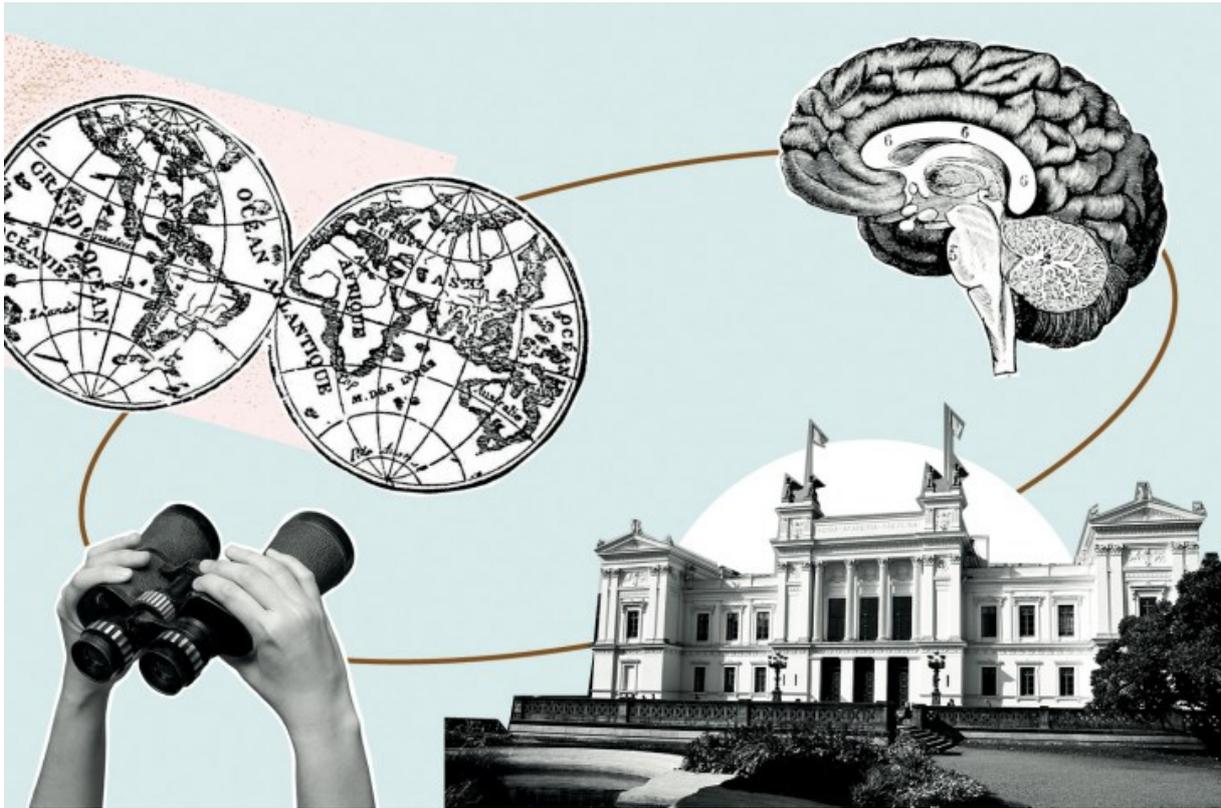


## Conference abstracts



# Knowledge for Sustainable Development

## – Lund University Research Conference

4 May 2021 | Sustainability Week in Lund 2021



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## Content

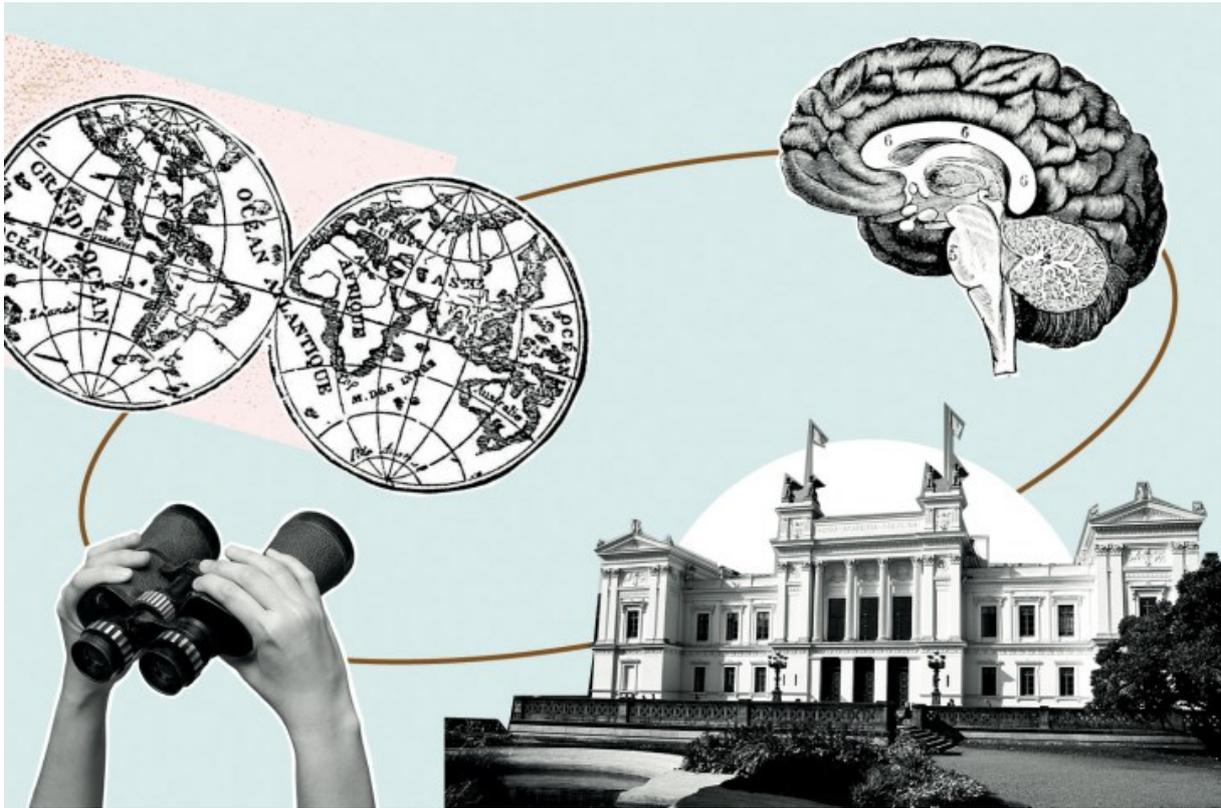
Summary of research abstracts presented during the thematic parallel sessions and poster session.

1. Overarching theme: Knowledge for Sustainable Development
2. Theme I: Knowledge on crisis and resilience in the sustainability context
3. Theme II: Knowledge on communicating uncertainty and ambiguity in sustainability research
4. Theme III: Knowledge about justice and equity in a sustainable world



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## Conference abstracts



# 1. Overarching theme:

## Knowledge for Sustainable Development

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Oral presentations



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## Research Conference on Sustainable Development 2021

Implicit sustainable development theories obscure disproportionate impacts from climate-related extreme events: example from Hurricane Michael and housing losses on Florida's Forgotten Coast

Presenting author: *Chad S. Boda (LUCSUS)*

Co-author: *Murray Scown (Utrecht University), Turaj Faran (LUCSUS), Emily Boyd (LUCSUS)*

Key words: Capital Theory; Human Development; Loss and Damage; Disproportionality; Disasters

Theme: *Overarching theme*

Format: *Parallel session*

### Aim

A central challenge for sustainable development (SD) is how societies are to avoid, minimize or address impacts from anthropogenic climate change. However, competing perspective on "what should be sustained" lead to widely different understandings of what mitigation, adaptation and loss and damage entail and how best to approach them. We provide a novel conceptual and empirical comparison of two contrasting SD-based theoretical approaches to the study of impacts from climate-related extreme events: Capital Theory and Human Development.

### Methodology

We use our analysis of immediate residential property value and housing capacity impacts caused by Hurricane Michael in Gulf County, Florida, to demonstrate how the theory used to assess and interpret impacts greatly affects the identification of whom and where is considered to be objectively "most impacted".

### Key results/conclusions

From our comparative analysis and discussion, we conclude that, while currently underutilized, Human Development is the more advanced approach to SD oriented climate-impact research and policy when compared to Capital Theory.

## Abstract



## Research Conference on Sustainable Development 2021

### Have a look at Plats: Looking as techne

Presenting author: *Lisa Källström*

Key words: *Plant studies, photography, gaze*

Theme: Overarching theme

Email address: *lisa.kallstrom@kom.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Approaching photographs as a participatory and mediated practice, I emphasize not the finished aesthetic object but the processes and relationships between the looked and the gaze. I do so, in attempt, in a dialogue with Sidney Dobrin and Sean Morey's *Ecosee* (2009). I attempt to offer a revised understanding of visual rhetorical strategies by stressing our looking activity as a form of techne as a skill and a making or doing.

### Methodology

Plants studies challenge us to reconsider the hierarchical view on vegetal life traditionally reducing it to the role of passive bystanders, ornamental backdrops, or mere symbols. The aim is to initiate an interdisciplinary dialogue on how to think, imagine, and describe vegetal life with critical awareness, conceptual rigor, and ethical sensitivity. For me this perspective offers an insights into the creativity and ethical responsibility of our gaze. My case is *Wise Trees*, from American landscape photographers Diane Cook and Len Jenshel. Here they showcase some of the world's oldest and wisest trees (2017). All of these trees have a story to tell us. With some of this stories in focus this paper question the dualism nature culture in the context of anthropogenic ecological crisis, to denote a broad aesthetic principle of combination and synthesis.

### Key results/conclusions

A description of your key results or conclusions.

Looking is about constructing meaning based on what we think we know about the world.

Contemporary studies in visual rhetoric are often based on the assumption that the viewer imposes a form on the material world based on questions of intention. Against this assumption, I argue that things arise in the fields of power and material flows. It is by intervening in these force fields and following the flow lines that we interact with things, and find our own paths or lines in the material surface. We have re-value our gaze on trees.

## Abstract



# Research Conference on Sustainable Development 2021

## Go Massive or Go Home? The rise of online courses for spreading knowledge on sustainable development

Presenting author: *Kes McCormick, IIIIEE*

Co-author: *Charlotte Leire, Peter Arnfalk, and Lena Neij, IIIIEE*

Key words: *massive, open, online, courses*

Theme: *overall theme of conference*

Email address: *kes.mccormick@iiiiee.lu.se*

Format: *Parallel session*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

This conference asks “What can the research community at Lund University bring to the table in order to advance knowledge for sustainable development?” This paper argues that all universities need to engage with the urgent task to advance **research impact** for sustainable development and asks “How can Lund University significantly develop **impact pathways** for research on sustainable development?” Research impact refers to how research contributes to the economy, society, environment or culture, beyond the contribution to academic research and education. This paper suggests that Massive Open Online Courses (MOOCs) represent invaluable impact pathways for sharing and multiplying the effects of knowledge.

### Methodology

This paper provides a review of the current five MOOCs at Lund University with a focus on sustainable development and an outline of emerging plans for specialisations as well as two MOOCs under development by Lund University on the sustainable development goals. It also provides an assessment of the global activities on MOOCs for sustainable development.

### Key results/conclusions

An extraordinary opportunity for universities is the rise of MOOCs, which offer a mechanism to share and spread state-of-the-art research and findings from ongoing research projects, to contribute to lifelong learning and capacity building as well as to educate and attract students to universities.

## Abstract



# Research Conference on Sustainable Development 2021

## How Resources Become: The 2021 Lund Resourcification Manifesto

Presenting author: *Hervé Corvellec (Dept of Service Studies)*

Co-authors: *Johan Hultman (Dept of Service Studies), Anne Jerneck (LUCSUS), Susanne Arvidsson (Dept of Business Administration), Johan Ekroos (CEC), Clara Gustafsson (Dept of Business Administration), Fay Lundh Nilsson (Dept of Economic History), Niklas Wahlberg (Dept of Biology)*

Key words: *Resources, Resourcification, the Anthropocene*

Theme: *Overarching conference theme*

Email address: *herve.corvellec@ism.lu.se*

Format: *Parallel session*

Consent: *Yes*

### Aim

By presenting the 2021 Lund Resourcification Manifesto, we offer a theoretical framework for a radical approach to innovation and sustainability studies and policies

### Methodology

In times of major global environmental change, the pressure to identify and exploit new resources is certain to intensify. Given that there are unavoidable trade-offs, conflicts, and arenas for violence involved when increasingly more material and immaterial things are turned into resources, we call for explicit research on the very process – a process that we label *resourcification*. The concept of resourcification shifts attention from essentialist queries about the nature of resources to a focus on the social processes through which things are turned into resources. In search of a better understanding of resources in the Anthropocene, resourcification offers a new conceptual framework that allows for a systematic search for knowledge about the diversity of contexts, conditions, modes, and temporalities of resourcification.

### Key results/conclusions

The Anthropocene is a post-sustainability framing of the world. Thus, the Resourcification Manifesto is a provisional statement to address the post-sustainability challenges of resources in the Anthropocene. It voices a need to adapt to a general condition of societal-environmental interfaces in constant and violent anthropogenic flux.

## Abstract



# Research Conference on Sustainable Development 2021

## New perspectives on the design of the buildings

Presenting author: *Pimkamol Mattsson, Environmental Psychology research group, Dept. Of Architecture and Built Environment, Faculty of Engineering, Lund University and affiliation*

Co-author: *Maria Johansson, Environmental Psychology research group, Dept. Of Architecture and Built Environment, Faculty of Engineering, Lund University*

*Zeynep Ekim, Environmental Psychology research group, Dept. Of Architecture and Built Environment, Faculty of Engineering, Lund University*

Key words: building design, behaviour, experience, mixed method

Theme: *Overarching theme*

Email address: *pimkamol.mattsson@arkitektur.lth.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

## Aim

The design of buildings has mainly focused on energy performances during the last decades however, it is also important to emphasize human needs and behaviour. Our research projects aim to advance knowledge of sustainability concepts in building design by investigating how buildings communicate with users towards sustainability, how are buildings perceived and used, and the roles of the individual factors such as habits and norms.

