contextual patho-aetiologies in pollution/outcomes discourses across contrasting geographies, under the assumption of behavioural, geographical, and seasonal dimensions.

Liberty is an applied geo-information scientist with a primary interest in applied spatial statistical modelling and spatial risk profiling for public health. A PhD Candidate at King’s College London, he holds an MSc Biostatistics and Epidemiology (majoring in Spatial Epidemiology) and BSc Hons Surveying and Geomatics, both from the Midlands State University in Zimbabwe.
Growth After Intimate Partner Violence (IPV): A Mixed Methods Study

Saira Khan, City, University of London

I looked at the services provided in the NHS and women’s organisations to help women overcome abuse and how they overlapped and where they differed. The medical model often ignores systemic issues and engages in the victim blaming narrative. As a result of this, survivors are looked at solely as victims and their strengths and abilities are ignored, with their outcomes viewed as hopeless. This is confirmed with high drop-out rates for IPV survivors and NHS practitioners stating they are ill prepared to ask and follow up appropriately with this form of abuse.

I looked at the research base and asked survivors what helped them in recovery and outlined these suggestions for psychological practitioners to improve mental health services for women.

Saira is a clinical social worker from California who is now a qualified counselling psychologist in the NHS and passionate about systemic change.

The Eco-Feminist Approach to Climate Change: A Discourse Analysis of Gendered Vulnerability in Rural Sub-Saharan Africa

Eleanor Rose Murray, SOAS University of London

“Climatic factors interact with and intensify the effects of broader socio-political and livelihood changes.” (Rao, 2019:27)

Ecofeminist theory links women’s marginalisation with environmentally unsustainable development on the basis that they are both consequences of capitalist patriarchy. Therefore, the pursuit of liberation from gendered norms must be executed in tandem with protecting the natural world.

This presentation firstly combines both ecofeminism and intersectional feminism as a framework to determine how and why women in rural Ethiopia, Uganda, and Kenya are disproportionately more vulnerable to the effects of climate change. Secondly, this presentation advocates for intertwining climate (Global Goal 13) and gender (Global Goal 5) policy in order to effectively increase the adaptive capacity of women to climate change in rural sub-Saharan Africa. As a further consequence, this presentation will explore how increasing female participation in decision making and the utilisation of their agricultural knowledge has the potential to mitigate the impact of climate change for entire communities and beyond.

Eleanor Murray is currently studying MSc Environment, Politics, and Development at SOAS. Her research interests include feminist political ecology, community-based natural resource management, and eco-voluntourism. Upon completing her Master’s degree, she plans to pursue a career in environmental/climate policy.
**AI-driven Sustainability Ratings for Corporations**

*Sebastien Kirk, Gordon Tveito-Duncan, City, University of London*

We are building an artificial intelligence (AI) driven Environmental, Social and Governance (ESG) product for investors with the aim of helping them invest in more sustainable businesses. Our vision is big: we want to provide high quality data and analytics to investment houses which should hopefully increase ESG investing, meaning that corporations that care more about ESG factors will get the capital they need to flourish. We also hope that through this process, corporations will care more about their ESG scores, which should mean that they positively change their behaviour with respect to the environment, their workforce and society as a whole, which could have a massive impact on the world.

We are trying to contribute to the global movement to make companies more sustainable, which could improve the life of individuals in a myriad of ways. One part of our product will ascertain the “Social” score of a company, which involves how well the company treats its workforce in terms of employee turnover, work accidents, and health care and pension packages. We will also measure the policies a company has in place such as a whistle blower policy, equal opportunity policy, fair remuneration policy, health and safety policies and a human rights policy. In addition to these measurements, we will also scrutinise a company’s supply chain in terms ethics and sustainability and take into account hundreds of other metrics to calculate an overall ESG rating.

Gordon and Sebastien both recently graduated from City, University of London after completing the MSc Data Science course. Prior to the Master’s, Gordon spent time working in Investment Banking and Consulting and Sebastien worked in Sustainable Corporate Finance.

