

## **YHYS Colloquium 2023: Polycrisis – eco-social linkages, responses and reconstruction**

### **Book of abstracts**

Edited by Timo Haapasalo & Eerika Albrecht

### **Session program**

#### **Thursday 15—17:15**

#### **Session 1. Maintaining and challenging the position of animal- and plant-based foods in food systems. (E212)**

Mari Niva, University of Helsinki, Dept. of Economics and Management

Silvia Gaiani, University of Helsinki, Ruralia Institute

Taru Lindblom, University of Helsinki, Dept. of Education

##### **1. Acceptability and support for “A Fair Meat Price”**

Marguerite Beattie, University of Helsinki; Daria Paniotova-Mączka; Adam Mickiewicz, University in Poznan, Poland & Hannibal Thai, University of Queensland, Australia

##### **2. Decision Support for Sustainable Dietary Choices**

Wanying Yan, University of Helsinki; Timo Sipiläinen, University of Helsinki & Alessandro Banterle, University of Milan

##### **3. Exploring meat consumption corridors**

Minna Kanerva, Sustainability Research Center (artec), University of Bremen

##### **4. Power relationships in the dairy and alternative products food system**

Silvia Gaiani & Iida Alasentie, Ruralia Institute, University of Helsinki

#### **Sessions 2 & 5. Technology is the answer, but what was the question? Critical approaches to the green promises of digitalization & Technological optimism and its critique in environmental social sciences (E101)**

Toni Ruuska, University of Helsinki

Andreas Roos, Lund University

Eeva Berglund, Aalto University

Minna Santaoja, University of Eastern Finland

##### **1. Technological optimism as a cultural-existential challenge**

Pasi Takkinen

##### **2. Expanding use of space creates a new planetary boundary for sustainability**

M. Palmroth & J. I. Hukkinen

##### **3. Has activation run out of steam?**

Outi Pitkänen; Tomas Moe Skjølsvold & Marianne Ryghaug

##### **4. Tech-yes, tech-no, tech-perhaps! Technological ambivalence in degrowth**

Andreas Roos & Toni Ruuska

## **Session 4. Deep leverage points and layers to understand and generate sustainability transformations: examining root causes of unsustainable systems (E102)**

Annika Lonkila, Finnish Environment Institute

Suvi Huttunen, Finnish Environment Institute

- 1. The paradigm of well-being and deep leverage points**  
Teea Kortetmäki, University of Jyväskylä
- 2. Who intervenes for transformation? Worker agency as a deep leverage point**  
Eeva Houtbeckers, University of Turku, University of Eastern Finland and Untame Collective
- 3. Paradigms and deep leverage points in the Finnish food system**  
Annika Lonkila, Finnish Environment Institute; Minna Kaljonen, Finnish Environment Institute & Linda Holvas, University of Eastern Finland
- 4. 'And then they will have nature protection as an occupation' - 'Good farming' as a paradigm hindering climate change mitigation with agricultural peatlands**  
Suvi Huttunen, Finnish Environment Institute; Annika Lonkila, Finnish Environment Institute; Sara Simola, University of Helsinki; Ari Paloviita, University of Jyväskylä & Ellen Huan-Niemi, Natural Resources Institute Finland
- 5. Creating a chain of leverage – when what happens behind the scene matters: Interlinkages between leverage points for strengthening adaptive capacity to climate change**  
Linda Rosengren, Natural Resources Institute Finland

## **Session 7. Conflicts and contestation in the Green Transition – where are the tensions and what should be done? (E215)**

Lasse Peltonen, University of Eastern Finland, Dept. of Geographical and Historical Studies

Johanna Leino, University of Eastern Finland, Dept. of Geographical and Historical Studies

Juha M. Kotilainen, University of Eastern Finland, Dept. of Geographical and Historical Studies

- 1. Policy trade-offs in urban transformations**  
Janina Käyhkö, University of Helsinki; Heidi Tuhkanen, University of Helsinki; Johan Schuur, ETH Zürich, Institute for Spatial and Landscape Development; Eveliina Dunkel, University of Helsinki; Adrienne Grêt-Regamey, ETH Zürich, Institute for Spatial and Landscape Development & Sirkku Juhola, University of Helsinki
- 2. Friction points of early small modular reactor (SMR) projects: regulation and seed funding**  
Matti Kojo, LUT University; Markku Lehtonen, Universitat Pompeu Fabra & Tapio Litmanen, University of Jyväskylä
- 3. Resisting extractivism: Thari Indigenous people's struggles against the Belt and Road Initiative**  
Usman Ashraf, University of Helsinki
- 4. Incommensurabilities of new Arctic extractive projects in Finland's North**  
Maija Lassila, University of Helsinki

**5. Managing Local Mining Tensions with Collaboration: Community Benefit Agreements in Finland**

Juha M. Kotilainen, University of Eastern Finland & Lasse Peltonen, University of Eastern Finland

**6. The Green Transition, contested natural resources, and rural perspectives of justice in Finland**

Johanna Leino, University of Eastern Finland; Tuija Mononen, University of Eastern Finland; Jukka Sihvonen, University of Eastern Finland & Sonja Kivinen, University of Eastern Finland

**7. Legal and political arguments on aquatic ecosystem services – A case study on Kemi River basin, Finland**

Eerika Albrecht, University of Eastern Finland and Finnish Environment Institute; Roman Isaac, Leuphana University Lüneburg & Aleksi Räsänen, Natural Resources Institute Finland

**8. “It should be much faster fashion” — tensions in the transition to a circular textile industry**

Anna Härrä, LUT University & Jarkko Levänen, LUT University

**Session 8. Experience and Meaning in/of Environments (E213)**

Pasi Heikkurinen, University of Helsinki

Tuulikki Halla, University of Eastern Finland

**1. Experiencing forests and urban green spaces through walk-and-talk interviews: towards holistic approach to restorative green environments**

Miia Heikkilä, Aalto University

**2. Walking as performance of relationality with environment**

Sonja Laukkanen, Helsinki University

**3. “Where is the joy?” Terrains of care in Helsinki’s smart city**

Sara Zaman, University of Helsinki; Suvielise Nurmi, University of Helsinki & Christopher Raymond, University of Helsinki

**4. Meaning making of future urban environments and politics of visualization**

Jenni Kuoppa, Tampere University & Aalto University

**5. Finding happiness in Finnish forest experiences**

M.S. Syamili, University of Eastern Finland; T. Takala, University of Eastern Finland; A. Korrensalo, Natural Resources Institute Finland & E-S. Tuittila, University of Eastern Finland

**6. Living with Flood and Migration: Experience of ‘Left Behind Women’ in the Kosi River Basin**

Shubha Srishti, Tata Institute, University of Jyväskylä

**Session 9. Engaging with care and broken world thinking in Polycrisis (E202)**

Taru Peltola, University of Eastern Finland, Finnish Environment Institute

**1. Unfolding Sense of Water: conceptual framework to explore caring for water**

Katriina Soini, Natural Resources Institute Finland; Juha Hiedanpää, Natural Resources Institute Finland; Riikka Latva-Somppi, Aalto University; Himansu Mishra, Natural Resources Institute Finland; Maarit Mäkelä, Aalto University; Taru Peltola, University of Eastern Finland

and Finnish Environment Institute; Mia Pihlajamäki, Natural Resources Institute Finland; Kati Pitkänen, Finnish Environment Institute; Matti Salo, Natural Resources Institute Finland & Kristina Svells, Natural Resources Institute Finland

**2. Green transition or cultural genocide? On the enactment of different realities of the Arctic Railway**

Anna Ott, Finnish Environment Institute

**3. Architecture as a regenerative practice of care – the need for a cultural and paradigmatic shift**

Panu Savolainen, Aalto University

**4. Building repair as an act of care**

Iida Kalakoski, University of Tampere & Riina Sirén, University of Tampere

**Session 10. Policies and practices for sufficiency (E214)**

Tina Nyfors, University of Helsinki

Senja Laakso, Tampere University

Kristoffer Wilén, University of Helsinki

**1. About fostering sufficiency in social work education and practice**

Satu Ranta-Tyrkkö, University of Jyväskylä

**2. Sufficiency overshadowed?**

Kaisa Matschoss, Laura Salmivaara, et al. University of Helsinki

**3. Sufficiency in sustainability transformations: how collective capacities operate in local governance?**

Maija Faehnle, Finnish Environment Institute; Jani Lukkarinen, Finnish Environment Institute & Hanna Nieminen, Finnish Environment Institute

**4. Frugal Innovations for a more resilient future: lessons learnt from an open innovation challenge targeting under-represented citizen groups**

Hanna Saari, VTT Technical research Centre of Finland; Maria Åkerman, VTT Technical research Centre of Finland & Giovanna Sanchez Nieminen, VTT Technical research Centre of Finland

**5. Acceptability of sufficiency consumption policies in Finnish households**

Essi Nuorivaara, University of Helsinki

**6. On the way to sufficiency: A circular economy as a springboard to degrowth**

Heta Leinonen, Tampere University & Roni Lappalainen, Jyväskylä University

**7. Already at minimum? Perceptions of energy use reduction and energy renovation in Finnish households**

Jenny Rinkinen, LUT University; Kaisa Matschoss, University of Helsinki & Tuija Kajoskoski, University of Helsinki

**Friday 9—11:30**

**Session 1. Maintaining and challenging the position of animal- and plant-based foods in food systems. (E212)**

Mari Niva, University of Helsinki, Dept. of Economics and Management

Silvia Gaiani, University of Helsinki, Ruralia Institute

Taru Lindblom, University of Helsinki, Dept. of Education

**1. Shaping normativity and affectivity of (un)sustainable food consumption practices – analysing food marketing discourses**

Katri Weckroth, Tampere University, Faculty of Management and Business & Ulla-Maija Sutinen, Tampere University, Faculty of Social Sciences

**2. Living (with) animals and plants in subsistence farming and CSA in Finland**

Riikka Aro, University of Jyväskylä

**3. “Milk Belongs to Finnish Food Tradition.” Nationalism and Naturalness in Finnish Milk Promotion**

Taija Kaarlenkaski, University of Eastern Finland

**4. Towards less ‘cheesy’ food culture? Cheese in the everyday lives of Finnish consumers**

Sami Koponen, University of Helsinki; Taru Lindblom, University of Helsinki & Mari Niva, University of Helsinki

**Sessions 2 & 5. Technology is the answer, but what was the question? Critical approaches to the green promises of digitalization & Technological optimism and its critique in environmental social sciences (E101)**

Toni Ruuska, University of Helsinki

Andreas Roos, Lund University

Eeva Berglund, Aalto University

Minna Santaoja, University of Eastern Finland

**1. Binaries of management and mitigation: From agricultural intensification to TechnoGarden fixes**

Hannu I. Heikkinen; Olli Haanpää; Karoliina Kikuchi; Simo Sarkki; Élise Lépy; Anna Ruohonen & Aleksi Räisänen

**2. Making worlds through governing soil biodiversity: why is environmental DNA (eDNA) gaining traction in Finnish land governance?**

Anna Krzywoszynska & Jelena Salmi

**3. Home To Roost And Then What? Developing cognitive resilience in cities in times of Polycrisis**

Nina Janasik; Marko Ahvenainen; Annukka Lehtikoinen; Tapio Reinekoski & Janne Hukkinen

**4. Cities as political technologies in the Polycrisis**

Lauri Lahikainen

### **Session 3. Sustainability in Tourism – Meaning of Nature for Individuals, Businesses, and the Whole Society (post 10 am) (E214)**

Henna Konu, University of Eastern Finland, Tourism Business research group

Kelsey Johansen, University of Eastern Finland, Tourism Business research group

Katja Pasanen, University of Eastern Finland, Tourism Business research group

Jarno Suni, University of Eastern Finland, Tourism Business research group

Muhammad Khogali, University of Eastern Finland, Tourism Business research group

#### **1. Tourism-related conflicts in the Bigodi community, Uganda**

Denis Dobrynin, University of Eastern Finland; Jordan Byekwaso, Makerere University; Irmeli Mustalahti, University of Eastern Finland & Ahimbisibwe Karembe, Makerere University

#### **2. Digital tools in developing nature tourism: Transitioning from theory to practical involvement in the Heinävesi Marina and nature travel development project for 2022-2023**

Virpi Pakarinen, väitöskirjatutkija, University of Eastern Finland

#### **3. On 'wilderness' and a modern forest economy: sustainability meets social reproduction in Finnish nature tourism**

Eeva Berglund, Adjunct Professor (Environmental Policy) Aalto University, Department of Design & Roger Norum, University of Oulu

#### **4. The Role of Reflective Nature Immersion in Online Place-Based Outdoor Experiential Learning: Lessons in Fostering Wellbeing, Human-Nature Connection, and Appreciation of the Amenity Value of Nature**

Dr. Kelsey M. Johansen, Postdoctoral Researcher, University of Eastern Finland, Tourism Business research group

### **Session 4. Deep leverage points and layers to understand and generate sustainability transformations: examining root causes of unsustainable systems (E102)**

Annika Lonkila, Finnish Environment Institute

Suvi Huttunen, Finnish Environment Institute

#### **1. Human–nature relations contributing to sustainability mindsets: insight from transdisciplinary empirical research**

Kaisa Raatikainen, Finnish Environment Institute

#### **2. Money as a deep lever: exploring paradigm changes in economics**

Ossi I. Ollinaho, University of Helsinki

#### **3. Fisheries management as an instrument for sustainability transformation**

Timo Haapasalo, University of Eastern Finland

#### **4. Shifting power through participation in post-disaster recovery: A scoping review**

Heidi Tuhkanen, University of Helsinki, Stockholm Environment Institute

#### **5. How to leverage the Nature Restoration Law in Finland? Digging into the roots of the policy conflict.**

Minna Santaoja, University of Eastern Finland, School of Forest Sciences

**6. Leverage points, leapfrogs, catalysts, triggers and what? Contours of transformative geographies in sustainable water governance**