## Methodology

Empirical studies have been conducted in the laboratory-based and real world environments such as home, educational and healthcare facilities and office, using a multidisciplinary approach and mixed methods from design, technology and psychology disciplines. The overarching model of human-environmental interaction has been used to evaluate experiences and behaviour at an individual level. The physical environments have been measured both objectively and subjectively, and the perceptions of social environment is taken into account.

## Key results/conclusions

The research would provide a better understanding of human-environment interaction in relation to sustainability aspects of buildings. To reach sustainable solutions, the environmental conditions from both technical and human perspectives are needed to be considered. The findings would contribute to building design improvements as well as support the practical implication of sustainable building research.

## Abstract



# Research Conference on Sustainable Development 2021

## Sustainable and resilient economic development in peripheral regions: a theoretical framework

Presenting author: *Rhiannon Pugh CIRCLE, Lund University*

Co-author: *Markus Grillitsch, Department of Human Geography and CIRCLE, Lund University*

Key words: *Sustainable economic development, regional resilience, peripheral regions*

Theme: *Overarching theme*

Email address: *Rhiannon.pugh@circle.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

This contribution brings together insights and developments from separate research projects currently being undertaken exploring the issues of innovation and economic development in peripheral regions. Peripheries are often struggling with issues of economic stagnation, out-migration, and ageing populations which require holistic solutions. Within the disciplines of economic geography and innovation studies in which we sit, sustainability dimensions have been largely absent, with an over-focus on pure economic dimensions. In this sense, we are working on developing a framework that allows us to view peripheral regions development in a more holistic manner, also taking into account discussions of sustainability and resilience.

### Methodology

In total, we are undertaking empirical research in regions in Sweden, Norway, Scotland, and Finland all with a “peripheral” profile.

The different studies have different methodologies but in total we cover both quantitative and qualitative data collection. However, since this contributions is going to be a primarily theoretical discussion we will not go into our methods and data in much detail.

### Key results/conclusions

Here we will present what we have found already about innovation in peripheral regions, focussing on the “opportunities” for peripheral regions to do things differently from the core, and to exploit or overcome their peripherality to be successful innovators. We will also reflect on what further knowledge and research we need to do to better integrate issues of sustainability and resilience into future policy and research on peripheries.

# Research Conference on Sustainable Development 2021

## Sustainable transformation through universal design

Presenting author: *Charlotte Magnusson, Certec, Department of Design Sciences*

Co-author: *Per-Olof Hedvall, Certec, Department of Design Sciences*

Key words: *universal design, social sustainability, diversity, inclusion*

Theme: *Overarching theme*

Email address: *charlotte.magnusson@certec.lth.se*

Format: *Parallel session*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

The aim of this presentation is to introduce universal design as a tool in the sustainability toolbox.

### Methodology

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland report). Universal design (UD) is design usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. UD has potential as an important tool when it comes to the transformation towards a sustainable, diverse and inclusive society. UD shares the goals of “inclusion”, “access” and “participation” with “social sustainable development”. The importance of UD is recognised in policy documents, legislation and standards, but research to establish knowledge and methods for how to implement and evaluate universal design for sustainability is needed. Building on research projects on procurement, interaction design, health/rehabilitation, city planning, policy and inclusive work environments we identify the core themes equality, non-stigmatisation, flexibility and diversity. These themes need to underpin all designs, activities, methods and processes carried out in the work.

### Key results/conclusions

We present UD as a key driver for inclusive social sustainable transformation, engaging the themes equality, non-stigmatisation, flexibility and diversity.

## Abstract



## Research Conference on Sustainable Development 2021

Distribution of responsibility for climate change adaptation - Is the global discussion relevant on the local level?

Presenting author: *Erik Persson, Lund University*

Co-author: *Kerstin Eriksson, Research Institutes of Sweden (RISE); Åsa Knaggård, Lund University*

Key words: *Responsibility, local adaptation, climate justice*

Theme: *Overarching theme*

Email address: *erik.persson@fil.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Our aim is to find out how existing theories about just distribution of responsibility for climate change mitigation and adaptation on the global level can contribute to the question of climate change adaptation on a local level.

### Methodology

We studied a large number of publications discussing just distribution of responsibility for climate change mitigation and adaptation on the global level. We then analysed and classified the theories, and finally, assessed their relevance and implications on the local level based on official documents and interviews with decision makers in municipalities and county administration boards.

### Key results/conclusions

We found that the basic principles for just distribution are the same but the choice between principles need to be made differently, which may or may not lead to different priorities. For example, historical emissions play a salient role in discussions about just distribution of future emission rights among countries but are less useful on the local level. On the other hand, ability to pay and technological capacity seem to be important considerations on both the global and the local level and regarding both mitigation and adaptation.

## Abstract

# Research Conference on Sustainable Development 2021



## Art, hacking & parasitic critique: Discussing the potentials and limits of international political design through Jacob Remin's "Harvesting the Rare Earth"

Presenting author: *Daniel Møller Ølgaard, Department of Political Science*

Key words: *Aesthetics, materiality, parasitic critique, hacking, international political design*

Theme: *Overarching theme*

Email address: [daniel.moller\\_olgaard@svet.lu.se](mailto:daniel.moller_olgaard@svet.lu.se)

Format: *Parallel session*

*The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

How can we, as social scientists, contribute to the daunting task of crafting a just world? Beginning from a reading of Jacob Remin's art project 'Harvesting the Rare Earth,' this paper considers how the material imaginary presented herein – namely bioengineered worms that extract rare earth minerals from e-waste – provides a glimpse of how social science might add to its dominant focus on knowledge production more active forms of material, technological and aesthetic interventions into global injustices and inequalities.

### Methodology

To this end, I engage with a number of conceptual and methodological devices: namely Michael Serres' figure of the 'parasite,' Jonathan Luke Austin's 'international political design' and Claudia Aradau's repurposing of 'hacking' as a form of critical methodological interference.

### Key results/conclusions

Employing these devices, I show how the aesthetic and material intervention performed in 'Harvesting the Rare Earth' not only negates the human injustices associated with living and working in e-waste dumps in the Global South but also constitutes a parasitic act of hacking that can be leveraged for the ethico-political purpose of imagining and crafting alternative ways of living *in* and *with* the world. I end the paper with a discussion of the potentials and limits of such interventions.

## Abstract



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# Research Conference on Sustainable Development 2021

## Environmental Psychology Perspectives on People and nature

Presenting author: **Ann Eklund**, *Environmental Psychology, Department of Architecture and Built Environment, Lund University*

Co-author: **Maria Johansson**, *Environmental Psychology, Department of Architecture and Built Environment, Lund University*; **Anna Litsmark** *Environmental Psychology, Department of Architecture and Built Environment, Lund University*; **Asa Waldo**, *Environmental Psychology, Department of Architecture and Built Environment, Lund University*

Key words: *Psychological resilience, ecological resilience, coping, biodiversity crisis.*

Theme: *Overarching theme*

Email address: [ann.eklund@arkitektur.lth.se](mailto:ann.eklund@arkitektur.lth.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Our research aims to provide knowledge on the interaction between humans and nature from the perspective of the individual, contributing towards human wellbeing and sustainable cities and settlements, as well as the protection and promotion of biodiversity and functional ecosystems on land and in the seas.

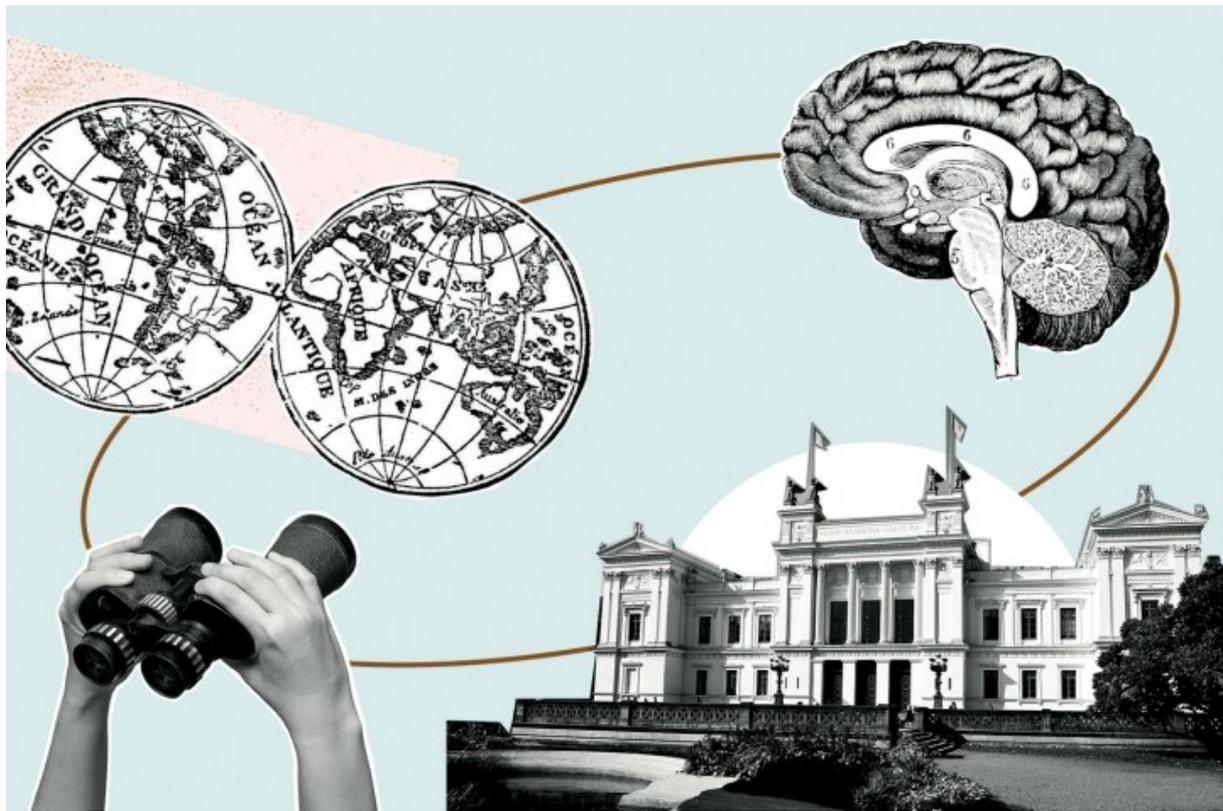
### Methodology

We build on the human-environment interaction model and appraisal theory of emotion to investigate the transactional relationship between individuals and the natural environment. Studies focus on how restored nature, wildlife conservation, and green urban areas influence psychological processes and behaviours. Human behaviour, in turn, influences the natural environment. Such transactions are analysed by a flexible approach involving quantitative and qualitative methods.

### Key results/conclusions

Natural and restored environments importantly influence human quality of life, restoration, and emotions. While these influences are often perceived as positive, elements of natural environments can additionally generate negative emotions such as disgust, stress, and fear, which may in turn lead to social conflicts over the management of natural resources. It is important to understand the different ways in which people perceive and experience the natural environments, to allow human wellbeing and conservation of biodiversity in multiuse landscapes in the future.

## Conference abstracts



# 1. Overarching theme:

## Knowledge for Sustainable Development

Poster presentations



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## Research Conference on Sustainable Development 2021

### A tool for sustainable business model conceptualization and implementation

Presenting author: *Kajsa Ahlgren Ode, Design Sciences, Lund Faculty of Engineering*

Co-author: *Emil Åkesson, Design Sciences, Lund Faculty of Engineering*

Key words: *Business model innovation, sustainability, tool, conceptualization, implementation*

Theme: *Overarching theme*

Email address: *kajsa.ahlgren\_ode@design.lth.se*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

#### Aim

The aim of the research is to develop a tool based on what might be jointly labeled model-based facilitation. We adapt this process tool, originally developed for psychology and strategy, to support managers in the process of conceptualizing new business models for sustainability through individual and collective cognitive mapping.

#### Methodology

To evaluate the tool's empirical applicability and make refinements, we test it in a utility company transitioning to sustainability.

#### Key results/conclusions

The paper contributes to the literature on business models for sustainability by evaluating and refining a tool supporting managers to both think differently and think together, and negotiate a common view supporting implementation of a future sustainable business model.

## Abstract

# Research Conference on Sustainable Development 2021



## Podcasting: a powerful communication tool to mobilize sustainability knowledge

**Presenting author:** Steven Curtis

**Co-author:** Frans Libertson, Katherine Shabb

**Key words:** Podcast, knowledge mobilization, sustainability communication

**Theme:** Conference overarching theme

**Email address:** [steven.curtis@iiee.lu.se](mailto:steven.curtis@iiee.lu.se)

**Consent:** The presenting author is acting on behalf and with consent of all authors of this contribution.

### Aim

Despite sustainability being researched for decades, little progress has been made. For example, resource extraction has quadrupled since 1970, with the population only doubling. With greater emphasis in research on societal impact, attention is needed on knowledge mobilization and impact pathways to communicate sustainability knowledge for impact. Yet, much academic research is published behind paywalls, and written for an expert audience, making it inaccessible to everyday people that may benefit. Therefore, the aim of this research is to showcase the role of *podcasting* as a powerful communication tool to diffuse and mobilize knowledge to a wider and relevant audience.

