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**THE
LONDON
STUDENT**

SUSTAINABILITY CONFERENCE 2019

Broaden your knowledge of the challenges and solutions to today's most critical issues.

Network with students, academics and professionals from the University of London.

Gain inspiration for your own research or dissertation projects.

Free entry
Thursday 28 February 2019
City, University of London

www.city.ac.uk

President's foreword



The London Student Sustainability Conference is the first of its kind in London and we are delighted to be hosting it at City, University of London. City is committed to embedding sustainability within its activities and featuring sustainable development in the curriculum. As a proud member of the Association of Commonwealth Universities, the world's first international university network, City recognises its role in achieving the UN Sustainable Development Goals (SDGs) through world-leading research; undergraduate and postgraduate education; and nurturing the next generation of leaders. We are proud to support student research which helps achieve the SDGs and we look forward to welcoming students, staff and members of the public to discuss some of the challenges and solutions to today's most critical issues.



A handwritten signature in black ink, appearing to be 'P. Curran', with a horizontal line underneath.

Professor Sir Paul Curran

President

Programme

8:45 – 9:15	Registration	Northampton Suite
9:15 – 9:50	Welcome and key note speakers	Northampton Suite
9:50 – 10:00	Changeover	
10:00 – 10:40	Session 1 1A: Life on land, life below water 1B: Good health and well-being	A225 A111
10:40 – 11:10	Break, poster exhibition	Northampton Suite
11:10 – 11:50	Session 2 2A: Partnerships for the goals 2B: Reduced inequalities	A225 A111
11:50 – 12:00	Changeover	
12:00 – 13:00	Session 3 3A: Responsible consumption 3B: Industry, innovation and infrastructure	A225 A109
13:00 – 14:00	Networking, poster exhibition, light refreshments	Northampton Suite

Session 1A: Life on land, life below water



9:45— 10:40 in A225

Session Chair: Dr Rosalind Sharpe,
Postdoctoral Research Fellow at the Centre
for Food Policy

To waste or not to waste: social and cultural influences on consumers' food waste behaviours

Léna Prouchet, City, University of London

Nowadays, food waste is one of the main challenges humanity has to face. Indeed, more than 30% of the food produced for human consumption is wasted. Consequently, reducing its volume and impact is part of the United Nations Sustainable Development Goals. Additionally, food waste has an environmental, human and economic cost. For example, the carbon dioxide emitted by food waste in the United Kingdom is equivalent to carbon dioxide emissions caused by 20% of the cars in the country (Waste and Resources Action Program, 2013).

Various factors determine food waste at a consumer level. The social and cultural factors are often underestimated whereas they play a crucial role in individuals' behaviours. Only a multifactorial approach can have a significant impact on this increasingly troublesome issue.

New policies that take into consideration these behaviours are urgently needed as they offer a new range of strategies to tackle the issue of food waste.

Furthermore, they can be an entering point to raise awareness among consumers about broader sustainability stakes such as climate change.

My project is to create a policy brief that acknowledges the issue of food waste and that makes recommendations for policy-makers in the UK.

Strategies and Progress of the Transnational Movement for Sustainable Palm Oil

Hyeonju Kwon, The London School of Economics and Political Science

During my final year at Boston University, I wrote a research paper for a course titled "People Power in Global Politics" outlining the strategies and objectives of the global movement for the sustainable production of palm oil. I believe that this paper could help others understand the overarching issue of state-driven agricultural practices and their consequences on not only the environment, but the well-being of residents of developing countries. When discussing environmental issues, we do not always consider the effects of deforestation on indigenous people and their livelihoods.

I think my work could elucidate the finer details of the impact the palm oil industry has had on human beings as well as on the Earth in the context of climate change. It also directly relates to UN Sustainable Development Goal 15: To sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss. Such a broad and complex issue, especially that concerning the forests of Southeast Asia, requires intervention from governments, NGOs, and ordinary people alike regardless of state boundaries.

Session 1B: Good health and well-being



9:45— 10:40 in A111

Session Chair: Ben Robinson, Community Volunteering Officer at City, University of London

Going green in healthcare

Nushma Malik, City, University of London

This project will be looking at developing green strategies in an effort to make hospitals more sustainable. Such environments are in need of green space in the form of an urban garden for both patients and staff, energy efficient solutions to decrease the carbon footprint and participation in recycling programs. Can Hospitals meet the UN sustainable development goals?