Jani Lukkarinen, Finnish Environment Institute

**Session 6. "All old is new again" – The alternative organisations as a phenomenon (E203)**

Minna Käyrä, University of Jyväskylä

Maija Lähteenkorva, University of Jyväskylä

**1. Ecosocial Approach to Social Work Organizational Praxis: A Case Study of NGOs in Finland & Slovenia**

Amy Shackelford, MSW, MPH Doctoral Student, Jyväskylä University

**2. Operational space of urban gardening among Polycrisis**

Krista Willman, PhD researcher, University of Tampere

**3. Sowing Change-Examining the evolution of the B Corp Movement in Georgia (U.S.) and Finland**

Maija Lähteenkorva, Doctoral researcher, Corporate Environmental Management, University of Jyväskylä

**Session 7. Conflicts and contestation in the Green Transition – where are the tensions and what should be done? (E215)**

Lasse Peltonen, University of Eastern Finland, Dept. of Geographical and Historical Studies

Johanna Leino, University of Eastern Finland, Dept. of Geographical and Historical Studies

Juha M. Kotilainen, University of Eastern Finland, Dept. of Geographical and Historical Studies

**1. Adding to acceptability of wind power - feasible or illusory?**

Jakob Donner-Amnell, University of Eastern Finland

**2. Building a Collaborative Platform between Wind Power and Reindeer Husbandry**

Emma Luoma; Jonna Kangasoja & Sanna Hast

**3. Actors' perceptions of environmental (in)justice – reindeer herding and forestry as overlapping rights-holders to the same land in Sápmi/Sweden**

Kaisa Raitio, Swedish University of Agricultural Studies (SLU) & Anna Hjelm, Swedish University of Agricultural Studies (SLU)

**4. Epistemic governance of fragmented forests in spatial planning – addressing the tensions between sectors and actors**

Aino Rekola, Finnish Environment Institute and University of Tampere & Riikka Paloniemi, Finnish Environment Institute

**5. Postgrowth Finnish Bioeconomy**

Ruben Vezzoni & Sabaheta Ramcilovic-Suominen

**6. Public forest discourses in Finland: Conflicts and collaborations**

Venla Wallius, Jyväskylä University of School of Business and Economics and European Forest Institute & Annukka Näyhä, Jyväskylä University School of Business and Economics

**7. Communicating agroforestry in the era of polycrisis: lessons learned from stakeholders in Finland**

Tanja Kähkönen, European Forest Institute & Michael den Herder, European Forest Institute

**Session 8. Experience and Meaning in/of Environments (E213)**

Pasi Heikkurinen, University of Helsinki

Tuulikki Halla, University of Eastern Finland

**1. The challenges of the existing land use binaries to the diversity of meanings that forest environments produce for forest owners in Finnish rural contexts**

Emmi Salmivuori, University of Eastern Finland

**2. Does holistic and meaningful urban dialogue have potential to reshape the idea of a good forest?**

Vesa Kemppainen, University of Eastern Finland

**3. Resources as relations: on the ecological (dis)embeddedness of meaning**

Janne Säynäjäkangas

**4. Experiencing natural environments: Non-economic Values and Indigenous perspectives**

Corinna Casi, University of Helsinki and University of Lapland

**5. Experiencing the environment during a polycrisis – shifting priorities and the moderating role of political trust**

Sami Ahonen, University of Turku; Aki Koivula, University of Turku & Jukka Sivonen, University of Turku

**Session 11. Decolonialization and moving towards environmental collaboration (E204)**

Irmeli Mustalahti, University of Eastern Finland

Patience Mususa, The Nordic Africa Institute

**1. A study on confrontation between the Sámi people's decolonising action and industrialisers' tactics**

Tiina Jääskeläinen, Hanken School of Business & University of Eastern Finland

**2. (De)colonizations in the Maya Forest? The Nexus of Science, Mayans and Conservation**

Hanna Laako, University of Eastern Finland

**3. Decolonial environmental justice in landscape restoration**

Sabaheta Ramcilovic-Suominen; Susan Chomba; Anne M. Larson & Fergus Sinclair.

**4. Collaboration and capacity building as creating internal ruptures – the case of Wayuu community gardens and the Cerrejón coal mine in La Guajira Colombia**

Liisa Varumo, Finnish Environmental Institute & University of Eastern Finland

**5. Culture, Climate Change and Water Conservation: Water ecosystem and culture-based adaptation practices in Bangladesh**

Shahid Mallick, University of Eastern Finland

**6. Forms of collaborative actions: Analysis of interactive methods, processes and their implication to support integrated landscape approach. Scoping review in progress**



Authors: Agustiyara, Maryam Amiri; Denis Dobrynin; Ida Herdieckerhoff; Nicole Klenk; Edda Tandi Lwoga; Aristarik H. Maro; Rebecca McLain; Irmeli Mustalahti; Anna Mustonen; Rijal Ramdani; Raúl Salas Reyes; Suzana Samson; Noelle Gadfly Stratton & Ubaldus Tumaini

Presenter: Anna Mustonen, doctoral researcher, University of Eastern Finland

## **Session 1. Maintaining and challenging the position of animal- and plant-based foods in food systems.**

Mari Niva, University of Helsinki, Dept. of Economics and Management (mari.niva@helsinki.fi)

Silvia Gaiani, University of Helsinki, Ruralia Institute (silvia.gaiani@helsinki.fi)

Taru Lindblom, University of Helsinki, Dept. of Education (taru.lindblom@helsinki.fi)

### **1. Acceptability and support for “A Fair Meat Price”**

*Marguerite Beattie, University of Helsinki (marguerite.beattie@helsinki.fi); Daria Paniotova-Mączka; Adam Mickiewicz, University in Poznan, Poland & Hannibal Thai, University of Queensland, Australia*

One of the most effective ways to address climate concerns that has been found is to change tax policies to encourage more environmentally friendly behaviour. In order to decrease carbon equivalent agricultural emissions in addition to improving human health and animal welfare, “A Fair Meat Price” policy has been introduced to the EU. It is argued to be fair because it takes into account the environmental and health externalities that are not currently part of the pricing of food. However, people do not always accept or support changes to tax policies to benefit the environment.

We explore predictors of acceptability and support for this policy in Ireland (N=693) using a path analysis. Predictors include perceived norms, place attachment, climate risk perception, meat attachment, perceived fairness, trust, beneficiality, willingness to bear costs and demographic variables. Preliminary analysis found the two strongest predictors to be willingness to bear costs ( $\beta=0.40$ ) and perceived fairness ( $\beta=0.24$ ). In addition, the data include open answer responses to evince the reasoning behind participants’ beliefs. The results inform our understanding of what influences acceptability and support for agricultural emissions policies. The environment is a common good, which is necessary to take care of collectively, and it is therefore essential to understand the social psychology behind its protection.

### **2. Decision Support for Sustainable Dietary Choices**

*Wanying Yan, University of Helsinki (wanying.yan@helsinki.fi); Timo Sipiläinen, University of Helsinki & Alessandro Banterle, University of Milan*

Nutrition policies in Nordic countries that emphasize individual responsibility for dietary choices can be problematic. Concerns have arisen about the limited effectiveness of nutritional policies in addressing obesity in Finland where 25.7 percent of the population is already obese (THL, 2020).

Incorporating sustainability into Food-based Nutritional Guidelines (FBNGs) with health consideration centers on concurrently reducing the intake of animal-based products may introduce a new layer of complexity to the existing problem. It's important to note that reducing the consumption of animal-based foods doesn't necessarily guarantee an increase in plant-based foods. People may compensate by consuming other calorie-dense and nutritionally poor foods, such as snacks and sweetened beverages, which can exacerbate the obesity problem. Relying solely on individuals may not yield the desired results, as irrational dietary behavior and neglect of healthier food choices are common. Effectively addressing dietary-related diseases requires purposeful nutritional interventions that strike a delicate balance between public health goals and individual autonomy. This paper addresses the need for innovative decision-support systems that assess individuals' dietary decision-making needs, guide healthier choices, and measure their impact on dietary outcomes and public health.

### **3. Exploring meat consumption corridors**

*Minna Kanerva, Sustainability Research Center (artec), University of Bremen  
(m.kanerva@uni-bremen.de)*

Meat consumption corridors have potential for being a tool for food democracy, offering a counterforce against corporate capture of food systems and food system governance. They could also help in enabling socio-ecological justice and systemic social change as regards food systems. In short, meat consumption corridors might be able to challenge the power structures embedded in the current meat system. Such corridors could arguably be best realized through strong sustainable consumption governance, and different ways of bringing them about can be envisaged. As with the consumption corridor framework more generally, participative decision making should be the first step for discussion and for determining limits.

On a practical level, perhaps the most controversial, although likely most effective approaches would include enacting a high meat tax and rationing meat. Rationing could be expected to be a fairer and more inclusive approach of the two, although more challenging in principle. Finally, seeing different intensities of meat consumption, as well as the consumption of alternative (new) meats as a continuum of different meatways is compatible with the corridor concept. This is because the corridors are not just about upper and lower limits, but also comprise of different levels of consumption. Continuum thinking can resolve some of the tensions between animal-based meat and new meat (production) and consumption. It can also strengthen discourses that enable the transition towards more sustainable meat consumption. This presentation will explore the above themes.

#### **4. Power relationships in the dairy and alternative products food system**

*Silvia Gaiani (silvia.gaiani@helsinki.fi) & Iida Alasentie, Ruralia Institute, University of Helsinki*

Environmental and political debate related to the dairy system and its sustainability has been actively ongoing in Finland. Stakeholders within the dairy sector are under pressure when adapting to changing consumer preferences and legislation related to carbon emissions. Accordingly, many of them are struggling with high production costs and power imbalances within the dairy market. As part of the ERA-NET project 'Climate-smart Dairy: Assessing Challenges, Innovations, and Solutions' we analyse the experiences and perceptions of dairy stakeholders and experts in Finland and focus on motivations, barriers and future practices to promote climate-smartness in the dairy sector.

Qualitative data have been collected through a dedicated online workshop and 10 in depth-interviews. Data have been scrutinized through thematic and content analysis methodologies and centered around the following themes:

1. Power relationships in the dairy and alternative products system
2. Needs of the dairy system in terms of climate-smartness
3. Relationship and roles between dairy sector stakeholders and climate-smart social and technological innovations.

In our presentation, we will focus on introducing the power relationships dominating the Finnish dairy system. Vertical and horizontal integration among actors, levels of power asymmetries and contractual agreements will be some of the salient topics we will explore.

#### **5. Shaping normativity and affectivity of (un)sustainable food consumption practices – analysing food marketing discourses**

*Katri Weckroth, Tampere University, Faculty of Management and Business (katri.weckroth@tuni.fi) & Ulla-Maija Sutinen, Tampere University, Faculty of Social Sciences*

Meat consumption reduction and the transition to plant-based foods have been approached from multiple perspectives in consumption research, including psychological as well as sociological, such as practice theoretical, approaches that emphasize the routinized and collective nature of consumption. However, the focus has mainly been on the behaviour itself, i.e. how practices are performed, leaving the normative and affective aspects with less attention. The socially constructed, inherent normativity and affectivity in (food consumption) practices guide how consumers can or should perform practices and for what purpose, and even define acceptable emotionality in them. Yet how these aspects are discursively constructed, and what role do the public discourses play in terms of changing meat intensive food consumption practices, are still unclear.

This study aims at understanding how commercial food marketing discourses construct normativity and affectivity in mundane food consumption practices and what their implications in terms of shifting from meat-based toward plant-based food consumption are. Food marketing content of two

major Finnish grocery retailers is examined with a critically oriented discourse analysis approach. The study adopts a sociocultural approach to critically examine the established role of meat in everyday food consumption and this way aims at contributing to the understanding of change in the food system.

## **6. Living (with) animals and plants in subsistence farming and CSA in Finland**

*Riikka Aro, University of Jyväskylä (riikka.aro@jyu.fi)*

This presentation is based on preliminary findings from an ethnographic study on the *food citizenship of subsistence farmers and community supported agriculture (CSA) practitioners* in Finland who acknowledge the need for food system transformation. I utilize data from the first field work tour (summer and autumn 2023) consisting of interviews (23), photos, and field notes from farm/garden tours. Here, I present views and experiences concerning animals and plants as part of farming, eating, and the food system at large.

This overall research project investigates the roles and possibilities of micro and small farming in sustainable and just food transition from the perspective of food citizenship. Food citizenship refers to citizens' food and food systems related agency, involvement, comprehension knowledge and knowhow, and possibilities to participate in and influence decision making related to food (e.g. Hassanein, 2003; Welsh McRae, 1998). Included critique towards the current food system and the related everyday subversive acts can be seen as political (e.g. Renting etc. 2012). Just food transition refers to just transition towards sustainable, climate wise, and healthy food systems (Kaljonen etc. 2019). The effectiveness of food citizenship is looked at from a micro perspective ('zoom in') through practitioners' meanings, practices and experiences on the one hand, and from a macro perspective of operational environments ('zoom out') on the other.

The preliminary findings indicate living relationships between the human and non-human worlds at farm-level, often cultivating multi species environments and local diverse food cultures while acknowledging global food system challenges related e.g. to animal production and mono crops.