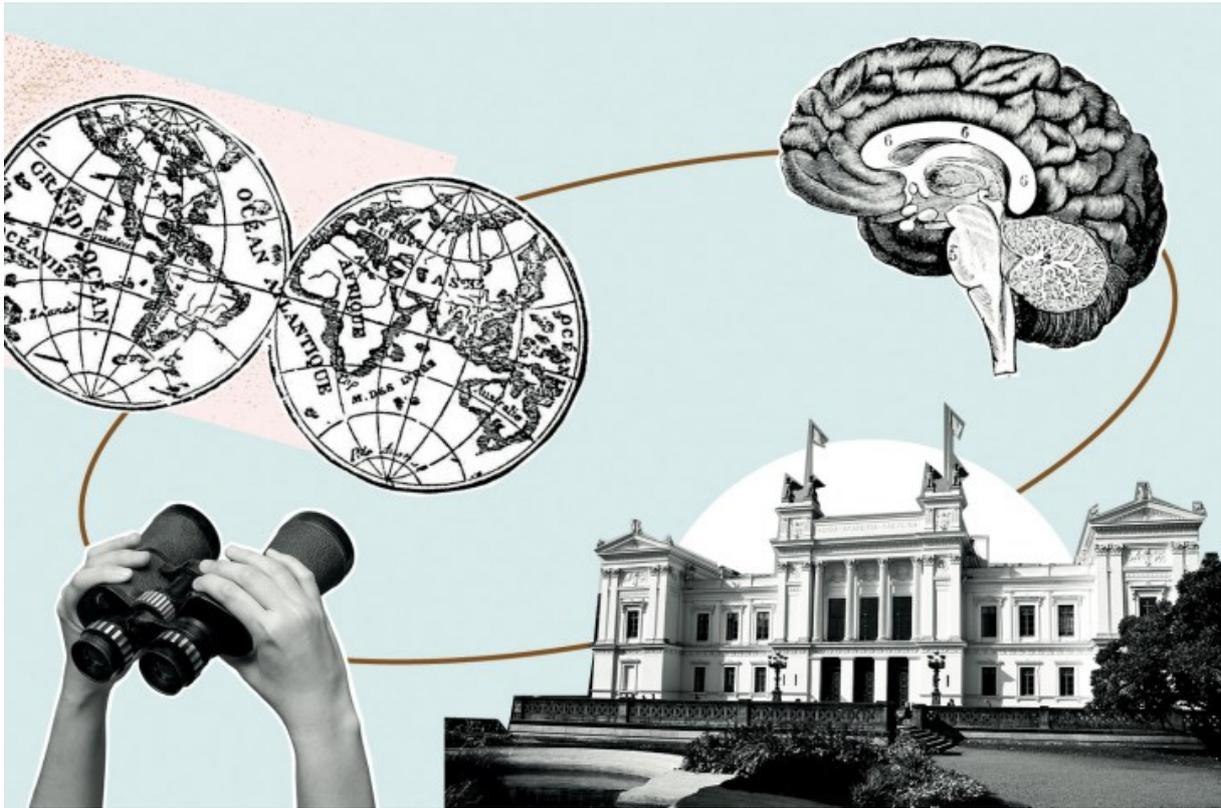
### Methodology

This research presents a case study analysis of our IIEE podcast 'Advancing Sustainable Solutions' at Lund University. Within two years, it is in the top 10% of all podcasts globally, providing a great case to draw lessons learnt and challenges from. This paper will provide a review of all episodes undertaken to generate key insights on communication mobilization, outreach and impact.

### Key results/conclusions

Podcasting is a powerful tool to increase the reach and significance of sustainability knowledge produced within academia, including Lund University. Podcasting creates various types of impact (e.g. awareness and understanding, attitudinal, environmental, policy) for people who can act on the efforts of academia, such as managers, policymakers, and everyday citizens.

## Conference abstracts



## 2. Theme I:

### Knowledge on crisis and resilience in the sustainability context

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Oral presentations



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## Research Conference on Sustainable Development 2021

### Circular business models – are they attractive for households?

Presenting author: *Jessica Lagerstedt Wadin, Innovation engineering, Design Sciences, LTH*

Co-author: *Fanny Wahlström, Innovation engineering, Design Sciences, LTH*

Key words: *circular business models, pains and gains, households*

Theme: /

Email address: [Jessica.wadin@design.lth.se](mailto:Jessica.wadin@design.lth.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim and background

The aim is to present an ongoing PhD project in the field of business models innovation for sustainability. Circular business models have a great potential to promote circular product use. Particularly promising is product-service system (PSS). Circular business models are unfortunately not very widespread in practice (Linder and Willander, 2017), 5-10% market penetration only (OECD, 2019). Two obstacles pointed out for the spread of circular business models are: 1) customers' and users' limited acceptance, or non-acceptance of the new system (Vermunt et al., 2019), and 2) today's way of doing business is built on linear business model logic, which must be fundamentally changed (Bocken, et al., 2019).

### Methodology

Based on a PSS model being tested at Electrolux, in a case study, we examine customers' and users' "pains and gains" in PSS business models, and how this can facilitate the circular business model innovation process in product based companies based on linear business model logic.

### Key results/conclusions

Expected results are insights about consumers' pains and gains and how this knowledge can support business models innovation for sustainability, more specifically transformation from a linear to a circular business model. Increased consumer satisfaction will support for circular use of products.

## Abstract

# Research Conference on Sustainable Development 2021



## Effects of Covid-19: from mobility to digital accessibility

Presenting author: *Peter Arnfalk IIIIEE, Lund University*

Co-author: *Lena Winslott Hiselius, K2 and Transport and Roads Lund University*

Key words: *COVID-19, Telework, Virtual meetings, Travel restrictions, Transport sustainability*

Theme: *Theme I*

Email address: *peter.arnfalk@iiiiee.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution. - Yes*

### Aim

Due to the pandemic, a shift to telework and virtual meetings is being tested in what can be seen as a large-scale experiment. This study seeks to analyse the effects of government and public agencies' recommendations on meeting and travel behaviour at ten organisations (public agencies, universities and companies) in Sweden.

### Methodology

The paper analyses implications on meeting and travel behaviour based on a questionnaire study to employees with desk work where telework is relevant and an interview study with HR people at organizations studied to capture the employer's view, what measures have been taken to tackle the challenges this has entailed, and how to reason, plan and prepare for the time after Corona - the "new normal".

### Key results/conclusions

The results indicate that the organisations surveyed were well prepared and had a 'backup collaboration solution', at least technically, to make a rapid behavioural shift when travel was not an option. The HR people believe in a continued high level of teleworking. Results from the interview study indicate that the offices are expected to have a slightly different role, where more emphasis is placed on formal and informal meetings and social exchange and less on pure office work.

## Abstract



# Research Conference on Sustainable Development 2021

## Does Scarcity Reduce Cooperation?

Presenting author: *Gustav Agneman (Lund University, Department of Political Science)*

Co-author: *Paolo Falco (University of Copenhagen), Onesmo Selejio (University of Dar Es Salaam), Exaud Joel (University of Dar Es Salaam).*

Key words: *food scarcity, cooperation, field experiment*

Theme: 1

Email address: *gustav.agneman@svet.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

## Aim

In this study, we investigate how food scarcity affects the level of cooperation.

## Methodology

We study cooperative behavior in a pre-registered lab-in-the-field experiment conducted in the poverty-stricken region of Singida, Tanzania. Cooperating is socially efficient and potentially profitable, but the outcome is uncertain as it rests on reciprocation from the second player. Exploiting quasi-experimental variation in food supply induced by the Msimu harvest in rural Tanzania, we then study how cooperation depends on food security.

## Key results/conclusions

We show that lean season scarcity depresses socially efficient but personally risky cooperation. This behavioral effect of scarcity can contribute to what is commonly referred to as a behavioral poverty trap.

## Research Conference on Sustainable Development 2021

### Supply and Demand of Ecosystem Services - African Geography of Sustainability

Presenting author: *Jonas Ardo, Physical Geography and Ecosystem Science*

Key words: *Supply, demand, ecosystem services*

Theme: *I, II*

Email address: *Jonas.Ardo@nateko.lu.se*

Format: *Parallel session*

Consent:

#### Aim

To assess the geography of African sustainability with special consideration to supply and demand of ecosystem services.

#### Methodology

A sustainable future of Africa may be problematic due to climate change, environmental stress, high population increase, frequent hunger and malnutrition in combination with low adaptation ability. Effect studies of climate change has identified Africa as one of the most vulnerable continents, due to both ecological and socio-economic factors. By year 2050 75-200 million Africans risk to suffer from increased water stress and the yield from rain-fed agriculture could be significantly decreased.

#### Key results

Regional sustainability will be assessed and mapped as the supply and demand of crucial ecosystem services (food, feed, fuel, water, decent living climate) under standard Socio-Economic Pathways and Representative Concentration Pathways in combination with birth control scenarios.

Regions with high population increase in combination with low primary productivity of vegetation due to drought and land degradation tend to show lower future sustainability.

# Research Conference on Sustainable Development 2021



## A strategic communication approach to resilience in tourism regions

Presenting authors: *Dr. Dr. Maria Månsson & Jörgen Eksell, Department of Strategic Communication, Lund University, Sweden*

Key words: *tourism, narrative, media, space, geography of communication*

Theme: *1<sup>st</sup> Theme 1, Knowledge on crisis and resilience in a sustainable context, and 2<sup>nd</sup> Theme 2, Knowledge on communicating uncertainty and ambiguity in sustainability research*

Email address: [Jorgen.eksell@isk.lu.se](mailto:Jorgen.eksell@isk.lu.se), [maria.mansson@isk.lu.se](mailto:maria.mansson@isk.lu.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

This research explores how the Covid-19 pandemic has reconceptualised the relationship between the urban and rural in tourism regions. *Especially, this paper discusses the relationship between media narratives and tourism flows, and the implications for resilience in tourism regions.* This paper departs from theories of geography of communication (GoC). Media and communication scholars have thus far been largely absent from resilience theorising and research (Houston et al., 2015). GoC explores the interconnectedness of media and space (e.g. Warf & Arias, 2009; Adams & Jansson, 2012).

### Methodology

The data consists of interviews with stakeholders (DMO representatives, managers of nature reserves and tourist attractions) and online news media texts on the region Scania, Sweden. A paradigmatic analysis of narratives that locate common themes or conceptual manifestations was conducted (cf. Polkinghorne 1995).

### Analysis, conclusions, and discussion

The analysis shows the intimate relation between resilience in places and media narratives, and how the latter transform both conceptions and practices about resilience in places. Rural places are contrived as places of physical distance and attractive for visitors. These are constructed as sustainable and safe even with large numbers of visitors. The GoC-approach to resilience reveals how the constitution of resilience in urban destinations is moulded by the politics of media and communication practices.

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## Abstract



## Research Conference on Sustainable Development 2021

### Refining Resilience Discourses in Development: resilience *of*, *for* and *as*

Presenting author: *Billy Jones. Agenda 2030 Graduate School, Division of Ethnology*

Key words: *Resilience, Discourse Analysis, International Development, Sustainable Development; Classification*

Theme: Theme I

Email address: [william.jones@kultur.lu.se](mailto:william.jones@kultur.lu.se)

Format: Parallel session

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

This paper proposes an empirically-grounded, triadic classification of the concept *resilience*. Strengthening the resilience of ecosystems, economies and/or livelihoods features heavily in sustainable development agendas. Its ubiquity relies on a vague definition that ensures relevance to multiple situations without losing integrity. However, its vagueness exposes it to manipulation to fit into pre-existing agendas without forcing real change. To ensure resilience retains clarity and practical relevance so it can contribute meaningfully to solving the world's complex problems, we require refined, more workable definitions.

### Methodology

This paper uses discourse analysis of international development agendas to propose three ways of engaging resilience. This triadic classification works to clarify its use in international development discourses and offer pathways for meaningful engagement with resilience-building initiatives.

### Key results/conclusions

The concept is used in three primary ways: resilience *of*, *for* and *as*.

- Resilience *of*: descriptive classification of resilience as a trait of something (individual, socio-technical system or ecosystem);
- Resilience *for* an external end: goal-oriented classification identifying what resilience-building aims to achieve;
- Resilience *as* a way of being: ontological classification identifying processual, dynamic ways humans engage with the world around them to overcome adversity.

## Abstract



## Research Conference on Sustainable Development 2021

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What can we learn about impacts and responses to the pandemic from sharing organisations in three sectors?

Presenting author: *Oksana Mont, International Institute for Industrial Environmental Economics (IIIEE) at Lund University*

Co-author: *Steven Curtis, Yuliya Voytenko Palgan, both at the IIIEE at Lund University*

Key words: *sharing platforms, mobility sharing, space sharing, goods sharing, resilience, pandemic*

Theme: *I*

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Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

The world is facing a high-impact, low-probability crisis unknown in modern times – the COVID-19 pandemic. It has impacted production and consumption patterns across the world and forced many organisations to respond. With the pandemic ongoing, there is a need to explore organisational impacts and response strategies in order to support learning and advance our understanding of what response strategies may increase organisational resilience in the future.

### Methodology

This study combined systematic literature review of sharing economy and qualitative web analysis of 30 mobility, space, and goods sharing platforms of different business models and geographies.

### Key results

An empirically-driven framework of organisational responses to COVID-19 was developed that comprises eight overarching response strategies targeting the organisation, users, and society. We also discuss the long-term implications of the COVID-19 pandemic on the sharing economy, and explore how this may impact future responses among sharing platforms in the society that seeks sustainability. The learnings of this study have real-world significance. Sharing platforms can learn from each other, and consider actions for future preparedness to potential forthcoming crises. With this we hope to encourage perseverance, long-term viability, sustainability, and resilience in organisations that may offer more sustainable ways of consumption and production.