**The Rottenness of ‘Mediterranean Fresh’: Towards a Sustainable System of Horticultural Labour Mobility After Covid-19**

*Inés Jimenez Rodriguez, SOAS University of London*

From tomato production in Morocco to strawberries in Greece, Mediterranean horticulture is increasingly characterised by a dependency on undocumented migrant workers and unsustainable patterns of land degradation and groundwater depletion. In the context of Covid-19, this project elucidates the challenges and opportunities for consolidating a sustainable system of labour mobility in the Mediterranean: ensuring responsible production, with decent working conditions and ecologically-respectful practices (Global Goals 8 and 12). This compensates the current lack of holistic, region-wide analyses of migrant-dependent horticulture. Instituting these Global Goals has been constrained by the transnational scale of Mediterranean horticulture.

The enclaves of Huelva (Spain) and Souss (Morocco) are connected by seasonal migration, as Moroccan workers are prominent in Spanish horticulture. The pandemic has exacerbated the vulnerabilities experienced by these workers; and created new ones concerning the wellbeing of those stranded in destination areas during lockdown, and the impact of frozen remittances on their home communities.

I demonstrate how the pandemic has publicly evidenced Southern Europe’s dependency on seasonal migration, and the subsequent need to regularise its mobility and ensure workers’ wages and health. Souss illustrates the implications of Europe-bound production on local livelihoods: exhausting the resources hitherto reserved to rural self-subsistence, and bolstering dependence on remittances from Southern Europe. The brittleness of this export-production model will intensify as desertification looms in the Mediterranean’s future. Pertaining to Global Goal 12, I explore avenues for regional cooperation and accountability regarding water management. This pertains, inter alia, to an integration of environmental responsibility within the EU’s investments in Magrebi horticulture.

Inés is a third-year student of Politics and International Relations at SOAS, intending to pursue a research-centred career in Political Ecology. Foremost, she is interested in the conflicts that can derive between local practices of subsistence and global environmental governance, especially in regards to Global North/South divisions. In her future career, Inés wants to ensure that solidarity and open-mindedness are the driving forces in tackling Climate Change and environmental disruption.
Modern Methods of Construction – Resolving the Housing Deficit with Sustainable Construction Techniques

Vatsal Anarkat, City, University of London

The residential sector has seen a shift in prices and overcrowding of dwellings due to high urbanisation and globalisation. We need to identify an economical and viable solution in resolving the housing deficit, and showcasing the economic benefits and improved quality standards by using modern construction techniques.

The presentation is focused on much debated issues regarding overpriced housing units, low degree of efficiency and sustainability in the construction industry. We can create a more efficient living environment by using modern construction methods. The objective of this work is to present an evaluation of the efficiency and sustainability of buildings, and to determine, based on analyses of socio-economic research, the advantages of modern construction methods of various prefabricated and off-site construction techniques.

At the age of 23 – with over three years of international project and volunteering experience in four countries and the ability to fluently communicate in seven languages – Vatsal is developing his global acumen in a variety of sectors including Energy and Infrastructure to develop strategies in achieving the Global Goals.

Cloud Fridge

Xiaocan Wang, City, University of London

My design is a food sharing system called “Cloud fridge” that can help residents cook efficiently and reduce food waste by sharing with neighbours. The system is a first step in improving relationships between residents. The users manage their ingredients through a mobile app, and the food will sync storage to the user’s Cloud fridge when they scan the recipe. The system will develop the cooking plan or recommend suitable recipes according to the user’s available ingredients. Furthermore, the user can find out which neighbours have used this recipe and see their food achievements.

In the app, people can find a group Cloud fridge built by all of the residents. Users’ estimated food leftovers can be uploaded to the group Cloud fridge and put into the physical Neighbour Fridge. The benefit of connecting the Cloud fridge and the physical fridge is that they will more accurately remind users about food expiration and encourage communication with neighbours.

Xiaocan is a Human-Computer Interaction Design student at City and has a strong interest in sustainability design. As a user experience (UX) design blogger she hopes to share her passion and is working to reach a million followers.
Bicycling the University: Tecnocampus Healthy and Sustainable Campus, Spain

Anaïs Arderiu, Anna Castells, Helena M Hernández, Elena Mas, Alba Pardo, Andreu Ruf, Tecnocampus Mataró Pompeu Fabra University

Tecnocampus Mataró is an affiliated university of Pompeu Fabra University, located in the North-East Coast of Spain. Tecnocampus is highly committed to promoting healthy and sustainable habits in the university community, including students and workers.

Healthy and Sustainable Campus is made up of a commission of students from different degrees and professors from different areas with the aim to promote healthy activities for the university community (including students and staff) through a participatory process.