Incorporating persuasive designs in a web application to increase employee participation in charity days

Helen Khor, City, University of London

This project aims to use persuasive design thinking in a web application for corporates to encourage employees to use their charity days. A charity day is time off from work to volunteer for charitable organisations e.g. gardening, painting OR activities which generates monies for charities e.g. cake sale.

From conducting this project, the goal is to increase the % of employees taking up their charity days. Using charity days enables employees to build a community outside the work environment and also it is hoped that there is a snowball effect i.e. they continue to donate and volunteer their time.

This project involves building wireframes for the web app based on understanding functional requirements from charity development personnel in an organisation and persuasive requirements based on employee user research.

Session 2A: Partnerships for the Goals

17 PARTNERSHIPS
FOR THE GOALS



11:10—11:50 in A225

Session Chair: Louise Woodward, Directorate Operations and Project Manager, Student and Academic Services at City, University of London

Sustainability education: the key to addressing our global sustainability challenges and successfully meeting ALL of the UN Sustainable Development Goals

Annette Yunus-Pendrey, City, University of London

The future is in our hands. Never before has so much opportunity for change rested in the hands of so many. Through education, we can raise awareness of the sustainability challenges that we are facing across the world, as captured in the 17 UN Sustainable Development Goals. Critically, education can equip current and future generations to better address these challenges. Integrating sustainability into our education - in our primary and secondary schooling and in our higher education - is therefore the single most effective key to empowering each of us to bring about fundamental changes for the benefit of global society and the world in which we live.

If education is key to addressing our sustainability challenges, what impact, if any, is sustainability education currently having on students? This PhD study contributes towards answers by providing a detailed analysis of whether, how and why students in higher education are engaging with their sustainability education. The research focuses on business and management studies as these are the most widely studied subjects in higher education across the world. Integrating sustainability into business and management studies will therefore have the biggest potential global impact in higher education to raise students' sustainability awareness, understanding and empowerment. This PhD study focuses on the MBA degree, which has been seen as the 'cauldron of capitalism'. 79 interviews were conducted with 41 MBA students at 4 leading UK business schools over the course of their 1 year degree. This longitudinal exploration provides an understanding of the current state of play of sustainability education in business schools. Moreover, this study of graduate students' personal accounts also provides an indication of sustainability attitudes among some of the world's future global employees, consumers, business leaders and managers, and thereby also suggests the depth and direction of future sustainability initiatives.

Super WildWay – Replanting Routings

Margaret Jennings, Goldsmiths, University of London

Driven by concern of diminishing bee, butterfly and insect populations, 'The No Skills Necessary Hands On Gardening Society' established itself on Goldsmiths University campus in 2014. Organic, Permaculture and 'One Straw Revolution' methods learnt along the way tackled the hard-as-iron and deep London clay soil. Gathered wild flower seeds and donated plants gradually began to form a nectar rich chemical free food supply and increased biodiversity. Connecting with seed, plant and growing specialists such as Grow Wild-Kew offers opportunities to monitor their free seed mixes and offer feedback on growth results. Garden Organic Heritage Seed Bank offers similar opportunities to contribute to research and keep plant stock 'alive' and in the public domain. Set up on The Eco Haven DIY trip cameras created by the Research Dept. offer surprising insights into life that can be found even in this small sanctuary. Appropriate interesting shots are relayed to be shared 'Spring Watch' nature program. 'Enthralled at the number of different species living on the site found within a 10-minute period' Primary Science PGCE student teachers, from the Education Department, now use the Eco Haven as a biodiversity site for 'Mini-Beast Hunts'. From the Official Report by Educational Studies Dept. Dave Bailey.

The relationship Goldsmiths has to The Woodland Trust's development of their New Tree Charter through sign ups and our submitted tree stories, continues with a variety of actively engaged eco arts; tree dressings, silent walks, readings, photography and soundscapes. These activities bring students and local communities together with inclusion in Deptford XFrige Annual Art Festival and local exhibitions of trees. Through these connections The Woodland Trust has gifted us a Rowen tree offering much needed berries for bird's winter food. Land Art, Tree Dressings and workshops for writing Tree Stories. Art Tours are offered during open to public exhibition times. The Eco Haven has now been utilized as an outside gallery displaying eco art installations, wall hangings moss graffiti and non human architecture insect nest. The latter won an art prize. Workshops have been offered to create such habitats at university and beyond.