## Abstract



# Research Conference on Sustainable Development 2021

## Conceptualizing and Researching Resilience: Need for Theoretical and Methodological Triangulation

Presenting author: *Azher Hameed Qamar, School of Social Work, Lund University*

Keywords: *Resilience, Vulnerability, Sustainability, Triangulation, Interdisciplinary*

Theme: *Theme I: Knowledge on crisis and resilience in the sustainability context*

Email address: *azher.hameed@live.com*

Format: *Parallel session*

### Aim

The concept of 'resilience' is not independent of physical, psychological, cultural, and political environments. The human capacity to sustain is ingrained in the contextualization and internalization of resilience. This makes the notion of resilience an interdisciplinary construct requiring theoretical and methodological triangulation.

### Methodology

A decontextualization of the concept 'resilience' and an attempt to the universalization of the resilience theories may undermine the broader socio-cultural context, indigenous understanding, and wider/deeper scope of resilience studies. In this presentation, I will reflect on rethinking resilience with a ground-up approach.

### Key results/conclusions

- The 'discipline-centered studies on resilience could not address the conceptual and methodological gaps; hence, these limitations restricted the contextual, wider/deeper understanding of resilience.
- 'Resilience' lies at the nexus of social, cultural, psychological, and political factors that I label as 'resilience mosaic'. I place perceptions and experience (of risk and vulnerability) in the situational context and 'resilience mosaic' in the constitutional context.

## Abstract

# Research Conference on Sustainable Development 2021



## Facilitating sustainable consumption through innovative business models

Presenting author: *Heather Schoonover, Lund University International Institute for Industrial Environmental Economics (IIIEE)*

Co-authors: *Oksana Mont and Matthias Lehner, Lund University IIIEE*

Key words: *sustainable consumption, sustainable business models, socio-technical transitions, reuse, rental*

Theme: 1

Email address: *heather.schoonover@iiiee.lu.se*

Format: *Parallel session*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

It is increasingly recognized that changing unsustainable consumption patterns must go beyond focusing on individual behaviour change to address the systems of provision in which consumption decisions take place. Business models that offer alternative ways to acquire, use, and dispose of products hold promise for facilitating more sustainable consumption practices. Our research seeks to better understand these business models, including the challenges they face and how they might become more mainstream.

### Methodology

Our methods comprise semi-structured interviews with practitioners at the forefront of sustainable business models, including home furnishings rental companies and the reuse-based shopping centre ReTuna.

### Key results/conclusions

Sustainable business models face numerous challenges, including a need for new capabilities and relationships, consumer uncertainties, and lack of supportive policy. However, our case companies provide inspiring examples of how altering different business model elements, communicating benefits other than sustainability, and collaborating with non-corporate actors can help overcome these challenges. We also reflect on the role of such business models in the post-COVID world, as they facilitate access over ownership and promote reuse, repair and upcycling. These business models may potentially make local economies and households less dependent on global supplies of new products and more reliant on utilisation of already produced goods that they have access to in their vicinity, thereby making them more resilient to external shocks.

## Abstract

# Research Conference on Sustainable Development 2021



## Good lighting promotes energy efficient behaviour

Presenting author: *Thorbjörn Laike, Environmental Psychology research group, Dept. Of Architecture and Built Environment, Faculty of Engineering, Lund University*

Co-authors: *Pimkamol Mattsson, Environmental Psychology research group, Dept. Of Architecture and Built Environment, Faculty of Engineering, Lund University*

*Zeynep Ekim, Environmental Psychology research group, Dept. Of Architecture and Built Environment, Faculty of Engineering, Lund University*

*Niko Gentile, Energy and building Design, Dept, of Architecture and Built Environment, Faculty of Engineering, Lund University*

*Kiran Maini Gerhardsson, Environmental Psychology research Group, Dept of Architecture and Built Environment, Faculty of Engineering, Lund University, Active and Healthy Ageing Research Group, Dept. of Health Sciences, Faculty of Medicine, Lund University*

Key words: *Daylight ,Behaviour, Energy efficiency, Lighting, Experience*

Theme: *Theme 1 Knowledge on crisis and resilience in the sustainability context*

Email address: *thorbjorn.laike@arkitektur.lth.se*

Format: *Parallel session*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

## Aim

Around 20 % of world wide generated energy goes to lighting. There is a strong need to lower this figure. For more than a decade our research group has investigated how to reduce the energy use for lighting, but at the same time provides better lighting conditions to meet human needs.

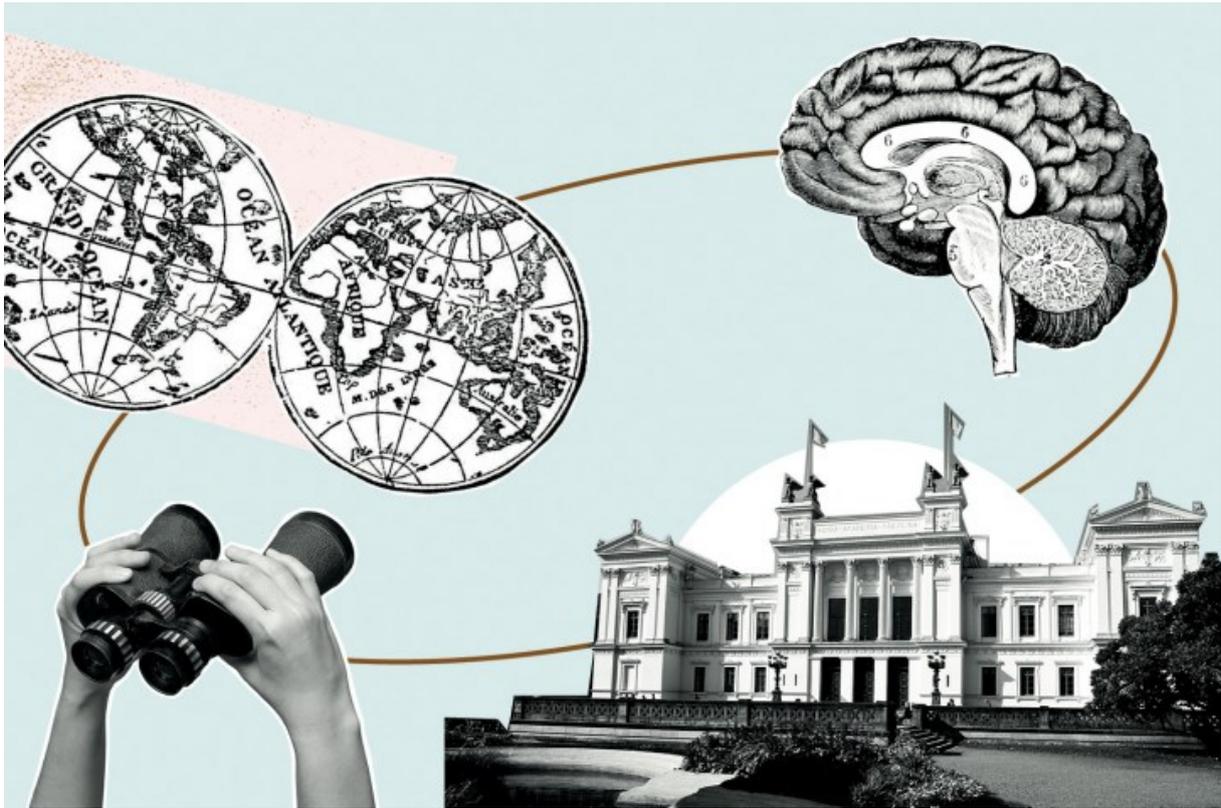
## Methodology

The work comprises both laboratory studies and field studies. Two different tracks have been used: One that relates to daylight, since this light source gives us the complete spectral composition and it is available when we should be awake. The other, electric lighting should be seen as a complement to daylight. The introduction of light emitting diodes (LED) reduces the energy use if it is used in the right way. We have investigated people's tendency to use light in a more efficient way but also how they experience different lighting solutions. The studies also investigate different ways to prompt a more energy efficient behavior in relation to lighting use.

## Key results/conclusions

The results suggest there is a large potential to change human lighting behavior become more sustainable.

## Conference abstracts



## 2. Theme I:

### Knowledge on crisis and resilience in the sustainability context

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Poster presentations



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## Abstract

# Research Conference on Sustainable Development 2021



## Black carbon sources, impact and mitigation strategies in Scania

Presenting author: *Pontus Roldin Div. of Nuclear Physics, Lund University*

Co-authors: *Adam Kristensson and Erik Ahlberg*

Key words: *Aerosols, Air pollution, Short Lived Climate Forcers*

Theme: I

Email address: *pontus.roldin@nuclear.lu.se*

Format: *Poster session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

- Quantify the sources, climate and health impact of black carbon (BC).
- To contribute to sustainable cities built for people not for cars.

### Methodology

Together with the environmental department city of Malmö we perform BC measurements in Malmö (Rådhuset and Dalaplan) and at the rural station Hyltemossa. We use models to quantify the origin and sources of BC.

### Key results/conclusions

>90 % of the BC mass at Hyltemossa is originating outside Sweden. The main sources are domestic heating and shipping. The road traffic contribution is only ~14 %, which likely explains why the Covid-lockdown is not clearly distinguishable.

In contrast, at Dalaplan the local road traffic is the dominant BC source. However, due to their small sizes, BC particles have only minor contribution to the air quality norm  $PM_{2.5}$ . This can be an obstacle when advocating traffic reduction policies.

## Abstract



## Research Conference on Sustainable Development 2021

### Green tissue processing for preclinical and clinical histology and immunohistochemistry

Presenting author: *Iran A.N Silva*<sup>1</sup>

Co-author: *Nika Gvazava*<sup>1</sup>, *Isabel Tamargo*<sup>1</sup>, *Deniz A. Bölükbas*<sup>1</sup>, *Darcy E Wagner*<sup>1</sup>.

*1 Department of Experimental Medical Science, Lund University, Lund, Sweden*

*Key words: Sustainability, Green histology, Histopathological analyses, Preclinical and Clinical.*

*Theme: Theme I*

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*Format: Poster presentation*

*Consent: The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Xylene is heavily and critically used by hospitals and universities during tissue processing for histology. It is highly toxic across several stages of its life cycle, is harmful for the environment, and severe human health risks are associated with occupational exposure. As a result, xylene is on the European Chemical Agency's (ECHA) list of chemicals to be evaluated in its Community Rolling Action Plan (CoRAP) in 2022 for potential stricter regulations. Therefore, there is a need to search for and implement other more sustainable options. Here we tested whether isopropanol can be a good alternative to replace xylene in histological tissue processing.

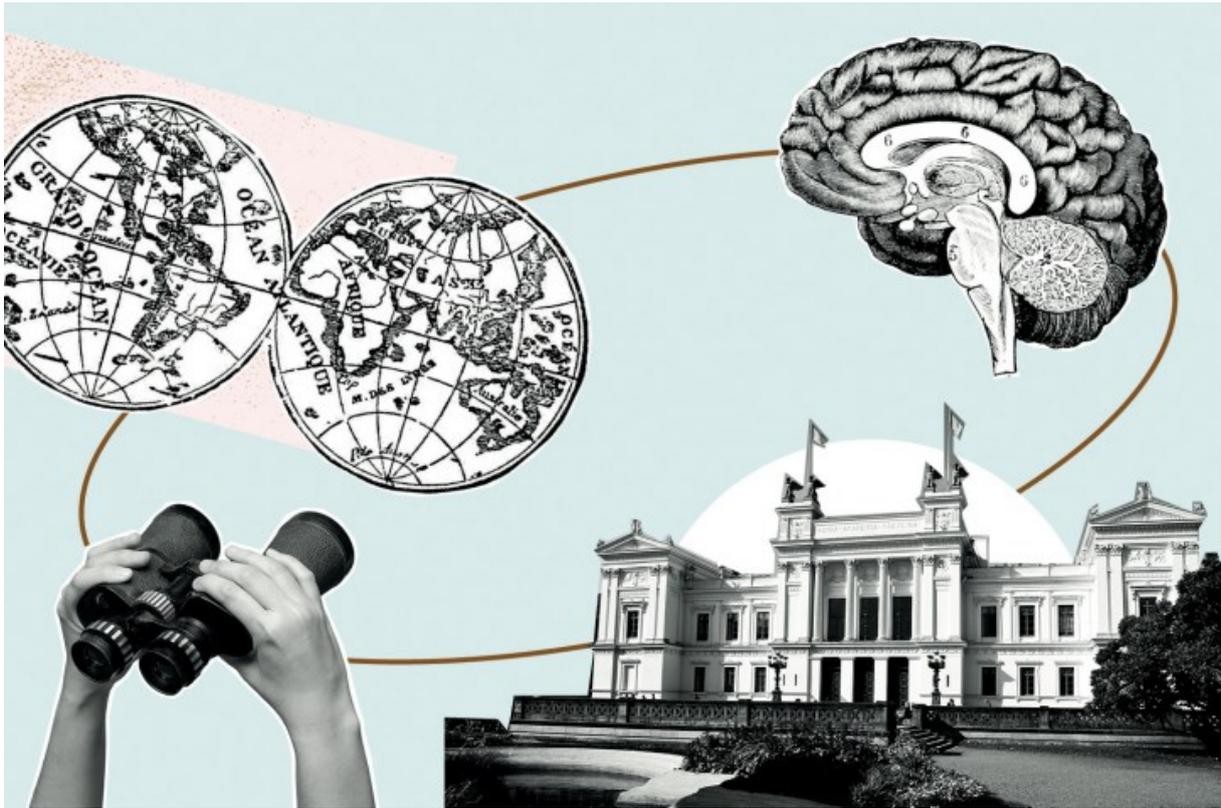
### Methodology

We compared various histological and immunohistochemical stainings in tissues processed using standard tissue processing with xylene or a protocol we developed where xylene was replaced with isopropanol. Tissue samples from different species (mouse, pig, and human) and organs and bioengineered laboratory models were fixed in 10% formalin at 4°C for up to 24h.