## **7. "Milk Belongs to Finnish Food Tradition." Nationalism and Naturalness in Finnish Milk Promotion**

*Taija Kaarlenkaski, University of Eastern Finland (taija.kaarlenkaski@uef.fi)*

In Finland, cow milk and milk products have been seen as an integral part of a healthy diet since the early twentieth century. Milk is also entangled with several crucial aspects of society: nutrition, agriculture and food industry, human-animal relationships, politics, and economics. However, recently the discussion on milk and dairy farming has turned more critical as research has shown that industrial milk production is a significant source of environmental problems, and awareness of animal welfare issues has risen among consumers. Changing our eating habits towards a more sustainable trajectory, however, is not simple, and the effective milk promotion that has been carried out in Finland for decades may have contributed to this difficulty. In this paper, I will explore the

activities of a Finnish public health organization Maito ja terveystyöryhmä (Milk and Health association). It was established in 1958 and continued until 2020, aiming to advance the consumption of milk and milk products. The association produced and distributed, e.g., promotional leaflets, brochures, and posters to different groups of people from toddlers to pensioners.

I will look at these materials from the point of view of banal nationalism, which refers to the everyday, subtle expressions of nationality. My main questions are: What kind of arguments and discourses have been used to justify milk as Finnish foodstuff? How has milk been associated with naturalness and nationality? I will argue that embracing milk consumption as part of Finnish identity may be one reason for the resistance to more plant-based food systems.

#### **8. Towards less 'cheesy' food culture? Cheese in the everyday lives of Finnish consumers**

*Sami Koponen, University of Helsinki (sami.koponen@helsinki.fi); Taru Lindblom, University of Helsinki & Mari Niva, University of Helsinki*

Several studies have stressed that the mitigation of climate crisis requires a notable shift towards plant-based diets. However, and although extant research has shown that the sustainability aspects of food are important for many consumers, the consumption of meat and dairy products remains high. Practice theoretical accounts on food and eating suggest that this is in large part due to the routinised nature of everyday life. Since many of these accounts have thus far explored meat reduction, barriers and drivers of dairy reduction have been largely overlooked.

This paper addresses the gap by focusing on cheese: analysing cheese consumption is timely and interesting because the amount of cheese consumed has remained rather stable in Finland throughout the twenty-first century despite the negative environmental consequences of cheese production and consumers' increasing environmental awareness. Drawing on practice theory, the paper describes the routinised role of cheese in the everyday lives of Finnish consumers and expands existing knowledge about the symbolic and practical barriers to cheese reduction. The analysis is based on data consisting of semi-structured interviews conducted in early 2023 with 30 Finnish consumers representing various social backgrounds.

#### **Sessions 2 & 5. Technology is the answer, but what was the question? Critical approaches to the green promises of digitalization & Technological optimism and its critique in environmental social sciences**

Toni Ruuska, University of Helsinki (toni.ruuska@helsinki.fi)

Andreas Roos, Lund University

Eeva Berglund, Aalto University (eeva.berglund@aalto.fi)

Minna Santaoja, University of Eastern Finland

## **1. Technological optimism as a cultural-existential challenge**

*Pasi Takkinen (pasi.takkinen@tuni.fi)*

Technological optimism in sustainability discourse does not seem to falter either by the recent results in economics and material sciences refuting decoupling scenarios, nor by results in natural sciences that illustrate how the expansive technosphere replaces living nature. But is there anything new here? Looking fifty years back, the Limits to growth report – summarizing the calculations of the world's first supercomputer – warned against technological optimism. But in vain, as the report's alarming message was papered over by even fiercer technological optimism. So it seems that critical views on technology fall on deaf ears not only when they are articulated by humanist intellectuals, but also when these warnings come from the pinnacle of empirical and predictive sciences of each era. Thus it needs to be asked if technological optimism is at all falsifiable, and what would such falsification require?

I suggest three possible loci (and according fields) where this seeming non-falsifiability might lurk: First, in personal worldviews (education), second, in the cultures of science and expertise (sociology of science) and third, in the fossil-fuelled modern self-understanding of rational human autonomy (energy humanities). In these framings technological optimism acts as experientially and existentially constitutive element: it is the 'ground' that is difficult to expose under critical evaluation. Thus giving up technological optimism hardly happens in argumentative and epistemic registers. It would rather mean ontological and existential transformation in worldviews, expert cultures and society at large.

## **2. Expanding use of space creates a new planetary boundary for sustainability**

*M. Palmroth & J. I. Hukkinen (janne.i.hukkinen@helsinki.fi)*

Green and digital transition policies that increasingly rely on the utilization of near-Earth space contain an overlooked contradiction between sustainability and resilience. Green and digital infrastructures for sustainability presume satellite technologies, which however render the infrastructures vulnerable to extreme space weather events. We show that an extreme near-Earth space event may significantly disturb global sustainability transition. The definition of sustainable use of space is too narrow if it centers around orbital debris only. In addition, we must consider the physical space environment. The build-up of a green and digital infrastructure on Earth creates a new planetary boundary that potentially limits its own deployment through operational coupling with the contingencies of near-Earth space dynamics. To safeguard the emerging infrastructure with sufficient prediction capabilities, a balanced interdisciplinary assessment of sustainable use of space is needed, including new space physics missions to improve our understanding of critical near-Earth space dynamics.

### **3. Has activation run out of steam?**

*Outi Pitkänen (outi.pitkanen@ntnu.no); Tomas Moe Skjølsvold & Marianne Ryghaug*

The promise of technology is often ascribed the lead role in energy transitions. These expectations include also taken-for-granted ideas of these technologies' users, including descriptions of what the public is like and how it would respond to policies accompanying these technologies. Our article explores the role that such Imagined Publics (Barnett et al 2012) play in Norwegian energy professionals' expectations for making households' electricity use more flexible in its timing (see Fjellså et al 2021). We find that the predominant expectations were no longer that technologies accompanying smart electricity meters will train the public to better manage their energy demand (Skjølsvold 2014). Instead, the most certain expectations were towards aggregation, a future arrangement where the public, their Internet-of-Things technologies, commercial actors, market platforms and publicly owned grid companies form a seamlessly functioning system.

Specifically, market actors are expected to be managing the energy use of the connected technologies within parameters set by users, while households are not expected to experience any inconveniences. However, our findings show that a new imaginary had spun out of the public hearings and mass trials related to the grid tariff reform. These expectations combined the certainty that the currently efforts to develop flexible energy use met only the needs of extra-interested users; and the uncertainty of what alternative engagement methods could achieve. We explore the dynamics between these parallel Imagined Publics and ask whether uncertainty in energy transition innovation makes it actually more credible than innovation based on technological promise and hype.

### **4. Tech-yes, tech-no, tech-perhaps! Technological ambivalence in degrowth**

*Andreas Roos & Toni Ruuska (toni.ruuska@helsinki.fi)*

Degrowth scholarship has shown, among other things, how modern technoscientific systematizations perpetuate the capitalist growth economy and facilitates the increasing exploitation of people, and nature as a whole. However, there still seems to remain an incipient optimism, or the very least neutralism, towards new technologies and scientific discoveries among many degrowth proponents and researchers that are often motivated by 'non-essentialist' and 'de-romantic' theoretical assumptions on technology and beyond. Without idealizing the past or reducing the world to essences, this presentation firstly proposes a typology consisting of four varieties of conceptualizing the relation between technology, science, and the environment, each relating differently to the 'techne'/'oikos' and 'logos'/'oikos' distinctions. Secondly, the presentation makes a case for technological ambivalence in the degrowth literature, as we analyze degrowth proposals for a Green New Deal without growth, and other positive and neutral takes on the global mega-production of cheap renewables, and more.

As we note, many degrowth initiatives that call for the adoption of various technologies are based on the assumption that change agents can selectively degrowth certain sectors while growing others – a statement that we find problematic. As opposed to optimist or neutral take on technology, we

propose that the Degrowth Movement should withdraw their support from the development and utilization of resource-intensive high-tech (e.g., electric cars), as economic growth and technology should be challenged together.

## **5. Binaries of management and mitigation: From agricultural intensification to TechnoGarden fixes**

*Hannu I. Heikkinen; Olli Haanpää (olli.haanpaa@oulu.fi); Karoliina Kikuchi; Simo Sarkki; Élise Lépy; Anna Ruohonen & Aleksi Räisänen*

Climate change, water quality and biodiversity loss are pressing concerns of today. The urgency of needed corrective actions forces us to think what nature management is as a contemporary practice. Current active restoration and conservation measures aim to correct the detrimental impacts of historical environmental management, that often have been based on a productivist and exploitative mindset. Nevertheless, we ask whether there is any fundamental difference between practices in the past and present because after all mostly technical engineering solutions seem to be emphasized. A good example of contemporary engineering solutions is the TechnoGarden scenario type technofixes illustrated in the Millenium Ecosystem Assessment framework, which have become a prominent way to address environmental problems. Although technofixes are implemented to restore natural ecosystem functions, they don't address the root causes of environmental problems. Instead, purely technical engineering solutions may legitimize the existing status quo of managerialist relationship towards nature evading the need for transformative societal change regarding human lifestyles and overconsumption.

Our study is based on the 'Co-planning of land use sector climate change mitigation in the Kiiminkijoki river catchment' project (MATKI). Through the project experiences, we examine current practices in catchment-level environmental management that supports and renews aquatic ecosystem functions rather than restores nature into a specific temporal context or 'natural state'. We discuss passive protection and active management of nature as binary alternatives instead of somewhat deceiving discourses on rewilding or restoring, which often just reflect certain power relations and the business-as-usual ways of managing and relating to nature.

## **6. Making worlds through governing soil biodiversity: why is environmental DNA (eDNA) gaining traction in Finnish land governance?**

*Anna Krzywoszynska (anna.krzywoszynska@oulu.fi) & Jelena Salmi*

Techno-optimism is central to the emerging imaginaries of anthropogenic environmental improvement through soil regeneration. Within these imaginaries, soil biodiversity is increasingly presented as an untapped "nature-based solution" to complex Anthropocene challenges including food security, land degradation, human health, and climate change. For governance actors, the lack of "sound science" on soil biodiversity is perceived to posit a challenge for effective action; thus, how to know and how to govern soil biodiversity are inter-linked challenges at both EU and national levels.



This paper interrogates the emerging dynamics of soil biodiversity knowledge production within governance in Finland. Informed by STS perspectives, we see knowledge-making and governance as co-produced (e.g., Jasanoff 2004): scientific knowledge is not a neutral mirror of reality but involves choices about what to measure and how in view of policy relevance (Turnhout et al 2014). Whose agendas dominate is, therefore, world-making in its consequences. In the light of this, we analyse the consequences of the growing focus on eDNA monitoring. We present stakeholder alliances and conflicts around eDNA to illuminate contrasting approaches to the role of techno-sciences in Finnish environmental management. In particular, we note how, in spite of resistances, the principles of cost-efficiency, harmonization, interoperability, and competitive prestige are shaping soil biodiversity knowledge production — and so the future of human-environment relations — in ways which privilege particular forms of techno-scientific soil knowledge in Finnish land management.

## **7. Home To Roost And Then What? Developing cognitive resilience in cities in times of Polycrisis**

*Nina Janasik (nina.janasik@helsinki.fi); Marko Ahvenainen; Annukka Lehikoinen; Tapio Reinekoski & Janne Hukkinen*

In her address from 1975, “Home to Roost” (1975), Hannah Arendt characterizes the notion of truth in the following way: “Conceptually, we may call truth what we cannot change; metaphorically, it is the ground on which we stand and the sky that stretches above us”. As noted by Robinson (2018), linked to the notion of “the Anthropocene”, this interpretation becomes vertiginous. In this paper, we argue that 1) the latter is the case even more in times of the epistemic complexity of “the polycrisis”; and that 2) something nevertheless has to be done to address this “vertigo” or these epistemologically abysmal circumstances. In the context of preparedness for climate crises in urban settings, this translates into finding truth-based modes of preparing for the unpredictable homecomings of the elements (water in the form of flooding; fire in the form of wildfires; wind in the form of storms, and earth in the form of mudslides).

Reporting on the results from in all eight participatory workshops on climate change preparedness arranged with experts and decision makers in three Finnish cities (Helsinki, Kotka and Tampere), we show, with reference to the element of water, that part of being able to prepare for long-term chronic crises is the capacity to adaptively reframe or “update” deeply rooted beliefs pertaining to water as simultaneously a resource and waste. More specifically, we show that for pragmatic purposes, it is not enough that city administrations show a general awareness of the need for coordinated long-term preparedness measures. In times of polycrisis, what is needed is an organizational infrastructure that both mimics and integrates, in the context of political forces, the aspects of water as simultaneously a necessity for continued life and an increasingly unpredictable destructive forcing.

## **8. Cities as political technologies in the Polycrisis**

*Lauri Lahikainen (lauri.lahikainen@tuni.fi)*

In this presentation I will discuss the role of cities in sustainability transitions through the lenses of philosophy of technology and democratic theory. Shane Epting (2023) has suggested that we can think of cities as technologies for promoting flourishing and justice. The city-as-a-technology frame can also be found in discussions about sustainability transitions. Some even see the city as an “urban fix,” our “last, best hope” for a post-fossil future (Kelbaugh 2020). In my presentation I will first suggest that many current ideas about cities as sustainability fixes, such as “the smart city” or “the resource wise city” have problematic depoliticizing effects. They frame cities as technologies for solving wicked problems as if these problems were not entangled with power and irreconcilable interests.

However, I will argue that attempts to escape technology as a frame would be counterproductive. Rather, I will suggest that cities could be reframed as specifically political technologies. They can be arenas of power struggles, but also vehicles for making collective decisions and changing the world. They are not the “the last, best” political technologies that we have but they may have untapped powers in our current predicament in the socioecological polycrisis. I will illustrate the idea of the city as a political technology by politicizing the concept of the carbon handprint. I argue that the carbon handprint should be reframed as another specifically political technology that can be produced within cities not just by innovation and design but through political contestation, contestation that remains uncertain and risky.