In the face of Climate Change, increase in urban population density and the new era of the Anthropocene, the Eco Haven gives off a quiet vibrational atmosphere and offers a mental pathway distant from consumerism. Opportunities for meditative reflection and quietude abound. It is also open to use by the Multi Faith University Chaplaincy.

The Eco Haven offers focus of decolonization our relationship to nature, a resensitizing ourselves in the recognition that we are part of nature. Psychological shift opportunity exists to reconsider who we are and where we are going away from human centered consumerism. To create a community connection between universities and local communities within our reach. drawing together ways to create a linked Super Wildway however dispersed that can begin to remap our existence as linked. My project facilitates community education research projects and creates opportunities for further research, education, Eco Arts and wellbeing to partner together to support the life on land, health and wellbeing and quality education.

Session 2B: Reduced Inequalities



11:10— 11:50 in A111

Session Chair: Dr Yi Wu, Lecturer in Real Estate at Cass Business School

Female financial illiteracy: breaking down barriers

Zara de Belder, City, University of London

Research suggests that women demonstrate more altruistic tendencies than men. Based on this theory, it appears that female investors would be more likely to participate in the social investment market, as it offers products that generate a financial and social return. However, research also indicates that on average women have lower levels of financial literacy than men.

Through extensive research and interviews with a sample of women aged between 25-35 years, I completed an exploratory project to understand if financial illiteracy was preventing women from investing and whether women expressed a preference for investing in social investment products. It was the first research project to use this sample within the context of financial literacy.

I will explore some key themes including:

1. The relationship between academic ability and financial literacy
2. Female attitudes towards the social investment market
3. The role of the UK National Curriculum and technology in improving financial literacy

I believe female financial illiteracy is contributing to Goal 5 of the UN SDGs - to be empowered women need to take financial ownership. According to the latest UK Census, women accounted for approximately 51% of the population. As a society, we are failing to provide women with the tools to improve their financial knowledge and we are wasting an investment opportunity that could help finance our most pressing social and environmental challenges. This seminar will tackle the question “What do we need to do as society to help improve female financial literacy?”

Ability Enabled

Yunqiao Xu, City, University of London, Zhaohan Li and Eboni Freeman

After the Americans with Disabilities Act (ADA) became law in 1990, companies all around America were pressed to hire and retain People with Disabilities (PWD). However, PWDs are often unwilling to disclose their 'secret' because of the negative stigma related to their performance. With the mission of creating more inclusive working environments for employees of all abilities, Ability Enabled is a discovery, request, and processing tool for disability accommodations. We solve two significant problems: lack of real-time information on what accommodations are available; and miscommunication around who and when to request for the accommodation, and what accommodations PWDs need. With the ability to directly calculate productivity ROI for each accommodation, as well as resulting trends in employee satisfaction, Ability Enabled helped employers and employees navigate disability inclusion effectively.

Ability Enabled will allow the hiring managers to feel comfortable supporting employees of all abilities, as they can rest assured that they will provide the proper accommodations in an efficient way. Employees will also feel more comfortable requesting accommodations than they would through the current bureaucratic and impersonal system since many people with disabilities (PWDs) struggle to disclose their condition and accommodation needs.

Our project links to UN Sustainable Development Goal 16: peace, justice and strong institutions. We tried to promote peaceful and inclusive societies for sustainable development. Ability Enabled will help institutions to create inclusive workplace for PWDs.

#LSSC19

Session 3A: Responsible consumption and production



12:00—13:00 in A225

Session Chair: Annette Yunus-Pendrey, PhD student and Students' Union Ethics and Environment Officer at City, University of London

Can technology help sustainable fashion clean up its act on fighting the war on environmental waste?

Nithya Venkatesan, City, University of London

The annual global fashion industry revenue is at \$1.2 trillion, with the U.S apparel market being the largest in the world, consuming about 28% of the global total.

Many companies adhere to the unsustainable 'fast fashion' model, where consumers can expect to find new clothes rolled out on the racks nearly every week instead of once a season. While technology has allowed companies to produce more garments more quickly and at less cost, fast fashion is now the second most wasteful industry in the world, behind the oil industry.

Thinking about the full life cycle of the garment and closing wasteful loops creates new opportunities for apparel and tech industries. Levis are involved in projects to address their own impact on the planet. They now dissolve old clothes to make a new fibre that the company uses in its jeans - an alternative to water-intensive cotton production.