### Key results/conclusions

We observed no noticeable differences in the quality or content of various histological or immunohistochemical stainings between the two protocols. Therefore, isopropanol is a suitable substitute for xylene. Next, we aim to find a replacement for formalin to further improve sustainability.

## Conference abstracts



### 3. Theme II:

#### Knowledge on communicating uncertainty and ambiguity in sustainability research

Oral presentations



**LUND**  
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## Mediatization and social sustainability – an ambivalent relationship

Presenting author: *Cecilia Cassinger, Department of Strategic Communication, Lund university*

Co-author: *Maria Månsson, Department of Strategic Communication, Lund university*

Key words: *mediatization, urban tourism, social sustainability, overtourism*

Theme: *Theme II*

Email address: *cecilia.cassinger@isk.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Mediatization is one of the central concepts by which to understand how the intensifying media and communications environment constructs our social world. The aim of research is to examine the conditions of sustainability communication in a media economy of visibility and recognition. To this end, we focus on how the phenomenon overtourism is constructed as a social sustainability challenge in news- and social media.

### Methodology

This research emphasises the dialectics of media and social institutions in examining overtourism as a challenge for sustainable development in European urban destinations. Narrative analysis of the emergence of overtourism on online news media and social media platforms was conducted during 2017-2019.

### Key results/conclusions

Findings underscore the ambivalent relationship between mediatization and sustainability. Media narratives construct overtourism as an unsustainable situation for urban destinations, whilst at the same time promoting the attractiveness of these places. Overtourism brings prosperity as well as urban decay and cultural despair to cities. We contend that the ambivalence surrounding the sustainability challenge of overtourism in the media is an obstacle to discussions of concrete measures. At the same time, ambivalence may lead to a greater reflexivity concerning social sustainability, which may be harnessed as a resource for change.

## Abstract

# Research Conference on Sustainable Development 2021



## Value incommensurability and complex trade-offs

Presenting author: *Henrik Andersson, Lund University*

Key words: *Value theory, incommensurability, trade-offs*

Theme: Theme 2

Email address: *Henrik.Andersson@fil.lu.se*

Format: *Parallel session*

## Aim

To provide a better understanding of complex trade-offs that are central in sustainable development.

## Methodology

The project uses the qualitative methods of analytic philosophy.

## Key results/conclusions

Decisions about environmental policy often involve trade-offs. Consider the decision of whether to increase the tax on fossil fuel or not. Here the sacrifice of our generation from reduced possibilities to travel and the expected harms on the economy are weighted against the gains of future generations from an unpolluted and safe environment. Trade-offs of this kind should not be expected to be straightforwardly carried out since they involve what philosophers call incommensurabilities. That is, due to the different values at stake we should not expect to identify a correct trade-off. How to correctly weigh the values is ambiguous in a robust sense. However, by invoking recent results in formal value theory and normative decision theory this ambiguity is taken seriously and a promising path forward can be made.

## Abstract



# Research Conference on Sustainable Development 2021

## Health impact of pesticide exposure in relation to climate change among populations in low- and middle income countries

Presenting author: Christian Lindh

Co-author: Annette Kraiss and Christian H. Lindh

<sup>1</sup>Division of Occupational and Environmental Medicine, Department of Laboratory Medicine, Lund University, SE-22363 Lund, Sweden;

Key words: *Pesticides; exposure studies; human biomonitoring;*

Theme: Theme 2

Email address: [christian.lindh@med.lu.se](mailto:christian.lindh@med.lu.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Pesticides are applied extensively in many low- and middle income countries (LMIC s) and the use is increasing due to climate change. The extent of pesticide exposure and associated health effects among populations in LMIC s is not established. The aim of this project is to evaluate how climate change and intensified use of pesticides affect pesticide exposure and health in humans, including susceptible groups. Exposure will be analyzed in relation to health effects relevant to pesticide exposure (e.g. respiratory effect, neurodevelopment and chronic kidney disease) by research groups responsible for the individual study populations. Negative health effects in relation to pesticide exposure will highlight the importance of controlling pesticide usage in LMIC s and to increase the emphasis on more sustainable means to adapt to climate change.

### Methodology

We will create a new international research collaboration bringing together studies of pesticide exposure and health outcomes in populations from LMIC s around the world affected by climate change. The populations include mother-child pairs from Bangladesh and Costa Rica, children from South Africa and agricultural workers from Uganda, Bolivia and Nicaragua. We will use the expertise in biomarker analyses at Occupational and Environmental Medicine (OEM) at Lund University to monitoring pesticide exposure in the populations.

### Key results/conclusions

Biological samples have been collected in all studies and are stored for further analysis. Work is ongoing for analysis of pesticides metabolites in samples in Lund using liquid chromatography mass spectrometry (LC-MS/MS). Several results of pesticide exposure analyses have already been performed for several of some participating populations. E.g. In the Uganda-PESTROP study we have identified very high exposures of the organophosphate pesticide profenofos, but also high exposure to chlorpyrifos, and 2,4D. In the ToxBol project in Bolivia- farmers show high exposure to chlorpyrifos and 2,4D. New collaborations are established.

## Abstract



# Research Conference on Sustainable Development 2021

## How policy-makers deal with scientific uncertainty – What scientists can learn from climate and covid-19 policy-making

Presenting author: Åsa Knaggård, Dept of Political Science (LU)

Key words: *uncertainty, knowledge use, policy-making, climate, covid-19*

Theme: *Theme 2*

Email address: [asa.knaggard@svet.lu.se](mailto:asa.knaggard@svet.lu.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Policy-makers always act under more or less uncertainty. Issues characterized by large scientific uncertainties and a need for urgent responses are challenging for policy-makers as there is limited time to test different responses and hard to know whom to listen to. Knowledge about how policy-makers react to and deal with scientific uncertainty is a prerequisite for effective scientific communication about uncertainty.

### Methodology

I use a typology of policy-makers' responses to scientific uncertainty to compare Swedish policy-making concerning climate change and the covid-19 pandemic. The typology differentiates between policy-makers' focus on existing knowledge or uncertainties, and their policy response trusting their own judgment or based on expert or scientific advice.

### Key results/conclusions

The comparison shows that Swedish climate policy-making has been characterized by a focus on existing knowledge and policy-makers trusting their own judgements. The covid-19 response has also been characterized by a focus on existing knowledge, but is based on expert advice. In none of the cases, focus has been on uncertainty. This result indicates that scientific uncertainty communication needs to clearly demarcate what we know and what we do not know, as well as clearly specify to what extent existing knowledge is a good base for future decisions.

## Abstract

# Research Conference on Sustainable Development 2021



Car sharing as a strategy to address GHG emissions in the transport system:  
Evaluation of effects of car sharing in Amsterdam

Presenting author: *Ana María Arbeláez Vélez (International Institute of Industrial Environmental Economics)*

Co-author: *Andrius Plepys (International Institute of Industrial Environmental Economics)*

Key words: *environmental assessment; shared mobility; innovative business models*

Theme: *Theme I: Knowledge on crisis and resilience in the sustainability context (first option)*

*Theme II: Knowledge on communicating uncertainty and ambiguity in sustainability research*

Email address: [ana\\_maria.arbelaez\\_velez@iiee.lu.se](mailto:ana_maria.arbelaez_velez@iiee.lu.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

## Aim

Innovative business models have emerged in the transport sector. Nonetheless, there is not enough understanding about how these modify the environmental impacts of this sector. We aim to explore changes in the transport emissions at an individuals and city level due to the use of car sharing.

## Methodology

We used Well-to-Wheel system boundaries to quantify GHG emissions of the transport system in Amsterdam as case study. We developed scenarios that included characteristics of the transport fleets that operate in the city, changes in travelling habits of individuals after they engaged with car sharing and the implementation of specific transport policies, all these to explore changes in GHG emissions.

## Key results/conclusions

After engaging in car sharing transport emissions of individuals change. Individuals that gain access to vehicles through car sharing increased their transport emissions while individuals that quit their vehicle might reduce them. At a city level reduction in emissions might be achieved by the implementation of policies that enable the improvement of the fleets, changes in travelling behaviour and decreased vehicle ownership.

## Abstract



## Research Conference on Sustainable Development 2021

### The Environmental Turn in Postwar Sweden: A New History of Knowledge

Presenting author: *David Larsson Heidenblad, Department of History, Lund University*

Co-author: -

Key words: *Environmentalism, History of Knowledge, 1960s and 1970s, Circulation of Knowledge,*

Theme: *Theme 2*

Email address: *David.larsson\_heidenblad@hist.lu.se*

Format: *Parallel session*

Consent: -

### Aim

To present my research on the social breakthrough of environmentalism in Sweden around 1970. I will provide insights into how environmental knowledge moved from expert sphere's to become "common knowledge". The talk draws on my book "Den gröna vändningen" (published in January 2021, English translation forthcoming summer 2021).

### Methodology

The historical methodology I have used is to study "the social circulation of knowledge", that is to closely map when, how, and by whom certain ideas became shared knowledge.

### Key results/conclusions

The environmental turn in Sweden took place in the fall of 1967, that is before there existed a modern environmental movement. Swedish scientists had uniquely strong connections to the political establishment which made large-scale social change possible at an early stage.

## Abstract

# Research Conference on Sustainable Development 2021



## Confronting the certainty-first-action-second misconception

Presenting author: *Mikael Klintman*

Co-author: *n/a*

Key words: *Knowledge resistance, uncertainty, Apollonian, Dionysian, action.*

Theme: **Theme II**; (2<sup>nd</sup> choice: Theme III.

Email address: [Mikael.klintman@soc.lu.se](mailto:Mikael.klintman@soc.lu.se)

Format: *Parallel session*

Consent: *n/a*:

## Aim

The aim is to distinguish two types of strategies for confronting the **certainty-first-action-second misconception**.

## Methodology

Based on my analysis of findings in the social, economic and evolutionary sciences, my case-studies as well as expert interviews, I divide the strategies into Apollonian and Dionysian, each resonating with reason & emotions, albeit differently.

## Key results/conclusions

Examples of the Apollonian strategies include claims about

- Risks & costs of waiting for full certainty
- Academic research, albeit imperfect, as uniquely & continuously self-correcting.
- Improved data & combination of sources.

Apollonian strategies are, of course, necessary. Still, society overly reliant on the Apollonian.

Therefore, they need to be combined with Dionysian ones, for instance:

- Telling better - more socially engaging - stories about the environmental challenges
- Using the entire, human spectrum of 'moral foundations'
- Initiating conversation about social concerns underlying the demand for full certainty.

I also suggest ways for combining the strategies.

## Abstract



# Research Conference on Sustainable Development 2021

## The shift from organic to *more sustainable* food consumption in Sweden

Presenting author: *Vasiliki Simaki, Centre for Languages and Literature, Lund University*  
Co-author: *Georgios Diagourtas and Carita Paradis, Centre for Languages and Literature, Lund University*

Key words: *organic food, sustainable consumption, consumer behaviour*

Theme: *II*

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Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Recently, the organic food market in Sweden has experienced a slowdown trend in growth rate driven by consumers' shift towards products considered *more sustainable* options such as locally-produced food, eco-friendly packaging<sup>1</sup>. Our aim here is to analyse this trend and identify the profile and attitudes of the *more sustainable* consumer.

### Methodology

We distributed an electronic questionnaire<sup>2</sup> containing open-ended and closed questions. We used statistical methods to estimate factors correlated to consumer responses, and analysed the language that consumers use in their texts to motivate their choices.

### Key results/conclusions

Our results confirm a shift to more sustainable food as 83% of the respondents would rather buy locally-produced food than organic products from abroad. Additionally, 78% of the respondents would rather buy conventional food in eco-friendly packaging than organic food in non eco-friendly packaging. Nevertheless, respondents mentioning 'health consciousness' as their consumption motivational factor would rather select organic products.

Sociodemographic factors do not influence consumer choices. The open-ended questions reveal that respondents tend to use hedging expressions<sup>3</sup> in describing their choices.

Overall, the responses reveal high sustainability awareness of Swedish consumers driving consumption behaviour in new directions.

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<sup>1</sup> <http://www.ekoweb.nu/attachments/67/68.pdf>

<sup>2</sup> February 2021, 211 participants in Sweden

<sup>3</sup> e.g., *think, believe, seem*

## Abstract

# Research Conference on Sustainable Development 2021



## Uncertainty in Science and Decision-making

Presenting author: *Henrik Thorén*

Key words: *uncertainty domestication, science communication, policy relevance*

Theme: *Theme II*

Email address: *Henrik.thoren@fil.lu.se*

Format: *Parallel Session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

In recent decades a vast literature has developed on how to best communicate scientific uncertainties to presumptive end-users—that is to say, policy and decision-makers—of scientific knowledge. The implicit assumption is that *if* we can accurately represent scientific uncertainties *and* package them in a for some particular audience digestible way, decision-making can be improved. In this talk I will introduce a metaphor, the domestication of uncertainty (Thorén et al. 2019), in order to discuss how uncertainties and risks are controlled for and managed with particular scientific approaches. The focus will be on model-based forecasting looking in particular at various models in climate economics, to show how different, often tacit approaches to dealing with uncertainties in specific disciplines clash or come into conflict with one another. I will discuss (1) what this means for developing some clear and unambiguous uncertainty framework to aid science communication, and (2) make some tentative suggestions about implications for organising the science-policy interface.

### Methodology

This is a philosophical presentation mulling over various theoretical issues. It is based on conceptual analysis informed by a number of cases and examples.