## **Session 3. Sustainability in Tourism – Meaning of Nature for Individuals, Businesses, and the Whole Society**

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### **1. Tourism-related conflicts in the Bigodi community, Uganda**

*Denis Dobrynin, University of Eastern Finland (denis.dobrynin@uef.fi); Jordan Byekwaso, Makerere University; Irmeli Mustalahti, University of Eastern Finland & Ahimbisibwe Karembe, Makerere University*

Tourism in protected areas generates income both at the local and national levels, but also, creates social and environmental conflicts. In Uganda, there are state-owned national parks and nature reserves established and managed by communities. One such nature reserve was established by the Bigodi community where tourism has been developing since the 1990s. Tourists travel to Bigodi’s forests and swamps to observe primates and birds and experience local culture and handicrafts. The

Bigodi nature reserve maintains biodiversity, and tourism contributes to community development and diversifies sources of livelihood for the community members, including women.

However, tourism is not always a win-win solution to reconcile conservation with nature use and income generation. Due to the reserve, the population of primates is growing, and they raid fields and destroy crops. A tourism cooperative pays compensation to their members, while other community members receive nothing; and even those who receive compensation may be dissatisfied. Moreover, the population of the Bigodi community is also growing, and people need more land and resources to survive.

We observed three layers of conflicts related to tourism in Bigodi: 1). community members vs. wildlife authority over the killing of wild animals by farmers and unsatisfactory compensation for the destroyed crops; 2). community members vs. environmental authority emanating from protected wetland encroachment; 3). between two competing tourism cooperatives over dominance, the use of the reserve and tourism business. The village council aims to resolve these conflicts and develop collaboration by convening and facilitating meetings between actors.

## **2. Digital tools in developing nature tourism: Transitioning from theory to practical involvement in the Heinävesi Marina and nature travel development project for 2022-2023**

*Virpi Pakarinen, väitöskirjatutkija, University of Eastern Finland (virpi.pakarinen@uef.fi)*

Luontomatkailu nähdään monissa maaseutukunnissa yhtenä mahdollisuutena elinvoiman lisäämiseen. Kehittämishankkeilla on pyritty luomaan uusia palveluja ja yhteistyöverkostoja maaseudun matkailutoimijoiden liiketoiminnan vahvistamiseksi ja maaseutuyritysten monialaisuuden tukemiseksi. (Pakarinen ym. 2020). Hankkeissa keskeiseen rooliin nostettu osallistaminen ei välttämättä kuitenkaan takaa mahdollisuutta aitoon osallistumiseen ja yhteistoimintaan eri toimijoiden välillä, vaan yhteisen arvonluonnin sijaan tuloksena voi olla ylhäältä alas ohjautuvia prosesseja, joissa yrittäjille ja yhdistystoimijoille tarjoutuu aidon vaikuttamisen sijaan mahdollisuus lähinnä mielipiteiden ilmaisuun. (esim. Meriluoto ym. 2019, Falco & Kleinhans 2019) Kuinka osallistaminen voisi muuttua aidoksi haluksi osallistua yhteisen ympäristön kestäväan kehittämiseen? Mikä rooli erilaisilla digitaalisilla alustoilla voisi olla osallistumismahdollisuuksien tukemisessa maaseutualueiden elinvoiman vahvistamiseksi?

Tapaustudkimus tarkastelee luontomatkailun kehittämistä Heinävedellä satamaympäristöön sijoittuvan investointi- ja kehittämishankkeen kehityksessä vuosina 2022-2023. Heinäveden kunnan hallinnoiman ja Pohjois-Karjalan ELY- keskuksen rahoittaman EAKR -hankkeen tavoitteena oli uudistaa satamaa ja palvelujen markkinointia tavoittamaan monenlaisia luonnossa viihtyviä matkailijoita. Hankkeessa oli sekä investointi- että kehittämisosio, ja yhtenä keskeisenä tavoitteena oli muodostaa yhteinen tahtotila pitkäjänteiseen luontomatkailun kehittämiseen. Hankkeen lähtötilanteessa asenne kuntaa ja hanketta kohtaan oli hyvin kriittinen. Alustavan miljöösunnitelman oli toteuttanut SWECO, suunnitelmaa pidettiin yleisesti varsin epäonnistuneena. Hankkeessa yritettiin saada yleisö mukaan suunnitelman muokkaamiseen

kokeilemalla tiedonvaihtoon perinteisten kyläiltojen ja avoimien yleisötilaisuuksien ohella erilaisia digitaalisia alustoja.

Tutkimusmateriaali koostuu vuorovaikutustilanteiden ja toteutettujen toimenpiteiden raporteista, kyselytuloksista, havainnoinnista sekä avainhenkilöiden teemahaastatteluista. Raporttien ja kyselytulosten, sekä osallistumisen aktiivisuuden perusteella voidaan jo tässä vaiheessa sanoa, että kokeillut ratkaisut olivat varsin onnistuneita. Kyselyt on koettu kiinnostavina ja niitä toivotaan lisää. Monikanavaisella vuorovaikutuksella on tavoitettu hyvin erityyppisiä ihmisiä ja luottamus hankkeen toteuttanutta kuntaorganisaatiota kohtaan on kasvanut. Hankkeesta on saatu runsaasti positiivista palautetta.

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### **3. On 'wilderness' and a modern forest economy: sustainability meets social reproduction in Finnish nature tourism**

*Eeva Berglund, Adjunct Professor (Environmental Policy) Aalto University, Department of Design (eeva.berglund@aalto.fi) & Roger Norum, University of Oulu*

Sustainable local economies in rural areas may be at odds with tourism promotion, with local interests at times clashing both with tourism aims and with other understandings of sustainability. This paper argues that it is possible to identify potential grounds for compromise and even strong sustainability in tourism in remote areas, namely by attending to context, taking seriously generalised critiques of the modern economy, and through nuanced analysis of the disagreements that unfold. Though long promoted, tourism in Kainuu remains small-scale and geared towards the notion of Northern Finland as wilderness. However, ideas of wilderness and concepts of sustainability are understood differently among actors. The paper, which is based on ethnographic fieldwork in the region, highlights the tensions that arise when wildlife watching is prioritized for economic reasons at the same time as forestry continues to dramatically alter landscapes. Assumptions about tourist preferences are often rooted in global or metropolitan notions of nature. These can differ from hosts' understandings, which are based in historical economic dependency on forests, even if recreation, well-being benefits and hopes for sustainable futures are shared by all. While Kainuu's landscape is not wilderness (as traditionally defined), even when understood as a socio-technical environment and part of local social reproduction, most actors value it highly. These considerations are critical as sustainable tourism development requires both the informed

participation of all relevant stakeholders and positive consensus building among participating communities.

#### **4. The Role of Reflective Nature Immersion in Online Place-Based Outdoor Experiential Learning: Lessons in Fostering Wellbeing, Human-Nature Connection, and Appreciation of the Amenity Value of Nature**

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The transition to remote online learning during the COVID-19 pandemic adversely impacted student well-being, resulting in burn out, 'ZOOM fatigue' and stress, negatively impacting academic performance (Iglesias-Pradas, et al, 2021). Tourism students lost opportunities for experiential, outdoor, and place-based learning, leading to concerns about achieving programmatic and course-based intended learning outcomes related to sustainability, pro-environmental beliefs, and understanding / appreciating of the amenity value of nature. To address this, students in an Outdoor Recreation, Tourism, and the Natural Environment course offered at a University in Canada engaged in a 12-week online nature journaling seminar and wrote a scaffolded reflective assignment facilitated through PebblePad e-Portfolios. Cultivating a growth mindset and transferable skills were encouraged while students explored their connections to place and nature (Dietz et al., 2005; Hornsey et al., 2016), integrated theory into practice, and reflected on immersion in the more-than-human world (Tsevreni, 2021). Qualitative content analysis of assignments revealed ways that students experienced and connected with nature and place, and their changing relationship with nature, place, and outdoor recreation / tourism. Through sensory nature experiences, and the artistic stimulation it provided, nature journaling cultivated a sense of wonder and curiosity, inspired outdoor learning / outdoor recreation, alleviated peer alienation and stress, and fostered place connection and nature appreciation (Arnold, 2012; King & LacRocco, 2006; Suloff, 2021). Results revealed the importance of providing tourism students with opportunities to engage in environmental education, including experiential, outdoor, and place-based learning, while demonstrating effective ways of instilling pro-environmental beliefs, place-attachment, and nature connection in future tourism professionals.

Keywords: Meaning of Nature for Individuals, Wellbeing, Artistic Stimulation, Growth Mindset, Human-Nature Connection

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## **Session 4. Deep leverage points and layers to understand and generate sustainability transformations: examining root causes of unsustainable systems**

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### **1. The paradigm of well-being and deep leverage points**

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The understanding of well-being is at the heart of sustainability transitions and transformations. Sustainability transition studies have addressed well-being especially within just transition research where the aim to realize just transition has multiple links to the equal well-being opportunities of people. So far, however, the focus has mainly been on the impacts of certain transition-actions on well-being, not the other way around. Ecosocial policy and welfare state research has shown that the ways of how we understand, conceptualize, and operationalize well-being is critical to successful sustainability transformations.

In this work, I consider the different ways in which the paradigm of *well-being* may have an influence on public policies as well as desirable, possible, and undesirable transition trajectories in societies generally and even more so in societies that have committed to the idea of a welfare state. I look at ecosocial policy and welfare state research and planetary well-being discourse (amongst other discussions) with the leverage points framework and explore the linkages between well-being ideas and sustainability transformations. The implicit critical question is whether the current normalized

way of understanding human well-being, rooted in individualism and anthropocentrism, is one of the root causes of unsustainabilities in social-ecological systems.

## **2. Who intervenes for transformation? Worker agency as a deep leverage point**

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In the times of polycrisis, work is gaining meagre attention as a site of ecosocial linkages, responses, and reconstruction. Despite pioneering efforts by some scholars and organisations, the everyday work of human and more-than-human actors is understood mainly as wage labour and taken for granted in many proposals focusing on sustainability transformation. To find deep levers, I treat work as a site of transformation and elaborate the concept of worker agency (Taipale & Houtbeckers, 2017). Worker agency, including labour and employee agency, epitomises the manoeuvring space of workers as part of global production and destruction networks. How could worker agency act as a deep leverage point?

Because degrowth and postgrowth literature host discussions beyond the status quo, I have explored their proposals on work. In this presentation I analyse the intersection of degrowth / postgrowth and work and ask, "who is doing (or is proposed to do) the intervening for transformation" (Doringer et al. 2020). Moreover, I present empirical examples from the standpoint of workers from two research projects, namely "Postgrowth work and livelihoods" and "Postfossil working life". Together they include 38 interviews with professionals in private, public, and the third sector.

Based on ongoing analysis, scarce focus on work as a site of transformation is partly explained by the reluctance to identify deep levers in related discussions, partly also in the degrowth and postgrowth literature. This presentation suggests pathways for identifying deep levers in the intersection of work and sustainability transformation and, thus, aims to aid the multidisciplinary field to focus on ecosocial linkages, responses, and reconstruction.

Keywords: worker agency, sustainability transformation, postgrowth, degrowth, standpoint, deep leverage points

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### **3. Paradigms and deep leverage points in the Finnish food system**

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A systemic perspective is needed to accelerate a sustainability transformation in the food system (Kaljonen et al. 2021). The much-needed transition to a more sustainable food system requires changes in food production, processing, distribution and consumption. Yet system perspectives often remain captive to underlying paradigmatic assumptions, specifically related to modernist and capitalist paradigms (West et al. 2021: 305). Intensive livestock production has been identified as a source for many ecological and ethical issues for a wide variety of multispecies actors. Current policies and solutions for sustainability transition in this sector similarly showcase the difficulties in thinking beyond the existing paradigm of green growth and sustainable intensification. In practice, the sustainable niche for livestock animals should be completely rethought in the food systems.

The concept of leverage points has been used to understand system transformation and the difficulties in achieving it (Meadows 1999, Abson et al. 2017). Crucially, leverage points allow for entertaining the radical idea that system paradigms can be transcended and transformed. This is desperately needed for food system transformation, where solutions to sustainability challenges often focus on promoting incremental changes to the existing system. To tease out the existing paradigms of the Finnish food system as well as the leverage points for changing them, we have analysed agricultural and food policy documents, reviewed literature and interviewed key food system actors and held two stakeholder workshops.

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#### **4. 'And then they will have nature protection as an occupation' - 'Good farming' as a paradigm hindering climate change mitigation with agricultural peatlands**

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The quote in the title was stated by a local government official after a lengthy contemplation about methods for farmers to reduce greenhouse gas (GHG) emissions from agricultural peatlands. It illustrates the tension between conforming to the expectations of being a 'good farmer' and adapting to environmental demands, suggesting that a too radical deviation from active farming towards peatland restoration is no longer considered a part of farming but rather nature conservation.

The concept of 'good farming' has evolved as a cultural explanation for the shortcomings of many agri-environmental programs. It has faced criticism for offering a narrow understanding of the diversity of farms and farming practices, predominantly scrutinized from the farmers' viewpoint, with limited attention to how society at large contributes to shaping ideals of the appropriate purposes and practices of farming. In this paper, we connect 'good farming' and leverage point thinking in sustainability transformations, employing this broader framework to gain a deeper understanding of the paradigms impeding sustainable farming.

Empirically, we analyse a set of qualitative interviews conducted in the context of a living lab in North Karelia, which, together with food system stakeholders seeks to co-create strategies for reducing GHG emissions from agricultural peatlands. The interviewees encompass farmers, local stakeholders, government officials, NGOs, and private companies. The presentation represents an ongoing study with the aim of stimulating discussion on the interplay between 'good farming' and leverage point thinking.