Through the project Healthy and Sustainable Campus, we attempt to develop a bike-friendly campus by virtue of different actions to generate more sustainable and healthier commuting. These actions offer resources to students and workers to change their mobility habits and opt for bike mobility.

Andreu Ruf, a Sports Science student is a member of the student’s commission and helps in the implementation of sustainable actions. Alba Pardo is the head coordinator of the Healthy and Sustainable Campus. Anna Castells is the student commission coordinator. Helena M Hernández evaluates all the interventions. Anaïs Arderiu is the communication coordinator along with Elena Mas (student commission).
Awareness of Carbon Emissions on the King’s Estate
Natasha Alexander, Sarah Buckwell, Sarah Dillon, Wai Yin Fung, Max Kindred, Muhammed Munaim, King’s College London

We are part of a new module at King’s, where students lead projects sponsored by the college looking into sustainability challenges of the university. We chose to look at carbon emissions of the King’s estate and to focus on awareness to change mindsets to reduce the emissions. We have conducted a survey and from that will implement the best method to raise awareness. We will also do a social media campaign taking over King’s social media account.

The team are an enthusiastic group of master’s students from a variety of backgrounds who want to showcase our work to try to spread student-led sustainability as far as possible.

Sustainable Rooms Within Hospitality
Yasemin Gorgun, Callum Hollis, Krzysztof Tomaszewski, University of Essex

Hospitality is one of the biggest industries, meaning it also contributes significantly towards several types of waste. The project aims to promote the implementation of sustainable alternatives when renovating existing rooms or designing new rooms in hotels. We’re talking seagrass carpets, light intensity dials, refillable glass water bottles, and more. Not only would hospitality businesses be helping to save the planet, they’d also be saving money and boosting profit.

Yasemin, Callum and Krzysztof are second-year Hospitality students at the University of Essex and are determined to change the face of sustainability within hospitality.

Refofa
Adeline Ng, King’s College London

Did you know it takes about 2,700 litres of water to make one cotton shirt? That’s enough of water for a person to drink for 2.5 years. Ever since fast fashion was introduced, the fashion industry has become the second-largest polluter globally after the oil industry. Fashion production has increased tremendously throughout the years with many major brands mushrooming around the world which leaves a negative impact on the environment as it ushers throwaway culture and single-use purchases.

Refofa wants to offer consumers a solution to enjoy fashion without costing the environment. In support of Global Goal 12 (Responsible Consumption and Production), the project aims to create a circular economy in the fashion industry by extending the lifespan of each piece of clothing. Refofa is a digital platform that promotes sustainable fashion through clothing renting, swapping and fixing by working closely with local communities. Come and learn how your wardrobe can be a part of a change in this world.

Adeline Ng is a current postgraduate student at King’s College London studying Environment and Development. Adeline is a fashion enthusiast and a champion for a sustainable lifestyle. She is the founder of Refofa a digital platform that promotes sustainable fashion through renting, swapping and fixing.
Aquaponics as a Circular Solution to Feed the World

Mona-Carita Ceder, City, University of London

Aquaponics is a closed system that avoids doing the same damage being done by current aquaculture systems, and promotes resource efficiency while enabling the producer to recycle both fertilizer and water. The system allows for producing both fish or plants in places where there is no access to natural waterbody or soil, including urban areas and places suffering from drought. This system promotes food security and supports local livelihoods, because it enables simultaneous fish and plant production in a variety of situations and circumstances due to its scalability and adaptability. This method can change the food system and diets around the world for the better, because it enables the production of two sustainable crops near the consumer.

For my MSc in Food Policy, I conducted a case study on aquaponics which is still not a well-known method of producing food, even though the concept is ancient. In the 21st century, eating fish is gaining a bad reputation due to overfishing and damaging aquaculture practices. As a food policy student, I truly believe in the potential of this method as a solution to feed the world with environmentally sustainable and healthy diets that include both fish and plants. I am hoping to spread the message about the system since the concept is still not well known by current consumers or policymakers who have power to influence change in the food system.

Mona is an MSc Food Policy student at City, University of London. She is originally from Finland, but has lived in four different countries and has travelled to many others. Mona is passionate about food and sustainability, and she hopes to work for the UN in the future.