### Key results/conclusions

The main conclusions in this presentations are:

- (1) the management or structuring of uncertainties within specific scientific contexts (such as disciplines) are both theory and value-laden and deeply embedded in idiosyncratic practices, norms, and conventions. This is a challenge for uncertainty frameworks (such as the one used by the IPCC) insofar as they aim to aid policymakers and support decision-making processes.
- (2) When it comes to how uncertainties are to be managed and presented one needs to rely on more realistic conceptions of the specific decision-makers that the scientific knowledge is supposed to target and not rely on simplistic (and often implicit) science-policy models, or highly idealised decision-theoretical models of the situation.

## Abstract



# Research Conference on Sustainable Development 2021

## The impacts of massive solar farms in the Sahara Desert on global climate and terrestrial ecosystem

Presenting author: *Zhengyao Lu (Dept. of Physical Geography and Ecosystem Science & Center for Environmental and Climate Science)*

Co-author: *Qiong Zhang (Stockholm U.), Paul Miller (LU), Jenson Zhang (SU), Ellen Berntell (SU), Benjamin Smith (LU)*

Key words: *desert solar farm; solar energy, climate impact; land use; Earth system modelling*  
Theme: *Theme2*

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Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Large solar farms in the global deserts can boost the use of renewable energy, but they can have unintended impacts on the global climate and ecosystems. I will bring people's attention to this case study of hypothetical massive Sahara desert solar farms.

### Methodology

We used an advanced Earth system model to closely examine how Saharan solar farms interact with the climate. This model takes into account the complex feedbacks between the interacting spheres of the world's climate – the atmosphere, the ocean and the land and its ecosystems.

### Key results/conclusions

Solar energy can contribute to the attainment of global climate mitigation goals by reducing reliance on fossil fuel energy. Using an advanced Earth-system model, we simulate the impacts of massive Sahara solar farms (e.g., 20% coverage) on global climate and terrestrial ecosystems through shifted atmospheric circulation.

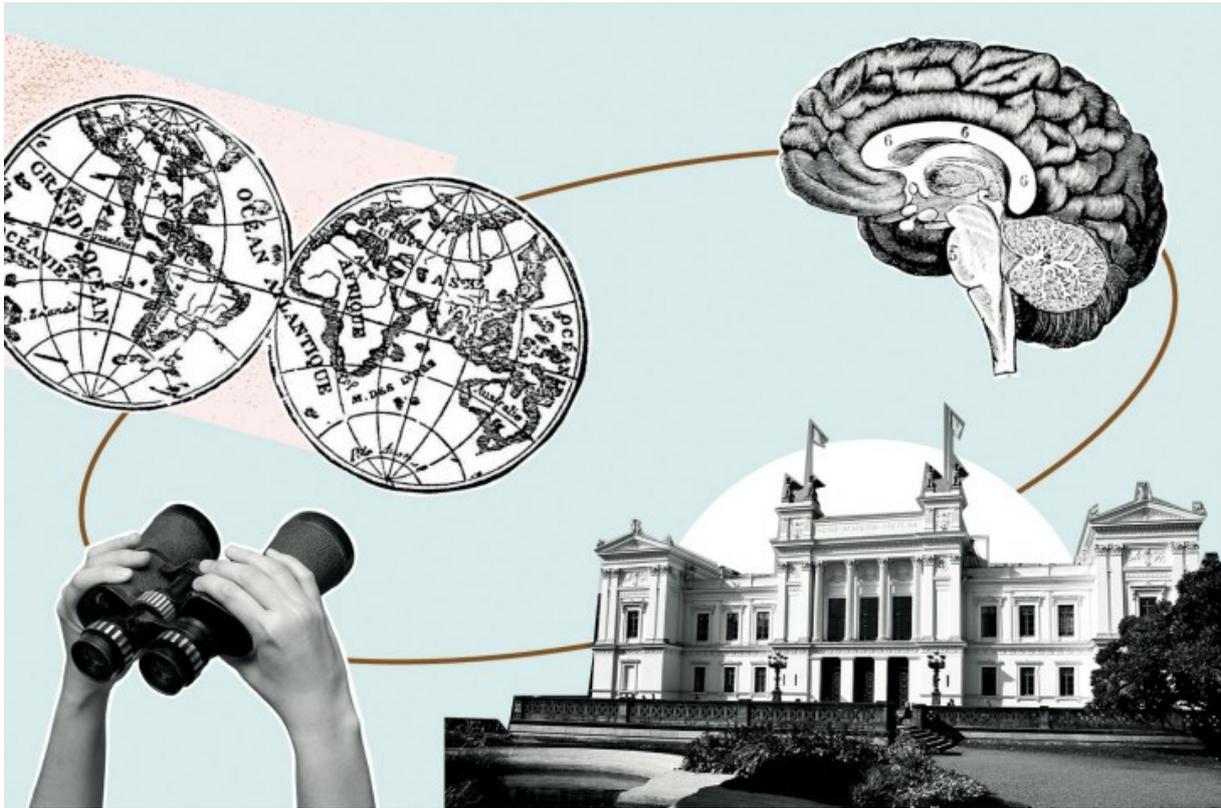
Over the desert itself, the solar farms can bring more rainfall and lead to the expansion of vegetation in the desert. This is due to the "darkening effects" of photovoltaic panel surface compared to more reflective desert soil, which is then amplified by the atmosphere-vegetation feedbacks.

For the remote regions, our results indicate damaging consequences, such as a redistribution of precipitation causing Amazon droughts and forest degradation, and global surface temperature rise and sea-ice loss, particularly over the Arctic due to increased polarward heat transport, and northward expansion of deciduous forests in the Northern Hemisphere.

The improved understanding of the forcing mechanisms of massive Sahara solar farms provides insights into the site selection concerning future massive deployment of solar energy in the world's deserts.

**More details** can be found in our recently published scientific article: <https://doi.org/10.1029/2020GL090789> or a popular science article: <https://theconversation.com/solar-panels-in-sahara-could-boost-renewable-energy-but-damage-the-global-climate-heres-why-153992>

## Conference abstracts



### 3. Theme II:

#### Knowledge on communicating uncertainty and ambiguity in sustainability research

Poster presentations



**LUND**  
UNIVERSITY

## Abstract



# Research Conference on Sustainable Development 2021

LUNDS  
UNIVERSITET

## Constructing sustainable relatings. The case of *Acqua Alta* in the Venetian lagoon

Presenting author: Monica Porzionato

Key words: high tide, Venice, assemblages, communication, sustainable relatings

Theme II: Knowledge on communicating uncertainty and ambiguity in sustainability research

Email address: monica.porzionato@isk.lu.se

Format: Poster

### Abstract

*Acqua alta* describes the phenomenon of high tide which commonly submerges part of city of Venice during the winter season. In the past years, due to climate change, exceptional high tide levels have been registered, posing considerable challenges to the city's survival. In an attempt to prevent Venice from sinking, a majestic engineering structure of mobile barriers at the lagoon's inlets has been implemented (M.O.S.E.). Exceptional high tide, however, more than a mere natural event in need of human intervention, is a complex and unpredictable phenomenon which necessitate of epistemological perspectives able to bridge across the nature/culture divide embedded in much of the sustainability discourse. In this regard, this project proposes to consider high tides as assemblages of humans and non-humans, happening, that is, thanks to the cooperation of multiple agentic bodies and forces, none of which, alone, has the ability to determine and predict the unfolding of the event. In particular, this project aims at investigating which role human communication plays during high tide events by way of looking at how the discursive construction of *acqua alta* both affects and is affected by the material relating of human bodies with the winds and water flowing into the city of Venice.

## Abstract



# Research Conference on Sustainable Development 2021

## Design as knowledge-creating process for navigating uncertainty and friction towards sustainability

Presenting author: *Despina Christoforidou, LUSID Lund University School of Industrial Design*

Co-authors: *Claus-Christian Eckhardt, LUSID Lund University School of Industrial Design*

*Andreas Hopf, LUSID Lund University School of Industrial Design*

*Olof Kolte, LUSID Lund University School of Industrial Design*

*Per Liljeqvist, LUSID Lund University School of Industrial Design*

Key words: *design as knowledge-creating process, navigating uncertainty and friction, collaboration, sustainability*

Theme: *Theme II*

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Format: *Poster presentation*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

We explore design as a knowledge creating process, and how the ability to navigate uncertainty and friction through the design process can be applied. In doing so, we aim to examine where design needs to go and what collaborations are required in order to be able to contribute as relevant partners in moving the Earth/societies towards a sustainable future.

### Methodology

We will revisit the design projects with a sustainability focus conducted at LUSID during the last twenty years and map the guiding briefs and the design principles applied.

### Key results/conclusions

The result will be a thematic overview of the design projects covered and how they relate to different sectors of society. Based on this information, we can establish a network of partners from the private and public sectors that we can collaborate with on how to transform society towards sustainability.

## Abstract



## Research Conference on Sustainable Development 2021

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### Decision Support Systems for Real! – Enhancing Sustainability in environmental clean-up action.

Presenting author: *Mehran Naseri-Rad, Division of Water Resources Engineering*

Co-author: *Ronny Berndtsson, Division of Water Resources Engineering and Centre for Advanced Middle Eastern Studies*

Key words: *sustainable remediation, contaminated sites, decision support system, contamination transport*

Theme: *Theme II*

Email address: *mehran.naseri\_rad@tvrl.lth.se*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

The aim of our research was to find ways for effective communication and information exchange between multidisciplinary stakeholders and various aspects of a complex problem, such as environmental clean-up. This is to lead to an integrated support tool that is not only based on sustainability assessment of different clean-up options, but also on reliable technical models, for addressing contamination transport. That is, a versatile decision support tool that can be understood and applied by all stakeholders, regardless of their background and expertise.

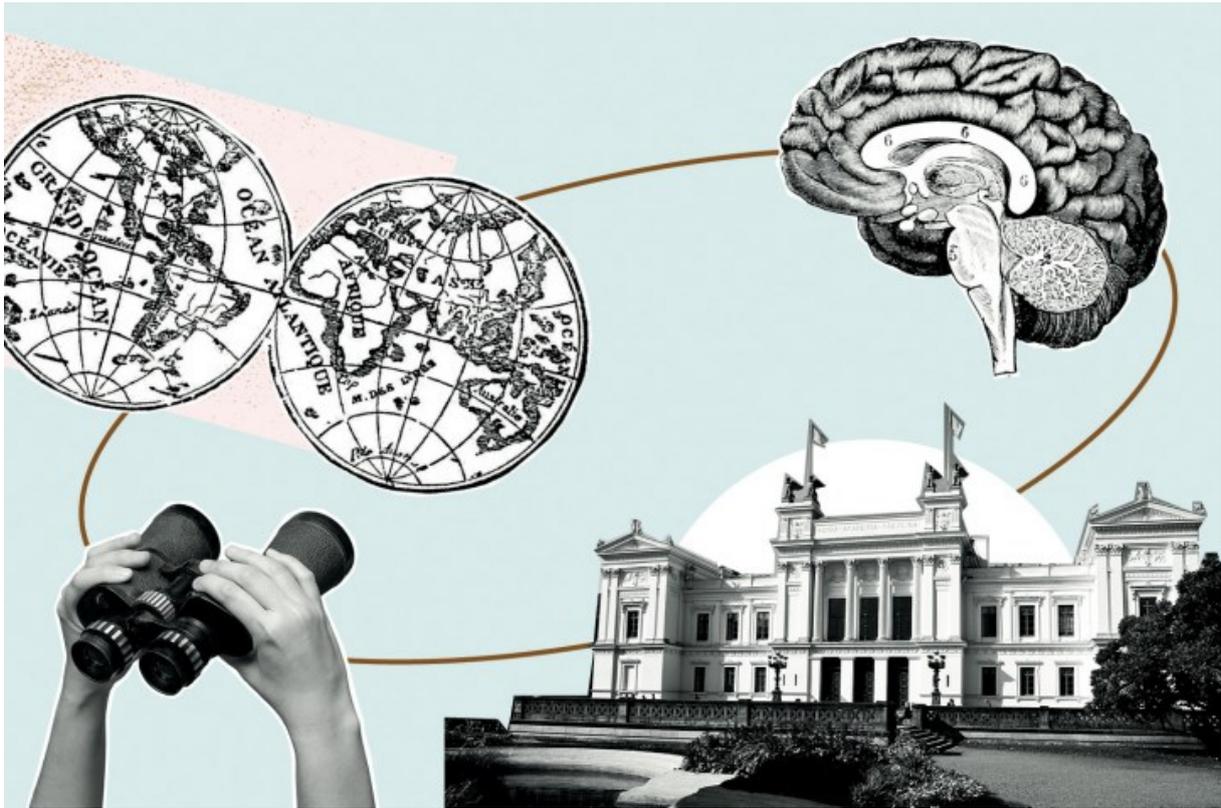
### Methodology

For the purpose, we designed i) a sustainability assessment tool based on multi-criteria decision analysis methods and an international survey, ii) a simple but reliable technical contamination transport model considering the associated uncertainties for different actions, and iii) integration of these two tools through *system dynamics* simulations to deliver a versatile support tool based on both technical and sustainability considerations.

### Key results/conclusions

As the methodology is implemented to real world problems at Swedish contaminated groundwater sites, it showed great potential in drawing both experts' and non-experts' attention to points important from each other's views. Also, it clearly showed that the less invasive a clean-up action is, the more sustainable it gets, and more "gentle" technologies are needed.