#### **5. Creating a chain of leverage – when what happens behind the scene matters: Interlinkages between leverage points for strengthening adaptive capacity to climate change**

*Linda Rosengren, Natural Resources Institute Finland (linda.rosengren@luke.fi)*

While systemic leverage points have been identified as a powerful approach for planning and assessing policies and interventions for sustainability transformations, few studies have explored how leverage points interact and how this affects the desired change. In this study, we explored how the interlinkages between leverage points enable or constrain adaptive capacity to climate change of food system actors.

We found 24 interlinkages when drawing on results from semi-structured interviews and a participatory visual art method used in focus groups in a case study in the Northern Region of Ghana. Nine interlinkages were identified as barriers to the adaptive capacity of the communities and actors of the local food system. For example, when studying the interlinkages between the place-specific leverage point of agricultural extension services and the generic leverage point of gender equality,

we found that women have less access to agricultural extension services compared with men. Fifteen interlinkages were presented as enabling adaptive capacity; for example, women's savings groups had many enabling interlinkages with gender equality such as creating unity and empowering the members.

We argue that interlinkages between a set of leverage points (1) play a pivotal role in enabling or hindering the leverage points, (2) may instigate a chain of leverage and (3) may affect the system including the related leverage points in a deep or shallow way.

## **6. Human–nature relations contributing to sustainability mindsets: insight from transdisciplinary empirical research**

*Kaisa Raatikainen, Finnish Environment Institute (kaisa.raatikainen@syke.fi)*

Supporting sustainability and navigating away from unsustainability require understanding how people relate to nature. Here I draw together findings of a transdisciplinary inquiry into human–nature relations. Approaches from environmental social sciences and arts-based research were combined in a mixed-methods design. A site-specific performance was created to a protected area together with qualitative research on audience members' and performers' experiences of nature. In parallel, a public online survey was used to collect data on shared nature conceptualizations and nature-related discourses in the Finnish context. These data were used to examine the general dimensions that underlie different human–nature relations.

Overall, nature was portrayed positively. Emergent ideas of nature ranged from natural scientific to philosophical; from dualistic to holistic; and from ecocentric to anthropocentric. Post-performance interviews revealed the importance of embodied experiences for individuals in building their nature relationship. Shared nature-related discourses focused on wellbeing, conservation, ecoanxiety, pro-environmentalism, outdoor activity, and enjoying nature. The different relations could be structured along dimensions of human–nature positionality, engagement and contact with nature, and conception and thought. Thus, a diversity of human–nature relations co-exists and co-evolves in Finland, with a common mindset of nature appreciation.

Given this background, I argue that the values shared by the Finnish society have significant potential in leveraging sustainable living. However, the realization of this potential is hindered by competing systemic goals, making it important to intervene at multiple deep leverage points in a coordinated manner.

## **7. Money as a deep lever: exploring paradigm changes in economics**

*Ossi I. Ollinaho, University of Helsinki (ossi.ollinaho@helsinki.fi)*

In this paper, I explore possible paradigm changes in economics and analyze sustainability transformations that such changes could leverage. I identify economics *qua* guardian of money management as one fundamental lever regarding just and sustainable transitions. The paper builds on post-Keynesian understanding of money (e.g., Prates 2020) and uses Schutzian social

phenomenology (e.g., Schutz and Luckmann 1973) to conceptualize economics as a province of special knowledge (Ollinaho 2023). Money has become the foremost organizer of life in late modernity; its flows determine what is being done and where. Even moderate changes in economics could drastically and broadly alter both production and consumption patterns.

The current dominant paradigm in economics, neoclassical economics makes sure that money remains scarce and that is directed to the most lucrative productive sectors, cementing the status quo and drastically unequal relations within as well as barring any radical transformations (Olk, Schneider, and Hickel 2023). If the lens with which money is understood changes, it could be seen – and used – as a public good that states could leverage when financing just and sustainable transitions (Olk et al. 2023). Going beyond state-level analysis, it is clear that distinct states have very different possibilities in leveraging their currencies (Prates 2020). For instance, the current economics paradigm prevents states in the global south from using their own currencies to fund national projects (Hudson 2016).

## **8. Fisheries management as an instrument for sustainability transformation**

*Timo Haapasalo, University of Eastern Finland (timo.haapasalo@uef.fi)*

Recreational fishing is a sport of challenges. Despite being endangered, wild salmonids are highly valued catch due to their size and unpredictable nature (Haapasalo 2023). This leads to an apparent sustainability challenge, where fishery regulations play a key role in protecting populations from overfishing, i.e., securing ecological sustainability. I approach recreational fisheries as socio-ecological systems that include natural and social elements (Ziegler et al. 2017). The key natural resource is highly endangered lake trout of Oulanka, which is an adfluvial, Finnish-Russian population. Finnish recreational fisheries management is mainly based on private ownership, where landowners also own fishing rights. Although fisheries management has transformed towards central governance and managerialism (Salmi 2013), local ownership is still a major component.

Surveys of recreational fishers (Haapasalo 2021) and fisheries shareholder associations (FSA) (Nikula et al. 2023) reveal differences in attitudes towards management needs. Despite decreasing trout population, FSA members do not see current situation needing as straightforward actions as most of the fishers do. In addition, fisheries regions struggle in providing consistent regulation guidelines to local management level. As opinions on sustainable regulation, trout population's condition and necessary actions differ, management system has eventually reached an impasse. Analysis highlights two root causes: systemic and ownership based. Therefore, possible solutions rely on enhancing institutional processes, but especially influencing social aspects of local management. This includes integrating wider array of stakeholders and information to decision making processes, and eventually introducing a new management paradigm to local management systems.

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## **9. Shifting power through participation in post-disaster recovery: A scoping review**

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According to the WMO, the number of natural hazard-triggered disasters has increased five-fold over the last fifty years. While improved preparedness has decreased deaths, economic losses and displacement have increased, especially in lower-income countries <sup>1,2</sup>. Under such challenging conditions and increasing damage and loss, it is clear that recovery interventions need to be investments that leverage the “window of opportunity for change towards sustainability” <sup>3</sup> to stop the continuing cycle of loss and damage.

Community participation is considered an integral part of Build Back Better (BBB) initiatives and an asset for ensuring equitable resilient outcomes of post-disaster recovery. However, BBB-related practices have failed to overcome the challenge of practices reinforcing inequities that require addressing issues of power, which is considered to be a root cause or underlying driver of disaster risk <sup>4,5</sup>. This scoping review examines the intersection of power and participation in post-disaster recovery.

This paper presents an overview of the existing power imbalances, participatory activities, and their associated outcomes <sup>6</sup>. Can participatory processes influence power dynamics in a transformative way? The study identifies five roles that participatory processes can play: raising critical consciousness, reflecting just power relations, developing a culture of change-making, changing relationships between actors, and providing a structure for change. This scoping review finds that the literature does not make use of power as an explicit analytical lens and insufficiently documents social processes related to participation. Bridging these gaps can generate a better understanding of the transformational potential of participation in recovery governance.

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### **10. Leverage points, leapfrogs, catalysts, triggers and what? Contours of transformative geographies in sustainable water governance**

*Jani Lukkarinen, Finnish Environment Institute (jani.lukkarinen@syke.fi)*

Climate crisis is a water crisis. All the environmental crises are trumped by biodiversity crisis. Water governance is in the centre of polycrisis, as many of the societal and economic sectors are dependent of availability (both quality and quantity) of water (de Haan et al., 2015). Issues of equity and justice are at the core of water use, as water is at the centre of diverse everyday routines and needs (Perrault, 2014). Furthermore, the water use is dependent of good condition of the ecosystem, while it impacts the state of the said ecosystem. Therefore, the sustainability transitions in water governance are deeply rooted to specific economic and social geographies of water.

One avenue in sustainable water governance has been to identify ‘contextual fit’ for interventions to enable leapfrogging across the conceptualised stages of governance transitions (Brodnik et al., 2018). On the one hand, it refers to temporal fit of short-term (resource allocation), mid-term (legislative system) and long-term (cultural norms) timescales of societal change. On the other hand, spatial fit connects to spatial fit of resources, strengths and weaknesses. Thus, the transformation is understood to unfold by mobilising specific ‘catalysts’ to enable local action towards sustainability.

Based on lessons on water, I elaborate two questions in my presentation. First, how are the geographically embedded transition views connected to deeper societal transformations. And second, how can the leapfrogging conceptualisation of sustainable innovations and practices be connected to policy interventions in sustainability transition literature?

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### **11. How to leverage the Nature Restoration Law in Finland? Digging into the roots of the policy conflict.**

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The European Commission issued its proposal for the Nature Restoration Law (NRL) in June 2022. When accepted and implemented ambitiously, the new kind of legislation could provide transformative leverage for improving the state of nature in Europe. According to the proposal, Finland would be one of the most economically affected countries due to large proportion of peatlands suitable for restoration. Peatlands cover approximately 8,7 million hectares and 4,7 million hectares are drained to be used for forestry.

The proposal became heavily disputed in Finland. Unique in international comparison, NRL came close to overthrowing the government. The Finnish government decided to support the NRL proposal at first, with reservations. When the proposal was discussed in parliamentary committees, some of the political parties represented in the government aligned themselves with the opposition, against the government's own view. The opposition used the opportunity to call the government to account concerning the government's measures regarding European forest policy. After a heated debate the parliament voted for the Government's confidence.

Somewhat surprisingly, NRL became framed as a forest policy question, not primarily as peatland policy, although in Finland these overlap significantly. In the Finnish media, NRL was titled erroneously as Forest Restoration Law, fueling the debate. To understand the Finnish position on NRL it is necessary to draw from previous research on Finnish corporatist policy tradition and historical policy coalitions with their conflicted relationships to the new discourses on climate change, sustainability transition, and bioeconomy. The heated forest debate continues, and it seems NRL will be significantly watered down.

In this paper I aim to understand why NRL became framed as a forest issue in Finland and why it became so contested. I use diverse qualitative research materials, including media coverage and public documents. Methodologically, the aim is to combine Advocacy Coalition Framework – interesting especially because of its focus on policy beliefs – and Causal Layered Analysis to get to the roots of the debate and propose potential leverage points.

## **12. The transformation of the clothing sector towards sustainability in the context of SDG 12**

*Vivien Rehn, University of Eastern Finland, Law School, Finland*

Despite continuous efforts to realize the efforts summarized in the Sustainable Development Goals (SDGs) the clothing sector, among others, continues to experience a tremendous increase in consumption of goods and a resulting increase in waste, water consumption and chemical use. In light of thereof, this research investigates if SDG 12, focusing on responsible consumption and production, is able to assist with the transformation of the clothing sector towards sustainability.

For this purpose, I investigate the drivers behind unsustainable practices in the sector, where the clothing industry stands in terms of sector development and the challenges and opportunities of SDG 12. This is done by comparing Simon's (2021) Sustainable Sector Transformation Model with selected targets and indicators of SDG 12 and evaluating if a possible overlap can lead to a successful transformation process. Combining these factors leads to a deeper understanding of society's drivers fueling these unsustainable practices and how they are interconnected on a much deeper and profound level, compared to simple governance approaches, social or political reasons.

Major root causes of unsustainable action in this sector are not only limited to prevailing self-interest of actors and a general lack of organization, as well as the fact that SDG 12 pursues a top-down management approach, contributing to a lack in consumer awareness. Instead, on a more fundamental level, it becomes clear that the framing of this problem is essential to the discovery of solutions and responsible actors, as it questions the support and legitimization this issue receives.

### **Session 6. "All old is new again" – The alternative organisations as a phenomenon**

Minna Käyrä, University of Jyväskylä (minna.k.kayra@jyu.fi)

Maija Lähteenkorva, University of Jyväskylä

#### **1. Ecosocial Approach to Social Work Organizational Praxis: A Case Study of NGOs in Finland & Slovenia**

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When it comes to environmental and social justice work, the focus is often on the responsibility of individuals. What if instead we could understand the structure of an organization as the critical predictor of the type of environment being created for eco transition work? In this PhD research project, the investigator asks how are nonprofit organizations enabling ecosocial practice towards systemic change? Through this inquiry, a multi-national, multiple case study approach is used to understand the ways an ecosocial approach to social work can be implemented within the macro and micro levels of the organization.

Drawing on organizational theory by Mary Parker Follett and the ecosocial approach to social work, the cases in Ljubljana, Slovenia and Jyväskylä, Finland, reveal what these theories can look like in action. This project reveals guideposts for future organizations to consider that a practice towards environmental sustainability is not merely recycling and reusing, but also built into the format and

processes of the organization – such as through a nonhierarchical, flat structure, shared decision making, and the importance of transdisciplinary teams.

## **2. Operational space of urban gardening among Polycrisis**

*Krista Willman, PhD researcher, University of Tampere (krista.willman@tuni.fi)*

I'm interested in the conditions and prospects of growing food in cities. I use the term operational space describing these prospects. The term looks into the local circumstances of urban gardening by acknowledging both the physical and social boundaries defined by local authorities and the potential of citizen activism as part of urban public space. Cities as landowners and land use planning officials define spatial boundaries for gardening activity. Cities often have goodwill and favorable strategic intentions to enable gardening. However, food production is mainly connected to rural areas, and enhancing gardening is not named as a task of cities. In addition, gardening initiatives emerge on various levels of society (e.g. associations, individual citizens, project organisations), which makes the phenomenon difficult to define.

Beside the unclear role of the cities, gardening as bottom-up movement or alternative organisations is not well organized either. Weak connections between different gardening initiatives are typical. Thus, operational space of gardening varies among different cities and even within cities. In the era of polycrises, gardening policies get new meanings in terms of environmental and social well-being and contingency planning. Urban gardening connects to a vast variety of urban issues, such as food policy and food safety, quality of everyday environment as well as physical and mental well-being. Therefore, it is essential to find ways to make the operational space of gardening more flexible. This requires lower bureaucracy, more communication channels between the city and urban gardeners, and stronger networks of gardening initiatives.