How Culture and History are Shaping Sustainable Sea Transportation in Fiji

Lara Alake, SOAS University of London

Over the course of human history, maritime transportation has been inextricably linked to economic growth. However, as shipping accounts for 2-3% of carbon dioxide emissions, it is not a sustainable method of transportation. Fiji, a Small Island Developing State (SIDS), is particularly vulnerable to the effects of climate change. However, maritime transportation is necessary for trade, fishing and access to healthcare services and education. In order to combat this paradox, Fijian organisations, such as the Uto ni Yalo Trust, are looking back to traditional sea-faring.

This presentation will focus on the cultural and historical significance of voyaging in Fiji. By using the Uto ni Yalo Trust as an example, it will describe how these traditional methods of voyaging are being used today and the impact they have on the Global Goals (focusing on Goal 8 Decent Work and Economic Growth, Goal 11 Sustainable Cities and Communities and Goal 14 Life Below Water).

Lara is a History of Art student at SOAS and also studies Social Anthropology. She has a keen interest in the preservation of culture and widening participation in the arts.
**Non-Zero Sum Game: Collaborate or Die**

*Iulia Tvigun, Ravensbourne University London*

Present-day sustainability watchdog organisations rank UK universities against each other for being more or less sustainable than others. But sustainability is not a ‘competitive’, ‘zero-sum game’; it is about collaboration. There are real opportunities in rethinking strategies for sustainability, but it requires a creative response and leadership to realise the potential. How do we support this as designers?

However before we explore how as designers we can enable inter-university collaboration for sustainability, we must establish where Ravensbourne University London stands in terms of sustainability and what are the challenges and opportunities it faces within its own walls.

In search for this answer, we took on a research mission. We asked the students to tell us what sustainability meant to them. According to the results of the Listening Campaign, Ravensbourne students think of sustainability in terms of the three Rs – reduce, reuse and recycle. They believe that being sustainable means being ‘not impactful’ and ‘environmentally friendly’. They care very much about sustainability as all respondents provided us with a thought-out answer; and think of sustainability in terms of being ‘less bad’. Only one respondent mentioned that sustainability means ‘progress’.

Our research revealed that Ravensbourne needed to enable collaboration within its own walls first. A catalyst of collaboration and change within the university turned out to be the university’s Environmental and Sustainability Working Group, which had the potential but needed a little more support to serve this purpose. To empower the university management to recognise this Group as a resource, we organised and conducted a workshop with the Ravensbourne top management. The presentation will share the lessons learnt from our experiences.

Find out more here.

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*Iulia is a recent Ravensbourne University graduate, a Service Designer and Chevening alumna, and the co-manager of the Ravensbourne Sustainability project, which was realised as part of the Master’s of Design at Ravensbourne University London from February to April 2020.*
The Revolution of Solar Energy

Josef Al-Daghir, Yousaf Bhatti, City, University of London

Solar Energy is the most overlooked opportunity in this and the next century. It has vast positive economic, environmental, geopolitical and even personal implications. In the presentation, we will look at how it can reduce poverty and the squeeze of the middle and working classes and how it can put more money in your pocket. We will also look into the effect of promoting sustainable economic growth without the downsides of volatile financial markets, events which lead to job losses, bankruptcies and a lot of misery. We will subsequently show how it simultaneously achieves at least five of UN’s global sustainability goals, hitting multiple birds with one stone.

We will also mention the exciting future possible with solar energy such as being able to build a sustainable colony on the Moon and Mars, allowing humanity to become interplanetary species.

Josef and Yousaf are undergraduate students at the Business School (formerly Cass), both studying BSc Finance, with hopes of accomplishing tremendous success in the business world. They have always been big-picture thinkers and love seeking problems and challenges that test their abilities to the limit. They hope to contribute positively to the future through their passion and hard work.

Lighting Up Lagos Markets with Clean Energy

Natasha Ibori, King’s College London

I am working with Uwana Energy to provide electricity to micro entrepreneurs in my community in Lagos, Nigeria. Uwana Energy is a clean energy company that empowers low-income Nigerians by facilitating their transition to renewable energy with an affordable financing option. The majority of Lagos state’s population is plagued with daily blackouts and primarily use hazardous, expensive fuel generators to plug the gaps in energy supply. Although the generators do not meet their demands, citizens are restricted by their limited access to capital. This financial barrier prevents the rapid adoption of renewable energy and stifles poverty alleviation efforts.