## Conference abstracts



### 4. Theme III:

Knowledge about justice and equity in a sustainable world

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Oral presentations



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## Abstract



## Research Conference on Sustainable Development 2021

### Inclusive urbanization and the urban transition – a research agenda for lower level urbanization in sub-Saharan Africa

Presenting author: *Agnes Andersson Djurfeldt, (Department of Human Geography),*

Co-author: *Ola Hall, Department of Human Geography, Fred Dzanku, Institute of Statistical and Economic Research (ISSER), University of Ghana at Legon*

Key words: *inclusive urbanization, rural-urban relations, family networks, GIS, local governance*

Theme: *Theme 3*

Email address: *agnes.andersson\_djurfeldt@keg.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

Urban policies focused on attracting foreign real estate investments to boost economic growth have been linked to spatial, social and economic exclusion in African cities. In recognition of this marginalization, development policy as espoused by UN agencies and gradually the cities themselves, has become more concerned with social and economic inclusion. Indeed, “the urban goal” (Goal 11) of the Sustainable Development Goals explicitly acknowledges inclusivity. A scholarly debate around inclusive urbanization is only just emerging, but the conceptualization and empirical understanding of this process needs to be contextualized with respect to future urbanization trends dominated by the emergence of small towns (up to 50000 inhabitants). Small towns can be viewed as spatially, socially and economically embedded in rural areas, with the strength of these linkages potentially affecting inclusivity.

### Aim

The research aims to address a conceptual and methodological gap in the budding literature on inclusive urbanization with respect to lower level urbanization in the context of sub-Saharan Africa.

### Methodology

Literature review.

### Key results/conclusions

The academic literature to date is thin. There is an emerging body of work within GIS that measures urban informality using satellite imagery. We hope to develop a method for measuring social inclusion through remote sensing.

## Abstract



# Research Conference on Sustainable Development 2021

## Small-scale farmers, municipalities and local food systems in Sweden

Presenting author: *Annika Pissin, Center for East and South-East Asian Studies, Lund University*

Co-author: *Eric Clark, Department of Human Geography, Lund University*

Key words: *Small-scale farming, local food system, municipality, Sweden*

Theme: *Theme 3: Knowledge about justice and equity in a sustainable world*

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Format: *Parallel session*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

### Aim

Local food systems have been increasingly emphasised as pivotal for achieving Sustainable Development Goals and as especially important in crisis situations. Yet, there are considerable inertias and differences among local governments in how they address the transformational potential of local food systems. The purpose of this presentation is to show how municipalities act as obstacles to or facilitators of the flourishing of small-scale farms.

### Methodology

Drawing on Karl Polanyi's forms of integration and critical realism, and using digital methods, we studied how food is presented on 54 municipal websites in Sweden, focusing on food policies, practices, procurement, and interest in local food producers.

### Key results/conclusions

Our analyses provide an account of how municipalities treat food in general, and more specifically food produced by local small-scale farmers. The results elucidate how local governments constitute in some instances obstacles to and in other instances facilitators of the thriving of small-scale local food producers. We conclude that there is great variation between municipalities concerning the degree to which they actively support strengthening local food systems with short supply chains.

## Abstract

# Research Conference on Sustainable Development 2021



The tragedy of recurrence/a recurring tragedy: How socially shared memories of past economic disasters inform experiences of Argentina's current macroeconomic crisis

Presenting author: *Sara Kauko, Department of Gender Studies*

Co-author: *n/a*

Key words: *macroeconomic crisis, temporality, memory, Argentina*

Theme: *3*

Email address: *sara.kauko@genus.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

## Aim

This paper examines how cyclical macroeconomic crises in Argentina inform people's experiences and understandings of the current recession.

## Methodology

This paper draws from the preliminary results of an ongoing 'nethnographic' research conducted with Argentine micro-entrepreneurs. It contributes to scholarly understandings of the temporality of crisis while also analysing cultural processes of meaning-making.

## Key results/conclusions

In 2017, Argentina entered a severe, rapidly accelerating recession. That acceleration evoked the specter of the 2001-2002 cash crisis that stripped millions of Argentines of their savings. In 2019, the inflation peaked at 54%. This in turn awoke collective memories of the 1989 hyperinflation. Since 1950, Argentina has defaulted on its foreign debt seven times. One could argue that the recurrence of macroeconomic crises is an integral part of the 'Argentine psyche'. It constitutes a temporal horizon that orients how people make meaning of the current crisis and how they anticipate the ones to come.

In that context, this paper explores the significance of past economic crises as socially shared reference points for the current multi-layered recession. It examines how people ascribe meaning to the idea of crisis through analogies between past hardship and the current conditions, and how they mobilize those analogies in preparation for the future.

## Abstract



# Research Conference on Sustainable Development 2021

## Understanding air pollution and health impact in Ethiopia

Presenting author: *Ebba Malmqvist, Medical Faculty*

Co-author: *Christina Isaxon, Faculty of Engineering and Kristoffer Mattisson, Faculty of Medicine*

Key words: *air pollution, Africa, global health*

Theme: 3

Email address: *ebba.malmqvist@med.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Our aim is to take an innovative research approach to combat the challenges for clean air in Africa.

### Methodology

Epidemiological studies have formed the basis for clean air policies in high- and middle-income countries. Africa, however, has been blindingly left behind due to lack of resources and technological challenges. African PM emissions originate from sources different than those in high- and middle-income countries, where almost all existing studies have been conducted. These research findings can thus not be translated to African settings. We will develop new low-cost and low-technology measurement and modelling techniques using sensors, land use regression. We will also use remote sensing models in collaboration with NASA. We also plan to assess population exposure in areas lacking required air pollution data using extensive both resource-intensive methods and new mobile phone techniques. To access health data we will test established cohorts, health surveillance systems and mobile applications developed during the pandemic.

### Key results/conclusions

Air pollution in Ethiopia is largely driven by transport, cooking, waste-burning, and soil erosion. Different components require different exposure models.

## Abstract

# Research Conference on Sustainable Development 2021



## Post-conflict reconstruction in the Middle East – strategies from international, national and local perspectives

Presenting author: *Helen Avery – CMES and CEC*

Key words: *post-conflict reconstruction; infrastructure systems; sustainability transitions; resilience strategies*

Theme: III

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Format: *Parallel session*

### Aim

The project aims to investigate decision-making and conditions for sustainability transitions in contexts of post-conflict reconstruction, where humanitarian organisations and foreign investments frequently play an important role. Better understanding of long-term consequences can thus inform more effective policies.

### Methodology

Infrastructure shocks present the opportunity to avoid lock-in effects, accelerate sustainability transitions and increase resilience during reconstruction by coordinated attention to key systems (Broto et al. 2014). Long-term consequences of post-conflict reconstruction strategies in northern and southern Iraq, Lebanon, Gaza and Algeria were investigated using a combination of desk-top research, interviews and fieldwork.

### Key results/conclusions

In the investigated contexts, reconstruction investments in infrastructure did not contribute to sustainability transitions. Foreign investments primarily served geopolitical considerations and vested interests in extractive industries, particularly hydrocarbons. National policies tended to consolidate power positions for future or continued conflicts, which was also reflected in income distribution. However, at local levels, non-formal strategies of resilience could be observed, including resource-efficient economies adapted to adverse conditions.

## Abstract

# Research Conference on Sustainable Development 2021



## Welfare-Improving Bubbles in Green Capital Markets?

Presenting author: *Danial Ali Akbari (Lund University)*

Co-author: *Emiliano Santoro (University of Copenhagen), Federico Lubello (Central Bank of Luxembourg)*

Key words: *Bubbles, global warming, collateral constraints, welfare, externality*

Theme: III

Email address: *danial.ali\_akbari@nek.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

This paper investigates under which circumstances bubbles in green capital markets can improve welfare.

### Methodology

Theoretical modelling and numerical calibration.

### Key results/conclusions

Early results show that bubbles in green assets are welfare-improving if the clean sector is completely carbon neutral (i.e. has zero net emissions) or if it also helps offset emissions from other sectors.

Title: Welfare-Improving Bubbles in Green Capital Markets

Abstract: This paper investigates under which circumstances bubbles in green capital markets can improve welfare. Asset bubbles are typically associated with damage and losses following their bursts. Green assets, however, have the peculiar characteristic that overinvestment in their prospects may in fact raise overall welfare due to facilitating a sustainable transition away from an economy dependent on fossil fuels. To address this question, we set up a framework with credit-driven bubbles in clean and dirty sectors and use data on green assets from Nasdaq stock exchange to guide the model calibration. Early results show that bubbles in green assets are welfare-improving if the clean sector is completely carbon neutral (i.e. has zero net emissions) or if it also helps offset emissions from other sectors.

## Abstract submission

Deadline: 21 of March 2021

Questions? Contact: [cerina.wittbom@cec.lu.se](mailto:cerina.wittbom@cec.lu.se)



# Research Conference on Sustainable Development 2021

## Title

*The Politics of the Sustainable Development Goals. Legitimacy, Responsibility, and Accountability.*

Presenting author: *Magdalena Bexell, Department of Political Science*

Co-author: *Kristina Jönsson, Department of Political Science*

Key words: *2030 Agenda, responsibility, accountability, legitimacy, politics*

Theme: First choice: *Theme III.*

Second choice: *Knowledge for sustainable development*

Email address: *Magdalena.Bexell@svet.lu.se*

Format: *Parallel session*

Consent: *The presenting author is acting on behalf and with consent of all authors of this contribution.*

## Aim

The aim of the project is to study how the 2030 Agenda has been taken up at the national political level in countries with very different preconditions for realising its Sustainable Development Goals.

## Methodology

Our project is guided by three political-theoretical concepts that put to the fore central political qualities of sustainable development goal-setting: legitimacy, responsibility, and accountability. The method employed is a comparative case study approach through which we explore how SDG politics has played out across three different countries: Ghana, Tanzania, and Sweden. These are chosen because they display great variation with regard to political system, degree of socio-economic development, and the country's role in international development cooperation

## Key results/conclusions

The case studies make clear that the choices made by national political institutions are the key to implementation of the 2030 Agenda. At the same time, the agenda does not enter a void at national levels. Rather, its national implementation is heavily shaped by pre-existing political-institutional structures and cleavages. The SDGs are often used to legitimize or reinforce domestic policies that are already in place. Moreover, interlinkages between legitimacy, responsibility, and accountability are strengthened through international expectations on governments to undertake review of progress towards the SDGs and to account for domestic efforts to the reach the goals.

## Abstract

# Research Conference on Sustainable Development 2021



## Data-Center infrastructure and Energy Gentrification: Perspectives from Sweden

Presenting author: *Frans Libertson (LU)*

Co-author: *Jenny Palm (LU), Julia Velkova (LiU)*

Key words: *3-5 keywords energy gentrification; electricity grid; digital infrastructure; just distribution; digitalization and new technology*

Theme: *Theme III: Knowledge about justice and equity in a sustainable world*

Format: *Parallel session*

### Aim

The aim of our research is to discuss the societal negotiations that arise around capacity deficits of the electricity grid. By introducing the term energy gentrification, we aim to highlight the potential dangers of failing to recognize that energy also constitutes a societal resource, and like any other resource of the built environment, it is exposed to the risk of exploitation if left unprotected.

### Methodology

We propose energy gentrification as an analytical perspective, through which negotiations and potential conflicts can be studied when grid owners must prioritize who should be connected to the grid.

### Key results/conclusions

In relation to previous research on gentrification, we identify several parallels to the Swedish case of data centers, such as the relative prioritization of global versus local capital, the competition over resources, the allusion to promises of job opportunities and regional development for justification, and the tradeoffs between common goods versus private interests. The perspective of energy gentrification offers a useful approach for inquiring into the ethical dimensions of energy policies and for highlighting the bureaucratic nature of energy policy decision-making.

## Abstract



# Research Conference on Sustainable Development 2021

## Developing sustainable and responsible research and innovation

Presenting authors: *Yahia Mahmoud, Department of Human Geography; Linda Paxling, CIRCLE, LTH ; Lena Trojer, CIRCLE*

Key words: *responsible innovation, social justice, multi actor approach*

Theme: *Theme III*

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[lena.trojer@circle.lu.se](mailto:lena.trojer@circle.lu.se)

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Innovation is no longer a phenomena limited to firm competitiveness or the growth of nations and regions. Innovation is now also tightly linked to sustainable development goals such as climate change, social sustainability and food security. Such goals go beyond technological transfer and demand innovative solutions that consider the organizational and cultural dimensions of innovation adoption and diffusion.

### Methodology

In the Global South, research on innovation has been dominated by the study of technological transfer, adoption and adaptation with relatively well-defined and formal scales such as firms, public institutions and regions and less attention has been paid to locally relevant and inner-driven processes (Kaplinsky, 2011, Acevedo 2018). In an effort to work more interdisciplinary towards achieving poverty reduction, alternative ways of production and consumption and social justice more attention needs to be placed on institutions and institutional change.

### Key results/conclusions

Our long-term research in Bolivia and East Africa shows the importance of a multi actor approach, with distributed knowledge processes, context of application and implication and participatory action research, to achieve desired societal outcomes.

## Abstract



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## Research Conference on Sustainable Development 2021

### Seeds, Sustainability, and Intellectual Property Rights: Modes of Showing Compliance with Plant Variety Protection Regimes in Asia

Presenting author: Erik Mobrand, Centre for East and South-East Asian Studies, Lund University

Co-author: Hyejin Kim, National University of Singapore

Key words: global food system; legal regimes and sustainability; sustainability in Asia; biodiversity; farmer livelihoods

Theme: Theme 3

Email address: erik.mobrand@ace.lu.se

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

#### Aim

This research outlines the range of ways that governments and activists in Asia feign compliance with plant variety protection (PVP). International trade agreements increasingly require signatories to subscribe to intellectual property regimes that apply to plants. These agreements, which turn seeds into private rather than common goods, threaten biodiversity and farmer livelihoods.