## **3. Sowing Change-Examining the evolution of the B Corp Movement in Georgia (U.S.) and Finland**

*Maija Lähteenkorva, Doctoral researcher, Corporate Environmental Management, University of Jyväskylä (maija.e.lahteenkorva@ju.fi)*

In an era of poly-crisis, characterized by the simultaneous occurrence of multiple interconnected crises, social movements play a crucial and multifaceted role in addressing and navigating these complex challenges. Social movements can take various forms, from grassroots initiatives to large-scale global campaigns, and they often emerge in response to perceived environmental, social, or economic injustices. While social movements are widely studied from the individual level, there is not an extensive body of research on social movements at the organizational level, particularly how these movements emerge. Social movements at the organizational level refer to collective actions, advocacy, or initiatives undertaken by groups of organizations that share common goals and values to address specific social, political, or environmental issues.



The B Corp movement has gained momentum in recent years as a global movement that seeks to redefine the role of businesses in society by emphasizing environmental and social responsibility alongside financial performance and driving a more stakeholder-centric economic system that is inclusive, just, and regenerative. Implementing an ecosystem approach, the study will use a qualitative case study design to examine the factors and dynamics that led to the initial emergence of the B Corp community in Georgia, the U.S., and Finland. The expected results of the study will expand social movement theory towards the organizational level, offering valuable insights into the emergence and evolution of the B Corp movement, with potential implications for fostering similar initiatives in diverse geographic and social contexts.

## **Session 7. Conflicts and contestation in the Green Transition – where are the tensions and what should be done?**

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### **1. Policy trade-offs in urban transformations**

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Trade-offs, i.e. when a gain in one aspect creates a loss in another (Denton et al., 2014), have been studied in relation to urban sustainability (e.g. Deng et al., 2016) and more recently in relation to adaptation (Singh et al., 2020; Wiréhn et al., 2020) and disaster studies (Tuhkanen et al. 2018). In climate change adaptation, trade-offs show the negative relation of disbenefits between adaptation options, with SDGs, and to sectors and groups at risk (IPCC 2022, p.23; Singh et al. 2020). Negotiation of trade-offs by diverse actors along with the consideration of distributive justice is needed (IPCC 2022).

In situations of complexity where win-win and no-regrets solutions are limited, consideration of trade-offs helps evaluate additional alternatives (Haffar-Searcy 2017). Identifying trade-offs can help identify drivers and barriers for desired outcomes (Wiréhn et al 2020), and maximise benefits and minimise negative impacts pre-emptively (Singh et al. 2020).

This study brings novel understanding of urban adaptation related trade-offs and unravels the process of urban transformation from the perspective of societal impact. By applying the integrated adaptation feasibility framework (Singh et al. 2020; IPCC 2022) and the typology of substantive and procedural trade-offs (Wiréhn et al. 2020) this study applies a discourse analysis to examine serious game induced stakeholder discussions about planning smart green neighborhoods in two urban

districts, one in Finland and the other in Switzerland. We focus on the perceived implications of urban climate policy and urban development on social and climate resilience and ask 'what characterizes urban sustainability transformation related policy trade-off discourses?'

## **2. Friction points of early small modular reactor (SMR) projects: regulation and seed funding**

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There are different views on the sustainability of nuclear power, but in Finland the support for nuclear power is at a record high (Energiateollisuus 2022). The nuclear sector's latest promise, small modular nuclear reactors (SMRs), is also surprisingly well received, for example in the Helsinki metropolitan area, where they are planned to decarbonise district heating. Residents' attitudes may yet change, however, if SMR projects proceed to site selection. Surveys show that most respondents are averse to a SMR plant being built close to their home (Kojo et al., 2023a). However, in Finland, the debate on small nuclear power has thus far not generated opposition and critique, which would create conflicts and generate counter-narratives to SMRs, for example in the media (Kari et al., forthcoming).

However, small nuclear projects are not without their friction points. We ask: what are the bottlenecks in promoting small nuclear projects when specific technology concepts are still being developed and in the process of being embedded in societal institutions (see Kojo et al., 2023b)? We analyse the debates on the nuclear safety regulation, seed funding, and policy measures designed to promote the creation of a SMR ecosystem.

## **3. Resisting extractivism: Thari Indigenous people's struggles against the Belt and Road Initiative**

*Usman Ashraf, University of Helsinki (usman.ashraf@helsinki.fi)*

The Tharparkar desert is under immense socio-spatial pressure due to coal energy development in Pakistan under the massive Chinese Belt and Road Initiative (BRI). The desert has become a multifaceted assemblage of Pakistani and Chinese state and non-state actors, local and global capital flows, extractive logics across scales, and diverse forms of transformative resistance. The threat of socio-ecological destruction has given rise to diverse forms of resistance by Thari indigenous communities. The Thari indigenous people are resisting extractivist imperatives through multiple strategies, including sit-ins, 'long marches', blocking access to mines and roads, litigation, and social media activism. The politics of struggle, which spans into both structured and everyday forms of resistance, intersect with class interests between landed and business elite and landless agro-pastoralists.

The results of the study show that class interests along with religious and caste politics are of detrimental importance in the context of the struggle. The study contributes to improved

understanding of the intersectionality of class, religion, and caste in transformative resistance movements against extractivism in the global South.

#### **4. Incommensurabilities of new Arctic extractive projects in Finland's North**

*Maija Lassila, University of Helsinki (maiya.lassila@helsinki.fi)*

This paper focuses on the impacts of envisioned mining projects in Finland's North, the possibilities of local communities in responding to the increase of mining, and emerging resistance as nuanced and developing dynamically over time. Through the findings of my ethnographic PhD research in Sodankylä and Utsjoki, the paper discusses the global and the local historical dimension of the envisioned green transition. The green transition as it is now pushed forward through discourses of greater global good, where mining belongs to the clean technologies of progress, is tied to historical and present day inequalities and marginalization. Particularly reindeer herders view mining in relation to the losses of traditional territories which have already taken place through hydroenergy and industrial forestry. The green extractivist logic is also introducing new power formations in the form of offsetting "fixes", or asymmetrical environmental impact assessment negotiations, depoliticizing questions of responsibility or resistance.

As a response to the dominant framework, the studied communities mobilize and articulate ontologies of incommensurability, such as irreplaceable place based human and more-than-human relations, representing alternative Arctic life worlds of sustainability. These alternative sustainabilities should acquire a main role in future decision making that is informed by planetary boundaries and well-being of future generations. The paper also discusses the complexities of local dynamics, where reindeer herders with a non-indigenous status find it difficult to legitimate and get recognition for their territorial rights.

#### **5. Managing Local Mining Tensions with Collaboration: Community Benefit Agreements in Finland**

*Juha M. Kotilainen, University of Eastern Finland (juha.kotilainen1@uef.fi) & Lasse Peltonen, University of Eastern Finland (lasse.peltonen@uef.fi)*

The green transition promises a decrease in fossil-based energy extractives, but at the same time, the so-called transition minerals, such as lithium, nickel and copper are needed in significant quantities for the low-carbon transition technologies. While the transition may reduce tensions in one place, the new wave of mining activities is creating them elsewhere, where its impacts are literally felt on the ground. Simultaneously, the green transition is advancing at a time where local communities are no longer satisfied with a passive role in local resource governance and want to have stronger voice regarding how the transition and its local manifestations (e.g. extractives and energy projects) are developed and how their impacts should be divided.

Together these developments call for new governance approaches that recognize the emerging local interdependence and the role of the community as autonomous actors. One such instrument is Community Benefit Agreement (CBA), which is based on locally negotiating how the benefits of

mining are shared and how its negative impacts can be mitigated. CBA has not been tested in Finland, which societal context differs from previous experiences, requiring adjustments. Based on our findings from action research, in which the idea of Finnish CBA was developed together with local stakeholders in the municipality of Sodankylä, we discuss what benefits and challenges the instrument and similar approaches can hold for Finland. The results suggest that CBA could help structure company-community interactions and address challenges and opportunities that arise from the unique local social and environmental contexts, typically difficult for regulatory, non-local instruments.

## **6. The Green Transition, contested natural resources, and rural perspectives of justice in Finland**

*Johanna Leino, University of Eastern Finland (johanna.leino@uef.fi); Tuija Mononen, University of Eastern Finland; Jukka Sihvonon, University of Eastern Finland & Sonja Kivinen, University of Eastern Finland*

The Green Transition objectives translate into growing pressure over rural areas which hold most of the natural resources needed for the transition. At the same time, conflicts over the governance of these resources have been increasing, demonstrating the tensions between the Green Transition and justice goals. In recent years, increasing attention has been paid to the spatial dimension of just transitions (Garvey et al. 2022). Research on environmental justice and just transitions from the perspective of rural areas is, still scarce (e.g., Pellow 2016).

By proposing a framework that combines the rural perspective with the concepts of environmental justice and rural protests (Woods 2003), this paper places the focus on rural areas. We present the preliminary results of a study that is based on data collected in seven Finnish rural municipalities that have recently experienced conflicts related to the use of natural resources. Interviews (n=15) and a survey (590) were conducted in the municipalities in the winter of 2023. The results open the conversation about the spatial justice consequences and tensions of the Green Transition.

## **7. Legal and political arguments on aquatic ecosystem services – A case study on Kemi River basin, Finland**

*Eerika Albrecht, University of Eastern Finland and Finnish Environment Institute (eerika.albrecht@uef.fi); Roman Isaac, Leuphana University Lüneburg & Aleksi Räsänen, Natural Resources Institute Finland*

The co-production of ecosystem services (ES) is an intertwined social-ecological process in which natural and anthropogenic contributions together produce a specific ES. In this paper, we study the co-production of aquatic ES and analyse political and legal arguments in a long-standing dispute over hydropower construction in the Kemi River basin, Finland. Specifically, we investigate: (1) what kinds of representations of ES co-production can be identified from stakeholder argumentation and in legal ruling, and (2) how the argumentation for political and legal audiences differs.

Our data consists of 26 semi-structured interviews conducted in 2017 and again 2019 to 2020, 144 news articles, and administrative court resolutions. The results show that the arguments used by the stakeholders aim at maintaining the existing hydrological regime and expanding the use of natural resources, establishing river basin management that considers the multiple uses of river, including recreation, or protecting the last untouched stretches of the river and riparian ecosystems. Political structures and legal norms define what is considered a valid and effective argument for specific audiences and which values are handled in policy or legal processes. The ES co-production concept can assist stakeholders to recognize the diversity of arguments, also the ones related to biodiversity and sociocultural values. This can contribute to governance and management interactions by highlighting the interrelated nature within social-ecological systems.

### **8. Adding to acceptability of wind power - feasible or illusory?**

*Jakob Donner-Amnell, University of Eastern Finland (jakob-donner.amnell@uef.fi)*

Finnish wind power capacity has grown substantially in recent years. This indicates that wind power's acceptability is fairly high both nationally and locally (projects need to be approved by landowners and municipalities), even though most projects are subjected to criticism. Many industrial projects and green transition visions in Finland are based on continued growth of wind power. This has led to proposals for speeding up wind power permitting and development. However, it is far from evident that acceptability of wind power will stay at present levels, if its growth continues and permitting of it notably changes. More information on the factors influencing wind power acceptability is therefore needed.

This paper will present results from a recent study on the subject. The empirics consists of material from interviews and a web-based inquiry. The results show that different challenges for wind power acceptability exist, with notable variety between local settings. Perceptions of inequality between affected landowners and small benefits compared to negative impact on reindeer herding, nature tourism and local environment stand out, but there are also other issues. Some measures to increase wind power acceptability might help, but no quick fix seems to exist. Trying to meet the challenges only by single means, such as bigger compensations to landowners, while at the same time speeding up permitting in ways possibly side-stepping local criticism might even lead to decreased wind power acceptability and slower wind power development.

### **9. Building a Collaborative Platform between Wind Power and Reindeer Husbandry**

*Emma Luoma (emma@akordi.fi), Jonna Kangasoja & Sanna Hast*

The northern regions across the Fennoscandia are attractive for wind power development due to the sparse population and good wind conditions. In Finland, there is a clear strategic goal outlined by the government to increase the share of wind power considerably as a part of the green transition. However, in Northern Finland wind power sites overlap almost always with reindeer husbandry areas. This co-occurrence generates encounters, or rather, clashes, between these two activities. The main reasons for this are the lack of timely communication and sufficient

understanding of each other. This in turn results in mutual mistrust and incapacity to negotiate and seek an agreement.

Here we present our work of building a collaborative platform between wind power operators and reindeer herders in Finland with neutral assistance. We describe a collaborative process initiated in 2019, where wind power industry and reindeer herding have worked together to create guidelines for best practices for operating wind power plants in the reindeer management area and build mutual trust. Involvement of a neutral third party and careful design of a step-by-step process has enabled wind energy operators and reindeer herders to examine the social acceptance of wind power together and build a missing platform for communication and problem solving, while forming a basis for future collaboration.