Whilst there is a lot of awareness within fashion firms, the question arises as to, how many of these brands are adopting meaningful measures to bring about change in their contribution to environmental waste and climate change. Research suggests that there appears to be a gap between the desire for sustainable fashion and the actual consumers' purchasing behaviour. The reason for this gap seems to be the lack of information, awareness and transparency from fashion businesses. Sustainable fashion remains difficult to define because of the many diverse approaches to it. Consumers want to understand why they should choose one brand over the other and see what the direct benefits are for them.

The difficulty in defining sustainable fashion mentioned earlier can be addressed through the UN SDG goals. The SDG's (sustainable development goals) are 17 clear goals that businesses, governments can incorporate into their business strategy to contribute to the

betterment of social and economic development whilst remaining profitable.

An example of which the brand H&M is currently working on empowering women (SDG5), promoting equality (SDG10), health (SDG3) education (SDG4), fair jobs (SDG8) and living wages (SDG1), water (SDG6), reducing and using renewable energy (SDG7), producing and consuming responsibly (SDG12) and partnerships (SDG17).

The power also lies in the hands of the consumers in having beauty with a purpose by reducing the amount of wardrobe accumulation and buying on a need basis rather than on a want basis. If every consumer had a motive to shop on the basis of its cause and effect, one would be able to discriminate their own thinking on the effects on the environment.

Making coffee great again (and guilt-free): Sustainable and Social Innovation in E-MOCA (coffee company)

Maria Giulia Castellani, City, University of London

Environmental destruction, exploitation of farmers and wasteful packaging harming the planet are only a few of the causes that make coffee production a relevant social matter. Nowadays many companies and customers have engaged in such problem and dedicated their missions to improving this situation. The Fairtrade certificate has become a 'must-have' tool in the coffee industry and the label 'Organic' is always more requested by customers. Society has become much more aware towards ethical consuming, reason why researches have shown a growth in the WTP towards ethical products and services. Acknowledging the ethical and sustainable market being in continuous growth, here is where and when E-MOCA steps in.

E-MOCA is a social enterprise, producing and selling coffee in a sustainable and ethical way. Supplying coffee from small-scale Fairtrade and organic producers around the world, it supports their welfare and sponsors their sustainable economic growth. Moreover, the company's vision and mission is that of promoting a sustainable socio-economic development in an underdeveloped community in South America. Generating funds to then create job opportunities for locals after teaching them sustainable farming techniques will be the main goal of E-MOCA. In order to achieve this, the company will focus on producing revenue through sales, by offering digital subscriptions and direct sales options to customers, according to the way they prefer to purchase their coffee.

This research project links to the different UN's goals towards a sustainable development that have been established since 2013, when the first High Level Political Forum meeting took place. Some of these consist in promoting a sustainable agriculture, building a resilient infrastructure that promotes sustainable industrialisation, implementing a sustainable use of terrestrial ecosystems and create sustainable jobs in third world countries.

Waste Plastic Recovery Certificates: Using Market Instruments to Improve Plastic Recycling

Ahsan Syed, The London School of Economics and Political Science

Plastic is pervasive in every component of our lives, but there is increasing concern about the accumulation of waste end-use plastics in the environment. Globally, only 14% of plastics are recycled. Even when collected, plastics are often landfilled because they are not properly sorted/cleaned or not economical to recycle according to global commodity prices. Consumers and governments are calling on consumer packaged goods firms (CPGs), retailers, and food companies to manage their plastic wastes, or ban plastics outright. In response, organizations are dumping millions of dollars into ineffective collection and sorting programs that don't guarantee plastics are actually recycled. Plastic Recovery Certificates offers a solution, by working with upcycle technology companies and plastic recycling companies to find the most cost-effective approaches to repurpose end-use plastics. Companies that directly convert waste plastics into new materials would generate verified certificates through a rigorous auditing procedure. CPG firms will be able to bid on and purchase those certificates along with reports certifying that end-use plastics were recovered and recycled. This approach will create a market for end-use plastics, offering trickle-down benefits across the plastics supply chain. Certificates offer a win-win solution: CPG and plastic-exposed firms will be able to report progress on plastic pollution while helping recycling technology companies who face tough economic barriers. This is essentially an application of carbon trading systems (which have been very effective at reducing GHG emissions) to plastic recycling.

Session 3B: Industry, innovation and infrastructure



12:00—13:00 in A109

Session Chair: Dr Veselin Rakocevic, Senior Lecturer in the School of Mathematics, Computer Science & Engineering

Upsourced, better sourced fashion

Claire Chauvel, The London School of Economics and Political Science, Eloise O'Carroll, The London School of Economics and Political Science, and Natasha Jones, UCL

If the future is to be sustainable, there needs to be change. At Upsourced, we're taking on fashion.