Uwana Energy provides entrepreneurs with loan-to-own solar systems, connecting them to electricity quickly with low monthly fees. It includes panels, battery, inverter and bulbs. We believe that having affordable and reliable electricity is the key to unlocking the potential of many local businesses and driving economic development. Thus, this project aims to increase micro/small/medium-sized enterprises’ (MSMEs) monthly income by reducing their expenses and increasing their productivity by 20%-30%. 11 systems will be bought and installed to entrepreneurs that have indicated interest. The flexible repayment plan enables us to support an overlooked and underserved market and provide sustainable financial benefits to this key population. This simple project to begin tackling Nigeria’s energy problems will have an outsized impact, addressing 6 of the 17 Global Goals, advancing environmental sustainability, and social reform within Lagos state.

Natasha is an impact-driven executive who is committed to giving more people better life options. She co-founded Uwana Energy to democratise access to affordable solar electricity and is powering the future of the most vulnerable. Having worked on numerous socio-economic issues across four continents, she is experienced in building holistic solutions.
Climate and Cake

Ana Oancea, King’s College London

Climate and Cake is an educational programme launched initially in Munich for sustainable living that is primarily catered to students, but can also be accessed by individuals. Its goal is to initiate and support open discussions on individual’s sustainability, and what you can personally do to become more sustainable. The programme is offered as a four-week course supported by an online guide.

Our proposed solutions are wide-ranging from fashion to transportation because in the contemporary world, modern problems require modern solutions. After launching it for the first time last spring, it became obvious that many students simply aren’t aware of the impact that personal actions can have on the planet, and with a combined effort and education on the subject, we can all contribute a little to make our environment more sustainable.

How Covid-19 Could Help Explain the Gap Between Environmental Concern and Behaviour

Jone de Roode Jauregi, King’s College London

An increasingly large majority of the world’s population is concerned about climate change and further environmental issues. As individuals, we are responsible for a large part of the global greenhouse gases through our consumption behaviour. However, there is a large gap when it comes to behaviour in line with this concern. How could we explain this lack of environmental behaviour change in times of mounting concern?

My research aims to use the unique circumstances of the Covid-19 pandemic in Spain to answer this question, analysing whether people have changed or are planning to change their environmental behaviour, or whether the pandemic has made it even more difficult. I look at factors such as increased solidarity and attitudes towards climate change vs Covid-19 to better understand this gap. We need to bridge this gap in order to fight climate change. This knowledge is key to developing effective strategies to bring more people along on our journey to sustainability, as it is not a fight of only politicians and industries. We all have an important role to play.

Ana is a first-year International Development student at King’s and hence is invested in the sustainable development of our planet, especially in the cultural change required for a better future. Through the programme, she hopes to inspire others to take steps into becoming more self-conscious of the impact of their actions and be part of the change needed.

Jone is a final-year BSc International Management student at King’s College London. Her dissertation focuses on sustainability and she wants to pursue a career in the area of sustainable development.
AI-assisted Personalized Education for a Sustainable Future

Abhiram Ravikumar, Misha Zahid, King’s College London

Quality education is Global Goal number 4. An improvement in the quality of education would improve the quality of the lives of its people which would, in turn, have a global impact, but to do so it is important to ensure that good quality education is being provided. Thus, there is a need to raise education standards.

Artificial Intelligence (AI) has engulfed every aspect of our lives – right from the way we travel, interact with our phones, and the way we consume email. One of the ways AI could help in the education sector is by providing personalized learning experiences for students. This would mean that every student would get a tailored experience based on their specific traits and characteristics. The goal here is to provide an AI-assisted learning experience and not an AI-led one. This would make the learning process more engaging and students will be able to grasp knowledge more effectively.

Furthermore, the AI system would intelligently collect feedback and pass it on to the teachers, which could be used to effectively tailor content. Ultimately, we believe that AI can be the means through which good quality education can reach even the poorest and most remote. This would ensure that the standard of education is raised at not only a grade level, but also at a personal level which would enable each student to benefit, and in turn, help in the betterment of the whole society.

Margaret’s interests are focused on developing socially engaged, community orientated, participative ecoart activism, which evokes critical questioning on the pressing climate emergency and other social issues. Her current developmental, environmental online workshops are focused on sustainability, wellbeing and wildlife centeredness. She holds a BA Fine Art (Hons) 1” from Goldsmiths, University of London.
Poster Presentations

You can view posters created by the delegates in the online exhibition space.

Vote for your three favourite posters that best represent the spirit of sustainability champions using the 'Like' button under your chosen posters in the online exhibition. Voting closes at 16:15 on Wednesday 24th February 2021.