#### **10. Actors' perceptions of environmental (in)justice – reindeer herding and forestry as overlapping rights-holders to the same land in Sápmi/Sweden**

*Kaisa Raitio, Swedish University of Agricultural Studies (SLU) (kaisa.rautio@slu.se) & Anna Hjelm, Swedish University of Agricultural Studies (SLU)*

One of the critical challenges in green transition concerns the perceived (in)justice of the proposed policies and projects. As in any conflicts, actors are unlikely to commit to solutions around contested green transitions projects unless both the processes and outcomes are perceived as just. Understanding what constitutes (in)justice to different actors - and why - thus becomes a central task for researchers and practitioners navigating the tensions around green transition. This paper combines environmental justice theory with Indigenous rights literature to examine how Sámi reindeer herding communities, industrial forest owners and Swedish state authorities perceive environmental (in)justice between timber production and Sámi reindeer herding. Half of Sweden's land area is traditional territory of the Sámi people, making the implementation of Indigenous peoples' rights a central part of just transition in Swedish forestry. Industrial forest owners and reindeer herding communities have overlapping, legally recognised property rights to same land. Due to Sweden's colonial legacy, however, reindeer herding rights are largely absent from the sectoral regulations on land use, paving way for multiple interpretations over both legality and justice. We used public statements and semi-structured interviews to analyse actors' perceptions on the three dimension of environmental justice: recognition, distribution and procedural justice. We looked at actors' assessment of today's situation and the arguments underlying them. The findings highlight the importance of understanding divergent perceptions of (in)justice; the presence of the past; and the role of structural injustices in perpetuating land use conflicts in forestry and beyond.

## **11. Epistemic governance of fragmented forests in spatial planning – addressing the tensions between sectors and actors**

*Aino Rekola, Finnish Environment Institute and University of Tampere (aino.rekola@syke.fi)  
& Riikka Paloniemi, Finnish Environment Institute*

Habitat loss and fragmentation, the main causes of biodiversity decline, especially in boreal forests, highlight the urgent need for integrative approaches like regional green infrastructure planning to address green transition. The demand for multi-sectoral policy (horizontal) integration in planning grows at the same time as the spatial planning prioritises democratic participation and reconciling multiple knowledges and rationalities (vertical integration). In the case of forests, challenges extend beyond the substance of environmental concerns, such as habitat connectivity, to include increasing conflicts. Yet, the governance of horizontal and vertical integration dynamics has received limited attention in planning research.

We examined integrating biodiversity conservation policy into spatial planning through a qualitative analysis of two decades of planning documents from Kymenlaakso Region, Finland. Drawing from Flyvbjerg's (2016) concept of tension points as catalysts for change and Alasuutari and Qadir's (2018) notion of epistemic work, we analyse the dynamics of horizontal and vertical integration and the epistemic governance of tensions among different sectors and actors. We ask how the tension points between forest and environmental coalitions unfolds and how planners address it through epistemic governance of forests and their connectivity. From our findings, we derive three main conclusions: 1) growing complexity intensifies the politicisation of forest connectivity, 2) incompatibility of ecological and commodity ontologies hinder reconciliation, and 3) sectoral divisions at the state level are reproduced locally in the absence of locally credible authorities. Addressing these issues in future planning could offer a lever for resolving tension points related to forest connectivity.

## **12. Postgrowth Finnish Bioeconomy**

*Ruben Vezzoni (ruben.vezzoni@helsinki.fi) & Sabaheta Ramcilovic-Suominen  
(sabaheta.ramcilovic-suominen@luke.fi)*

'Green transition' and 'just transition' have emerged as key international political discourses and agendas over the last years. Recognized as a key enabler and an end goal of the European Green Deal, by the European Union (EU), the bioeconomy strategies have a central role in shaping transition politics in the EU and beyond. In this study we explore the contradictions in the latest Finnish Bioeconomy Strategy, which aims to double the bioeconomy's value added by 2035, all the while taking "holistic sustainability" into consideration. We argue that the idea that the bioeconomy can experience a 6% growth rate per year without exacerbating ecological loss, both domestically and globally, is currently empirically impossible.

We build on post- and degrowth research to position the Finnish bioeconomy within the existing alternatives to the increasingly challenged ideas of green growth. We advance a critical social science perspective to frame planetary boundaries in relation to social practices, values and intentions, as well as in terms of human-nature relations. The study outlines the main flaws of the green growth

approach, followed by the main tenets of postgrowth bioeconomy. Then, it proposes three interrelated trajectories for moving beyond growth, including: (i) acknowledging and addressing the colonial-capitalist nexus as the root cause of the poly-crises, (ii) pluralising onto-epistemologies and addressing epistemic and other forms of neocolonial oppression and domination, (iii) rooting for Economic democracy. Finally, it concludes by outlining other that financial priorities for a postgrowth bioeconomy and the policy and regulatory recommendations that can help us get there.

### **13. Public forest discourses in Finland: Conflicts and collaborations**

*Venla Wallius, Jyväskylä University of School of Business and Economics and European Forest Institute (venla.j.wallius@jyu.fi) & Annukka Näyhä, Jyväskylä University School of Business and Economics*

Forests play are seen to play a key role in transitioning from our current fossil-based economy towards a more sustainable circular bioeconomy. However, different visions regarding the future of forests and their utilization can be conflicting. This leads to active, polarized, and sometimes heated public discussion especially in forested countries such as Finland, where forests are an integral part of the culture and society. Taking all different viewpoints into account is crucial in creating a fair green transition, however, reconciling them can sometimes be challenging.

The aim of the study is to explore the current forest-related media discourses in Finland. We analyzed forest-related news articles from two wide-spread newspapers (Maaseudun Tulevaisuus and Helsingin Sanomat) during 2019-2021, identifying key actors, their discourses and power relations in the discussion (Näyhä and Wallius 2023, in review). To complement the picture, we are in the process of interviewing in total 65 forest-based companies and stakeholder groups such as environmental organizations, policymakers, forest users and interest organizations, exploring their views on the forest-related discussion. The results of the study will show how various forest-related actors in Finland reflect upon the current public discussion regarding forests, how they see their own role in these discussions, and how the various viewpoints can be brought together to create collaboration instead of conflicts. Ultimately, this can aid forest-related policymaking and support solutions for a sustainability transition that is urgently needed.

### **14. Communicating agroforestry in the era of polycrisis: lessons learned from stakeholders in Finland**

*Tanja Kähkönen, European Forest Institute (tanja.kahkonen@efi.int) & Michael den Herder, European Forest Institute*

Agroforestry – land use systems combining woody perennials with agricultural crops and/or animals (FAO 2015) – has received increasing political attention as a climate-friendly land management practice in the era of climate change, biodiversity loss and degradation of ecosystem services. Yet environmental crises combined with economic crises, social crises and geopolitical crises call for new ways of producing food, managing land and generating income, agroforestry is little discussed in Finland.



In this presentation we will discuss public perceptions on agroforestry from a survey data consisting of Likert-type questions collected from 28 respondents that participated in EFI Bazaar, an event showcasing EFI's work for stakeholders in North Karelia, Finland in October 2023. Although surveys are typically analyzed quantitatively, we will do mainly a qualitative analysis due to a small number of respondents. Most of the respondents agree or strongly agree that increased use of agroforestry can mitigate climate change and that agroforestry is environmentally friendly. Also most of the respondents disagree or strongly disagree with food production from conventional agriculture being globally sustainable. At the same time, most of the respondents agree or strongly agree that politicians should support development of agroforestry in society and that they would prefer to use food produced in agroforestry instead of food produced in conventional agriculture. The results of this study can open new insights into discussing agroforestry – non-mainstream land use systems and technologies – in the context of conventional agriculture and forestry during the era of polycrisis.

### **15. “It should be much faster fashion”— tensions in the transition to a circular textile industry**

*Anna Härrä, LUT University (anna.harri@lut.fi) & Jarkko Levänen, LUT University*

A circular economy is advocated as an answer to multiple sustainability challenges and is considered a key aspect of the green transition in the EU. A shift to circular processes will nevertheless have several consequences on people and businesses around the world, and the transition is likely to create tensions and trade-offs. We used a just transition lens focusing on distributive, procedural and recognitive justice to uncover the tensions related to the circular transition. Our analysis is based on empirical data from textile stakeholders from Tamil Nadu, India.

We found several justness tensions related to economic, social, power, value, epistemic, and governance issues. For example, factory representatives in India expressed that recycling, instead of reusing or reducing consumption would be the desired circular practice as this would maintain jobs in the area – reflecting distributive justness. One factory representative even noted that “it should be faster fashion, but sustainable”. This is in stark contrast with the waste hierarchy promoted in the EU, with its focus on reducing and reusing.

For the just circular transition to succeed, these tensions should be acknowledged, ameliorated or dealt with. Without design for justness, the transition can reproduce or lead to novel injustices, especially in the Global South. We argue that research on circularity has been overly focused on the environmental dimension of sustainability and just transitions on the social, so, as a step forward, we present a framework for just circular transitions, that integrate the just transition with the triple-bottom line.

## **Session 8. Experience and Meaning in/of Environments**

Pasi Heikkurinen, University of Helsinki (pasi.heikkurinen@helsinki.fi)

Tuulikki Halla, University of Eastern Finland (tuulikki.halla@uef.fi)

## **1. Experiencing forests and urban green spaces through walk-and-talk interviews: towards holistic approach to restorative green environments**

*Miia Heikkilä, Aalto University (miia.heikkila@aalto.fi)*

I am suggesting a talk centered on my ongoing thesis research, which delves into the visible and invisible restorative affordances and benefits of restorative environmental experiences across distinct green environments – forests and urban green spaces. Site-specific walk-and-talk interviews, online interviews and observations serve as primary tools for collecting participant narratives of their restorative experiences within forests and urban green environments, in Finland and Japan. By deepening our understanding of restorative experiences, human-nature relationships in these environments, and the cultural nuances associated with them, the research seeks to find the synergy between restorative and regenerative environments.

The research draws the theoretical framework upon several fields and theories that can shed light on the restorative affordances of green environments, for example, phenomenology, environmental psychology, landscape architecture, and Japanese philosophy. The theories from affordance theory (Gibson, 1983) and phenomenology (Husserl, 1913; Merleau-Ponty, 1945), offer insights into the subjective nature of human experiences in different green environments. Key questions that guide the talk include: What constitutes restorative experiences in green environments? How can these experiences be encountered and studied? What design recommendations can emerge from the examination of restorative experience and meaning through non-anthropocentric perspectives? This research holds significance in advancing our understanding of the restorative potential of green spaces and how it can inform design and policy decisions, ultimately contributing to more meaningful human-environment relationships and the well-being of both.

## **2. Walking as performance of relationality with environment**

*Sonja Laukkanen, Helsinki University (sonja.laukkanen@helsinki.fi)*

In my presentation I will examine the practice of walking as a method for experiencing and interacting with our environment or rather landscape. In my research site Meili Snow Mountains, located in Northwestern Yunnan, China, it is the unique landscape of the three great rivers of Asia: Yangtze, Mekong and Salween running in deep parallel gorges that is protected as a part of The Three Parallel Rivers UNESCO World Natural Heritage site. Common understanding of landscape is a vista or a view but following Tim Ingold (2000) I understand it as deeply rooted knowledge of our environment based on everyday interaction with the material world as well as the beings inhabiting it. In Meili Snow Mountains these include not only plants and but also deities and spirit forces as the landscape is animate and sacred. The highest peak, Khawa Karpo, is one of the holiest mountains of Tibetan Buddhism and a pilgrimage destination. People inhabiting these landscapes need to maintain good relations with the chthonic beings which can be dangerous if disturbed or offended (Coggins & Zeren 2014). In a pilgrimage destination walking seems like a perfect method for examining the landscape.

If we understand walking phenomenologically as an engaged, embodied experience and attentive involvement with the world, it is similar to Tibetan conceptions of pilgrimage which is an enactment of relationality with place and the forces that dwell within it through seeing, “reading” and interpreting landscape, body positioning, consuming/tasting, collecting exchanging, vocalizing and listening (Huber 1999: 88). In an attempt to understand the **emic perspective**, I have walked and talked with other people, most importantly with the mother of my Tibetan host family to whom I refer as Ama (mother in Tibetan). Walking could be seen as performative gathering (Tilley 2012) creating a ‘perceptual space’ (Relph 1976) which is “richly differentiated into places, or centres of special personal significance (ibid.: 11). Connecting places by movement creates a landscape which has topology of connective properties and relationality (Rose and Wylie 2006: 475) making it “a product of practices, trajectories, interrelations” (Massey 2004: 5). When we walked, Ama told me meanings of places, stories and her memories teaching me how to be in her world.

### **3. “Where is the joy?” Terrains of care in Helsinki’s smart city**

*Sara Zaman, University of Helsinki (sara.zaman@helsinki.fi); Suvielise Nurmi, University of Helsinki & Christopher Raymond, University of Helsinki*

It is increasingly demanded that smart cities become sites of social meaning, ecological sustainability, and economic growth. Yet in this quest for a meaningful, growing smart city, little emphasis has been placed on embodied approaches for studying what people actually do to derive **meaning** from and make sense of their smart urban environment. In this presentation, we take a postcognitivist lens to the smart city to address a challenging question: how does embodied sensemaking contribute to the creation of a meaningful smart city? We use **an enactivist approach** to help uncover experiences of meaning in the smart city held by three creative communities of practice in Helsinki, Finland. We interviewed n=22 urban planners, artists, and community space organizers, assessing these groups’ differing and overlapping sensemaking processes. Utilizing 5E sensemaking processes (embodied, extended, enacted, emotive, and embedded) as a flexible analytical framework, we identify and interpret terrains of care in which these communities of practice act. In these careful terrains the smart city is extended to include maintenance, reclamation, negotiation, and cultivation of unexpected experiences within smart urban environments. This terrain allows us to consider how embodied ontologies could soften understandings of smart urban environments to more relational realities.