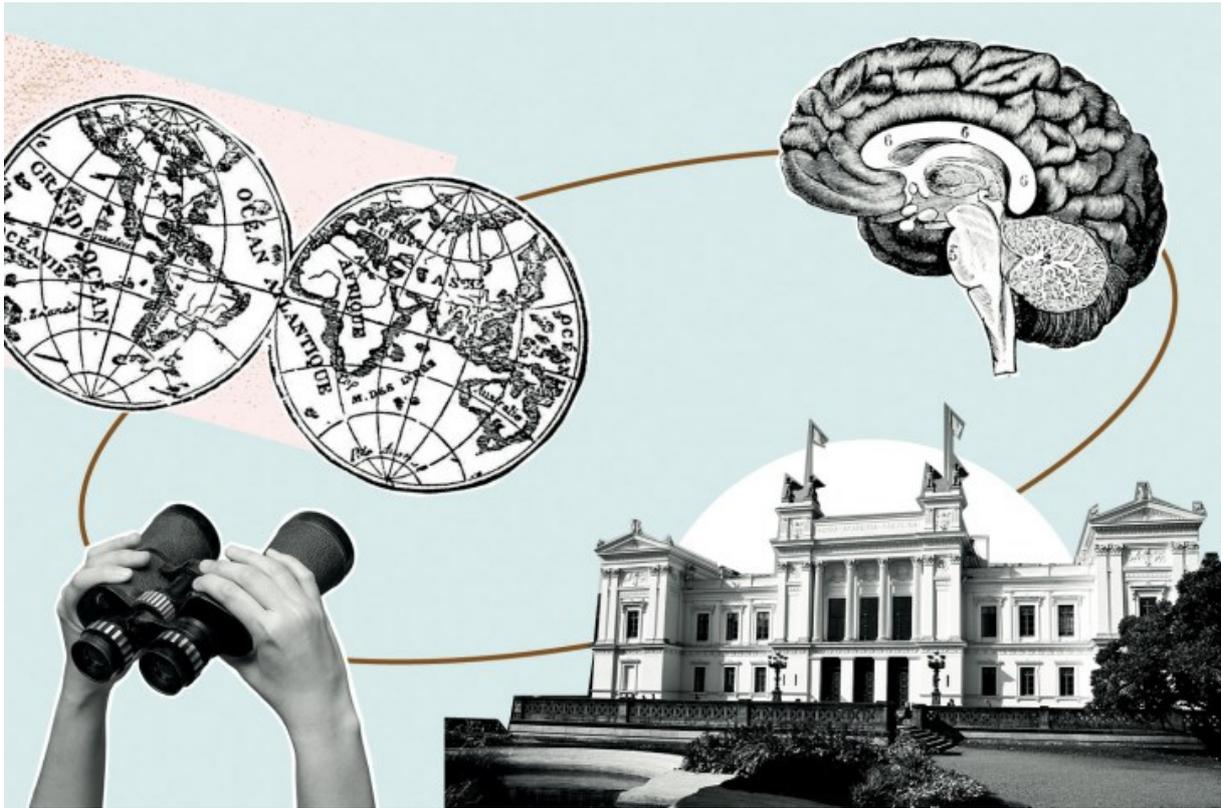
#### Methodology

We approach this subject from two angles. One is from the legal angle. We study PVPs as a case of intellectual property rights within free trade agreements. The other angle is provided by the food sovereignty perspective, which looks at ways that cultivators seek to grow food in a way that they control and that is sustainable. While scholarship on food sovereignty is rich, it has not yet given sufficient attention to the subtle tools of resistance that have been deployed alongside rhetoric that seems to indicate compliance. Our study, which is ongoing, examines East, Southeast, and South Asia.

#### Key results/conclusions

There are multiple ways that compliance with PVP regimes can be feigned, giving farmers greater autonomy than it would appear.

## Conference abstracts



### 4. Theme III: Knowledge about justice and equity in a sustainable world

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Poster presentations



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## Abstract



# Research Conference on Sustainable Development 2021

## Ensuring Social Sustainability: towards a Systematic Framework to Assess Social Impacts of Sharing Platforms

Presenting author: *Oksana Mont, International Institute for Industrial Environmental Economics (IIIEE) at Lund University*

Co-author: *Steven Curtis, IIIEE at Lund University*

Key words: *social sustainability, sharing platforms, trust, empowerment, social justice, and inclusivity*

Theme: *III*

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Format: *Poster session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

The exponential development of the sharing economy around the globe in the last decade has received close attention from both researchers and practitioners. However, its social sustainability impacts are still widely debated, ranging from social cohesion vs. gentrification; inclusiveness vs. discrimination; flexible employment vs. exploitation. The social impacts of the sharing economy are increasingly critical to understand, especially as they are subject to diverse understandings by a variety of stakeholders in different contexts. We aim to improve understanding of the social impacts of sharing platforms and develop a systematic framework to assess these impacts.

### Methodology

By integrating insights from a narrative literature review and stakeholder workshop we produce a systematic social impact assessment framework and a practice-oriented tool.

### Key results

We identify four social aspects—trust, empowerment, social justice, and inclusivity—and eighteen indicators that make up the framework. The framework and tool are the first holistic method for assessing social impact in the sharing economy, which may inform researchers, sharing platforms, regulators, investors, and citizens to mitigate adverse social impacts while enhancing the overall net social value of the sharing economy.

## Abstract



## Research Conference on Sustainable Development 2021

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### Potential health benefits following the implementation of low emission zones in Malmö, Sweden

Presenting author: *Erin Flanagan, Division of Occupational and Environmental Medicine, Department of Laboratory Medicine, Lund University*

Co-authors: *Ebba Malmqvist, Division of Occupational and Environmental Medicine, Department of Laboratory Medicine, Lund University; Susanna Gustafsson, Environmental Department of the City of Malmö, Malmö, Sweden; Anna Oudin, Division of Occupational and Environmental Medicine, Department of Laboratory Medicine, Lund University and Sustainable health, Department for Public Health and Clinical Medicine, Umeå University*

Key words: *health impact assessment, low emission zones, clean air policy, urban and transport planning, ambient air pollution*

Theme: *Theme III: Knowledge about justice and equity in a sustainable world;*

Email address: *erin.flanagan@med.lu.se*

Format: *Poster presentation*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

This research aims to estimate the effect of low emission zones (LEZ) on mortality and morbidity in Malmö, Sweden.

### Methodology

A health impact assessment (HIA) was conducted, for which baseline health data was gathered from various health registers, and exposure response functions (ERFs) were derived from currently literature, mainly meta-analyses. A Gaussian dispersion model (AERMOD) combined with a detailed emission database (EDB) was used to calculate NO<sub>x</sub> emissions from traffic, which were converted into NO<sub>2</sub>. The adjusted emission factors assumed all vehicles on municipal roads as having the emission standard of euro6 or better.

### Key results/conclusions

The introduction of this LEZ would decrease NO<sub>2</sub> levels by 2.1 µg/m<sup>3</sup> per person on average. The resulting cleaner air would prevent 9—26 deaths per year in Malmö. In terms of morbidity, 12 hospitalizations for respiratory disease, 8 childhood asthma cases, 14 preeclampsia incidences, and 78 cases of dementia would be avoided annually.

LEZ can reduce air pollution exposure and improve health, especially for those living in close proximity to roadways. However, vehicles with improved emission standards must be made affordable to lower-income persons. Additionally, the promotion of electric vehicles should consider the ethical and environmental impacts of cobalt and lithium mining.

## Abstract



## Research Conference on Sustainable Development 2021

Distribution of responsibility for climate change adaptation - Is the global discussion relevant on the local level?

Presenting author: *Erik Persson, Lund University*

Co-author: *Kerstin Eriksson, Research Institutes of Sweden (RISE); Åsa Knaggård, Lund University*

Key words: *Responsibility, local adaptation, climate justice*

Theme: *Theme III*

Email address: *erik.persson@fil.lu.se*

Format: *Poster session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Our aim is to find out how existing theories about just distribution of responsibility for climate change mitigation and adaptation on the global level can contribute to the question of climate change adaptation on a local level.

### Methodology

We studied a large number of publications discussing just distribution of responsibility for climate change mitigation and adaptation on the global level. We then analysed and classified the theories, and finally, assessed their relevance and implications on the local level based on official documents and interviews with decision makers in municipalities and county administration boards.

### Key results/conclusions

We found that the basic principles for just distribution are the same but the choice between principles need to be made differently, which may or may not lead to different priorities. For example, historical emissions play a salient role in discussions about just distribution of future emission rights among countries but are less useful on the local level. On the other hand, ability to pay and technological capacity seem to be important considerations on both the global and the local level and regarding both mitigation and adaptation.

## Abstract



## Research Conference on Sustainable Development 2021

Title of your contribution A human rights-based approach to displacement in the context of disasters and climate change

Presenting author: *Name and affiliation Matthew Scott*

Co-author: *Albert Salamanca*

Key words: *3-5 keywords Displacement, human rights, evacuation, disaster risk reduction, climate change adaptation*

Theme: *Theme III Knowledge about justice and equity in a sustainable world*

Email address: *provide presenting author email address matthew.scott@rwi.lu.se*

Format: *Poster presentation*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution. Yes*

### Aim

The collaborative research examines how human rights principles are integrated in national legal and policy frameworks relating to disaster risk reduction and climate change adaptation in 10 countries across Asia and the Pacific, and how those frameworks address different aspects of displacement. It also examined implementation in local displacement situations.

### Methodology

The research develops a human rights-based approach, taking impetus from the calls under the post-2015 development agenda. It is further informed by a political ecological awareness of the importance of recognizing how social factors underpin disaster risk.

### Key results/conclusions

Human rights principles are widely reflected in legal and policy frameworks. However, frameworks tend not to reflect a systematic approach to the issue of displacement, with limited consideration of the measures that can be taken to prevent and prepare for displacement, and even less consideration of the kinds of steps that need to be taken to facilitate the achievement of durable solutions. Action at the local level does not tend to reflect coherent implementation the frameworks, in part owing to power dynamics, in part to budgets, and in part to gaps in training.

## Research Conference on Sustainable Development 2021

### “What’s love got to do with it?” SDGs, gendered power, and place attachment

Presenting author: *Karin Steen, LUCSUS Lund University*

Co-author: *Anne Jerneck, LUCSUS Lund University*

Key words (3-5): *Emotions, Gender, Love power, subsistence farming, sustainability*

Theme: *Theme III (Theme I)*

Email address: *karin.steen@lucsus.lu.se*

Format: *Parallel session*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

Gender is crucial in smallscale farming in sub-Saharan Africa, but knowledge is partial. Research on societies where women depend on men for productive resources focuses more on gendered access to and control over land but less on immaterial resources such as labour or emotions. However, love as an **emotion binds people together** through social practices that are contingent on culture, historical processes, and social trends. Thus, love is a perfect site for studying power.

Resources and emotions matter in everyday struggles where access to, use of and control over resources are mediated through social relations of power, and through place attachment. Gendered experiences and emotions decide how **nature-society relations** are lived and practiced in everyday life.

We generate **knowledge** to stimulate theoretical advancement, empirical insights, and policy debates on the gendered dynamics of resource management and food security. It will show *how* love and gender dynamics shape conditions for sustainable development.

### Methodology

Drawing on theories of **love power**, **rights-in-person**, and the **love triangle** combined with **interactive methods**, we analyse emotions and power in interpersonal relations.

The analysis of human-nature relations employs the **theory of emotions** defined as the energy-laden side of agency.

### Key results/conclusions

The gendered regime of land and labour, wherein women and men have unequal rights and responsibilities, both legally and socially, is the foundation of unequal love exchange (in this setting). We confirm power exists within love relations and it affects conditions for sustainable development.

We find a **‘life cycle of love’** and an **Annual Wheel of Love** among subjects. Participants treasure **nature** for intergenerational reasons and temporal links to ancestors.

## Abstract



# Research Conference on Sustainable Development 2021

## Toxic uncertainty as a matter of care

Presenting author: *Lina Bonde, PhD researcher, Department of Gender Studies, Faculty of Social Sciences, Lund University*

Key words: *care work, e-waste, environmental in/justice, toxic livelihood*

Theme: *Theme III (first choice), Theme I (second choice)*

Format: *Poster presentation*

Consent: *The presenting author are acting on behalf and with consent of all authors of this contribution.*

### Aim

My project explores the entanglements of e-waste with practices and matters of care (work), particularly gendered socio-material practices often unrecognized, such as reproductive work in a context of toxic uncertainty, caring for e-waste, one's health, safety, surroundings, and home. My research site is Agbogbloshie, an e-waste scrap yard and slum settlement in Accra, Ghana. The slum settlement has 80 000 inhabitants and is surrounded by polarized narratives questioning or confirming its toxic narrative by referring to it as the most toxic places on earth, an e-waste hub or poverty porn.

### Methodology

By drawing on a near ANT-approach, matters of care (work) and a feminist methodology, I address what counts as toxic in the first place, and how toxicity orients and shapes people, more-than-human actants and places.

### Key results/conclusions

United Nation E-waste Coalition (2019) has framed e-waste as the fastest growing hazard of our times. Hence, the project will be relevant for approaching the situated and gendered effects of waste and wasting. It will also contribute to a societal discussion on environmental justice, slow violence, and the politicization of toxic bodies and environments that take the extended margins of Europe under consideration.

## Abstract

# Research Conference on Sustainable Development 2021



Title of your contribution: **Reasons behind low adoption of non-hydro renewable energy in Central Asia**

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## Aim

To identify possible reasons behind the slow progress in adoption of non-hydro renewable energy in Central Asian countries relative to other regions.

## Methodology

Comparative analysis based on industry reports and related assumptions of the average lifetime levelised costs of electricity generation.

## Key results/conclusions

Central Asian countries were late in adapting to the green energy revolution in the field of solar and wind energy. Energy costs, subsidies, logistics, expertise, and financing seem to be the main causes. With the existing cost trends and the structure of long-term investments, the region needs to create a more sustainable energy mix by shifting focus from fossil and hydropower to non-hydro renewable energy.