You can also ask questions by using the 'Add comment' function under each poster. Our student presenters will answer your questions in the same thread on the platform.

As well as the public vote, the poster competition will have three additional categories:

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

The winners of these categories will be decided by our panel of experts:

Daniel Hartz, Founder at Sustainability Champions
Angeliki Karydi, Energy Management Coordinator at King’s College London
Professor Pam Parker, Deputy Director for Learning Enhancement and Development, City, University of London

Join us for the announcement of the competition winners during the conference at 16:50.

Can the United Kingdom’s healthcare economy become completely circular in the future?

Mohamed Guled, King’s College London

‘Closing the loop’ was published by the European commission in 2015 and it states that reaching a circular economy includes the actions of ‘greater recycling and reuse which bring benefits to both the environment and the economy’. These actions have the goal of extracting the maximum value and use from all raw materials and products used in the hospital setting, and not just stopping there, but converting the waste into resources as well. This will accomplish a reduction of waste generation. Most hospitals have a duty of delivering care to a great standard, however, the same cannot be said for waste reduction and the implementation of recycling programmes. Both environmental and financial resources can be spared, which in turn, can help the hospital provide a higher standard of care. This project aims to delve deeper into these issues employing a mix of both primary and secondary research.

Mohamed Guled is a fourth-year medical student at King’s College London. Alongside clinical medicine, Mohamed has interests in the non-clinical aspects of medicine which are often ignored. These include the medical humanities, health economics and the sustainability of the medical sector.
**Goal 13: Climate action**

Green Leaders

*Deepikaa Chandegra, King's College London*

Environmentally friendly habits take time to become established in society, therefore, there is great importance in implementing this through education. Green Leader is an action-oriented project whereby university students can deliver interactive workshops to school pupils, bringing lessons on sustainability to life. It is our job to educate the younger generation in order to create young green leaders who are able to develop insights on global issues as a method for a mindful and sustainable future. This is in alignment with United Nations Global Goal 13 of Climate Action to improve education and raise awareness on climate change. This project will consist of creating educational resources that enable schools, teachers, and pupils to develop their knowledge and understanding of the environmental challenges facing our planet.

Deepikaa is a first-year Mathematics student at King's College London, who wants to use resources to create a sustainable society. She is currently creating an eco-friendly product in order to reduce plastic waste.

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**Goal 15: Life on land**

The Role of Saharan Dust as a Fertiliser to the Amazon Rainforest

*Robyn Lees, King’s College London*

Wind-driven dust can be transported and deposited miles and miles from where it was first entrained. This process has major implications in biogeochemical cycles and a contested role in the climate system. Dust from the Sahara can travel across the Atlantic all the way to the Amazon rainforest, transporting vital nutrients along with it. These nutrients are important in ecosystem productivity for the rainforest, phosphorus in particular as the Amazon is generally phosphorus-limited. It is suggested that this flux of dust provides the Amazon with vital nutrients in order to aid functioning and productivity, with important implications for rainforest conservation.

The future of this flux is increasingly uncertain due to changing weather patterns as a result of climatic change and with increasing desertification. For my undergraduate dissertation, I assess the potential impact of the Saharan-Amazon dust flux in relation to biogeochemical cycles and the potential for future conservation strategies.

Robyn is a final-year BSc Geography undergraduate student at King’s College London. Her dissertation research was inspired by a research fellowship completed during the summer of 2020 with Dr Daniel Schillereff in the department of geography at King’s College London.
Upcoming events

#TakeAction Hackathon

12:00 - 1:30, Thursday 25th February 2021.

Are you passionate about sustainability?
Social justice?
Communities coming together to create positive change?

If yes, then join the first ever King’s Sustainability Hackathon!

Hackathons provide an opportunity for a group to work together to problem solve and develop real solutions to a problem.

This hackathon will present four sustainability challenges and we welcome participants from all universities:

1. How can we support diversity within the field of sustainability further (from education of school pupils, college and university life and into careers)?
2. What should an online open-access sustainability focused Keats module at King’s look like?
3. How can King’s Sustainability improve its communications to engage with more students?
4. How can King’s encourage students to have more conversations about sustainability?

Choose the topic which most interests you to discuss with others from the wider university community and together, develop actions to help solve the problem.

Register and select the challenge you want to tackle here!

#TakeAction