Fashion is the second most polluting industry. Conscious of this, 68% of people prefer purchasing sustainable and local clothing. Value and ease of purchase drive nearly everyone's fashion choices. Yet, no e-marketplace for sustainable and local fashion exists to meet these consumer needs. Clearly, there is a mismatch.

Founded in October 2018, Upsourced aims to be the e-marketplace for local and sustainable fashion. We believe the time of global, impersonal fast fashion is over. By delivering ease, value and transparency, we want consumers to rediscover local, independent and sustainable fashion labels.

How are we different? We are striving to support ethical and small business who get crowded out by the big online marketplaces and high street fast fashion. Our website dynamically generates fashion labels according to a shopper's proximity. This gives the consumer a unique shopping experience that is both fun and interactive whilst drawing on a sense of a local fashion identities and a desire to find unique pieces. A 'Discover' tab allows the consumer to discover independent designers in different cities, regions and countries through interactive maps.

We have placed the Sustainable Development Goals at the heart of our mission. Carbon offsetting of our deliveries and plastic free packaging are just two ways that Upsourced aims to change the way that we shop. Above all, we want to empower consumers to shop consciously without compromising on style. Upsourced offers detailed product information about how, where and who made their clothing.

We believe that a sustainable future will be built together. Through talks events and a content rich platform we will foster a fashion community and the exchange of ideas. We are launching focusing on the UK and three major European cities: Paris, Berlin and Vienna.

With just a few clicks on Upsourced, a sustainable fashion future will be a closer reality.

Wireless EV charging through lamp posts

Dr Alejandro Asensio Cermeño, Aditya Gupta, Pantea Mollaahmad and Mohnish Singh, City, University of London

With the rapid rise of electric vehicles in London and around the world, on-street chargers are not being installed quickly enough. It is, therefore, imperative to invest in innovative ways for charging EV's across cities with a model that is scalable, reliable, cheap and effective.

Our final proposed solution to the stated problem will satisfy the following specifications:

1. Use street lamps as smart charging stations for Electric-Vehicles.
2. Benefit from new IoT technologies to improve user experience (payment, locating closest charging station, booking, seamless switching of energy source).
3. Use wireless charging technology to charge the EV.
4. Incorporate the sustainability and environmental consciousness approach by using renewable energy generated near the lamp post to charge the car when available.

By achieving the above, we will be able to contribute to the following UN sustainable development goals: Goal 7. Affordable and clean energy; Goal 9. Industry, innovation and infrastructure; Goal 11. Sustainable cities and communities and Goal 13. Climate action.

#LSSC19

Evaluating the air pollution impacts of distributed generation systems in urban areas

Faysal Mahad, City, University of London

Climate change, limited fossil fuel resources and concerns over the supply and price of energy are proving to be major challenges in the effort to meet the ever-growing demand for energy. Urban areas are at the forefront of being exposed to the problems these challenges bring. Currently over 50% of the world's population lives in urban areas which is expected to increase to 60% by 2030 and to 70% by 2050. As the world's urban population grows so will its demand for energy. Recent estimates suggest that for every 1% increase in the urban population will result in a 2.2% increase in energy consumption.

In the effort to meet the growing energy demand of urban area in a clean, secure and affordable manner Combined Heat and Power (CHP) systems are considered as one of our best hope. However, a large scale deployment of the prevalent CHP system (gas engine CHP) might not be the most economic choice and would adversely impact the air quality of urban areas; having both economic and health implications for the residents of urban areas. The aim of my research project was to investigate the economic feasibility of different small CHP systems in urban areas, by considering the air quality impacts of each system when calculating it's the economic performance.

The findings indicated that the gas turbine CHP systems have better economic and environmental performance compared to gas engine CHP system. The main conclusions drawn from this research were: the future deployment of CHP systems in urban areas is economically feasible. What's more, compared to gas engine CHP, gas turbine CHP deployment in urban areas can be more economic, provide a high CO₂ saving and have a lower air quality (NO_x) emissions costs. This research argues for both the CO₂ and air quality (NO_x) emissions of a CHP system to be considered when evaluating the economic performance of a CHP system in urban area. Likewise, they should both be considered when financial support is granted to CHP systems based on their environmental performance.