### **4. Meaning making of future urban environments and politics of visualization**

*Jenni Kuoppa, Tampere University & Aalto University (jenni.kuoppa@tuni.fi)*

Recent scholarship has emphasized the need for positive imaginations of alternative, sustainable urban futures. The urban environment is experienced and made meaningful not only in immediate encounters with physical environment (Ingold 2000), but also through stories and images of imagined places. Stories and images may be capable of opening pathways to a jointly desirable future, suggesting guidelines for action here and now, and inspiring actors in different arenas (Healey 2007; Mäntysalo et al. 2020). The meaningful future can become performative (Anderson 2010;

Hajer & Pelzer 2018). However, the difficulty of conceiving new possible urban worlds has also been identified, and the stories and images may become mere vehicles for design marketing (Groulx & Lewis 2019).

In this context, the use of visualisations – e.g. images, digital renderings and videos – in urban planning and political decision making (Raento, Leino, & Laine 2021) seems an intriguing topic. How do particular visions of urban environments become influential? What is the role of visualisations? In my presentation I will construct a conceptual framework for examining these questions in the empirical context of a large-scale urban planning project which aims to develop a science and technological park into a mixed-use urban environment.

The research connects to the interpretive approach to policy analysis (Häikiö & Leino 2014, 17; Yanow 1996). It also follows a shift from the representative and semiotic understanding of images towards the focus on the entanglements, interactions and practices within which they became meaningful (Lehmuskallio & Gómez Cruz 2016) as well as techniques of futuring (Oomen et al. 2022) and aesthetic labour (Böhme 2017) involved. I also turn to the Ingold's (2022) insights into the relation between imagination and the perception of the environment as meaning making, and ask how they should guide the work at hand.

## **5. Finding happiness in Finnish forest experiences**

*M.S. Syamili, University of Eastern Finland (syamil.manoj@uef.fi); T. Takala, University of Eastern Finland; A. Korrensalo, Natural Resources Institute Finland & E-S. Tuittila, University of Eastern Finland*

The human-forest relationship is an integral part of Finland's culture and identity. This intricate relationship which is influenced by individual experiences, cultural backgrounds, and social context, has a profound impact on human well-being. The scientific community has recently become interested in the role that forests and green areas play in human well-being, especially in the wake of the pandemic. In this study, we aim to understand the sociocultural values and experiences associated with forests in Finland and how they contribute to people's happiness. The theoretical framework of this research is rooted in the 'Theory of Biophilia' and the 'Attention Restoration Theory'.

Based on the nine biophilic values, a multilingual questionnaire survey was created. Descriptive statistical measures and multivariate techniques were used in the data analysis. Among the 900 responses, about 94% of the respondents reported that they would be unhappier without their relationship with forests. The observed human-forest relationship seemed to be both individualistic and spiritual in nature. More than 55% of respondents associated individual sensory experiences such as sight, sound, smell, and touch along with the spiritual experiences of the restorative environment such as peace, freedom and space with their happy forest. The reported happiness was found to be impacted by the dominionistic values connected to Finland's forests, such as the practices of clear-cutting and land-use change. The results highlight the substantial influence of forest experiences on people's sense of happiness.

## **6. Living with Flood and Migration: Experience of 'Left Behind Women' in the Kosi River Basin**

*Shubha Srishti, Tata Institute, University of Jyväskylä (Shubha.srishti@gmail.com)*

The discourse on flood and flood-water management primarily frames it as an environmental disaster, with a central focus on adaptation, vulnerability, and resilience frameworks. This approach is linear, as it views flood as an isolated, one-time event. It overlooks the ubiquity of floods in everyday narratives and the lived experience of people, especially in the context of flood-prone regions. In the flood-affected Kosi region spread between Bihar in India and Nepal, the combined effect of the flood (pre-dominantly conceptualized as a disaster) and repressive socio-economic and political structure puts undue pressure on men to migrate while wives and children are left behind. The paper takes the everyday life of 'left behind women' as a site of academic enquiry to understand their lived experience of out-migration and flooding in the specific context of the Kosi region. Gendered power difference creates situations where men and women experience events differently. Flood and migration are complex events with a limited enquiry into the gendered experience. Hence, women's lived experience becomes an epistemic source offering a comprehensive understanding of societal power dynamics. In the paper, everyday life has been conceptualized through events and relationships with self, society and state unfolding in different phases of the lives of left-behind women. The primary data collection for the study was carried out in 2019-2020 using in-depth interviews, focused group discussions, observations, and informal conversations as the main source of information.

The discourse on flood and flood-water management primarily focuses on adaptation, vulnerability, and resilience frameworks. This approach is linear, as it views flood as an isolated, one-time event. It often fails to consider the ubiquity of floods in everyday life and narratives, especially in the context of flood-prone regions. In the flood-affected Kosi region of spread between Bihar in India and Nepal, the combined effect of ecological disaster and repressive socio-economic and political structure puts undue pressure on men to migrate while wives and children are left behind. The study carried out in 2019-2020 aimed to understand the everyday life of 'Left Behind Women' in the context of out-migration and flooding in the specific context of Kosi region. Gendered power difference creates a situations where men and women experience events differently it be migration or flood. Hence women's lived experience becomes an epistemic source where their oppressed location within society gives a fuller insight of society's power dynamics as a whole. The everyday life was conceptualized where the focus was on how events and relationship with self, society and state unfold in lives of left behind women. In-depth interview, focused group discussion, observations, informal conversation were the main source of information.

## **7. The challenges of the existing land use binaries to the diversity of meanings that forest environments produce for forest owners in Finnish rural contexts**

*Emmi Salmivuori, University of Eastern Finland (emmi.salmivuori@uef.fi)*

Modern Western land use management is characterized by the human/culture binary separating human and nature from each other (Latour 1991; Lorimer 2015; McCumber 2018). This artificial binary fits poorly in Nordic contexts, where the connection between human and nature has been

close and inseparable, and where nature and people have influenced each other extensively throughout time. Still, Finnish forest management practices are dichotomous: “forestry land” is managed intensively for the needs of the forest industry, while the management of “nature reserves” aims to fade the visible signs of human presence and pursue “naturalness”. This forest binary is connected to the urban/rural binary that controls the management of regions: rural areas are primarily seen as an area of primary production of raw materials, or as visiting areas for people living in the centers. Such binaries ignore the diversity of rural areas and their inhabitants and the diversity of meanings they attach to forests.

In this paper, I examine what kind of meanings the forest environments have for forest owners in different rural contexts, and how they affect the choices about how the forests are finally used, and by whom. The paper is based on an interview study conducted in 2022, in which 27 forest owners and rural entrepreneurs who use forests were interviewed about the development of their forest-related business activities and income generation.

## **8. Does holistic and meaningful urban dialogue have potential to reshape the idea of a good forest?**

*Vesa Kemppainen, University of Eastern Finland (vesa.kemppainen@uef.fi)*

In a world struggling with the urgent need for ecological reconstruction, it is necessary to explore how we could change our way of thinking in the environment of urban forests. This study aims to explore the holistic social-ecological values and meanings of urban forests and the city's opportunities to strengthen the ecological awareness of citizens including forest owners. Urban-owned forests, encompassing both city forests and industrial forests, offer multifaceted benefits beyond their economic and social contributions. However, these benefits are often overshadowed by traditional views, as shown by the discursive analysis of forest owners (Takala et al. 2022).

This research endeavours to broaden the concept of a “good forest,” emphasizing the need for a deeper understanding about the ecological basis. Semi-structured theme interviews with urban experts will be deepened as a case study into the city of Joensuu. Observations connected with interviews, knowledge of current studies and city-based materials shape this research. In the definition of the human-forest relationship (Halla et al. 2023), the forest consists of experiences and the daily activities of individuals that blend with the image given by institutions (such as cities) and the cultures. On the other hand, it is possible (though requires input from all parties) that despite to the weight of history, the current pressures of the change and the attractive prospects and meanings of the future affect what is thought of the good forest. Preliminary findings reveal several gaps and paradoxes between knowledge and practise. Experience of local nature is not wanted close to homes in all its diversity and the social norms are difficult to change. Often the risks to biodiversity have been almost non-existent in comparison with economic or human threats, but there are also rising opposite perceptions. In general results support the claim, that the idea of a good forest is evolving but slowly and should be pushed towards strong sustainability. City’s every day practises have, if

designed constructively, potential to expand knowledge-based ecological dialogue, which can mean wide variety of experiences of different kind.

### **9. Resources as relations: on the ecological (dis)embeddedness of meaning**

*Janne Säynäjäkangas (jsaynajakangas@gmail.com)*

Drawing on diverse traditions of thought, such as ecological marxism and postmetaphysical ontology, this presentation argues that resources are relations. What makes something a resource are not the properties it might carry simply by virtue of being what it is. Resourceness is not in matter. Neither is the resourceness of the resource a semantic convention or a cognitive projection. It is not in meaning. Instead, that what makes something a resource lies halfway from matter to meaning; in the interaction between us, the meaning-making subjectivities, and the material beings that are employed as resources. A resource is an affordance, to use Gibson's (1979) neologism.

The resourceness of something consists of what it affords to the resource user. Instead of being produced socially or discovered as they are, resources come to be in processes that involve both creativity and receptiveness. These processes produce the "ecological embeddedness" (Whiteman and Cooper 2000) of communities in their environments. From this perspective, there is a paradox in modern forms of resource use. Modern resource use seems to sever, weaken and simplify, rather than to build, strengthen and multiply our connections with places and ecological systems. Of this, oil is a paradigmatic example. Its use involves what Vadén and Salminen call con-distancing: "creating connections in the mode of keeping apart" (Vadén and Salminen 2018). I argue that the modern resource relationship is characterized by the use of specific kinds of resources for the purpose of maximizing surpluses, with the result of ecological disembeddedness of meanings.

### **10. Experiencing natural environments: Non-economic Values and Indigenous perspectives**

*Corinna Casi, University of Helsinki and University of Lapland (corinna.casi@helsinki.fi)*

Values of nature (also known as environmental values) are still a central topic within environmental discourses, as well as an important tool to experience natural environments and, at time, to give them meaning. Yet its criticism lacks prominent perspectives which have not entered this area of research. This work is part of the introduction of my Doctoral dissertation and is a continuation of my previous research on environmental values starting from the philosophical field of environmental ethics (e.g. O'Neill, Holland and Light 2008; Norton 2017; Rolston III 2002).

To be precise, I focus on the non-economic type of values vis-à-vis the economic (or monetary) values of nature which reduce natural environments -and all parts of nature- to commodities to be sold and traded in the market. I understand the non-economic values of nature as a set of values, different than the economic one, such as the moral (Sagoff 1988; Norton 2005; Norton and Sanbeg 2021; Deplazes-Zemp 2023), aesthetic (Brady 2021, 2017; Lintott 2007; Saito 2010), ecological value (Carlson 2000, 1979; Brady 2003) as well as Indigenous perspectives on nature (Whyte 2018; Bhambra 2017; Kuokkanen 2019).

Utilizing the non-economic values, instead of the monetary one, a different type of experience and valuations of nature is possible, consequently different meanings connected to natural environments. Especially the introduction of Indigenous perspectives toward nature allows the inclusion of a knowledge system which is different than the Western one (McGregor 2004; Bhambra 2017). I started to investigate Indigenous views of nature based on their traditional ecologic knowledge (TEK). This is a situated knowledge which means connected to specific places and types of natural environments (Berkes, 1999/2012; McGregor 2009; LaDuke 1997).

The inclusion of Indigenous TEK is a fundamental step to start decolonizing environmental discourses (Quijano 2007, 2000; Mignolo 2007; Mendoza 2020; Maldonato-Torres 2016 and 2007; Escobar 2006), within environmental ethics. A decolonial approach to environmental discourses explores also other types of knowledge, such as the Indigenous TEK, which can bring alternative angles to the fora of experiencing, learning, giving meaning and understanding nature.

### **11. Experiencing the environment during a polycrisis – shifting priorities and the moderating role of political trust**

*Sami Ahonen, University of Turku (sami.ahonen@utu.fi); Aki Koivula, University of Turku & Jukka Sivonen, University of Turku*

Environmental policy is frequently perceived as a cost rather than a strategic move to counteract the negative side effects of the market. This perspective can diminish the backing for urgently needed environmental measures. Furthermore, the environmental meanings and attitudes are influenced by situational factors, rendering them susceptible to changes during short-term crises that stress the economy. These circumstances could impede the adoption of impactful environmental policies, leading policymakers to potentially address short-term crises in manners that establish harmful path-dependencies for environmental protection and climate change mitigation. Has this occurred during the last four years and which factors influenced the change or constancy of environmental attitudes?

In our article, we examine the longitudinal development of individuals' economy-over-environmental policy priorities during a period marked by several significant adverse societal events, resulting in a polycrisis. Furthermore, we explore the influence of political trust on policy priorities over time. We utilize a five-round panel dataset comprising 2,155 observations (N = 431) to examine both within and between individual variations from late 2017 to early 2023. Our findings reveal a significant increasing trend in the prioritization of economic policy over environmental policy following the onset of the COVID-19 pandemic. However, this impact is not observed among individuals who possess high levels of political trust. The within-individual analysis indicates that high political trust rather moderates than causes higher environmental prioritization. Our study highlights the significance of political trust as a deterrent to the deprioritization of environmental policy, particularly when societies confront significant and intersecting crises.



## **Session 9. Engaging with care and broken world thinking in polycrisis**

Taru Peltola, University of Eastern Finland, Finnish Environment Institute (taru.peltola@uef.fi)

### **1. Unfolding Sense of Water: conceptual framework to explore caring for water**

*Katriina Soini, Natural Resources Institute Finland; Juha Hiedanpää, Natural Resources Institute Finland; Riikka Latva-Somppi, Aalto University; Himansu Mishra, Natural Resources Institute Finland; Maarit Mäkelä, Aalto University; Taru Peltola, University of Eastern Finland and Finnish Environment Institute; Mia Pihlajamäki, Natural Resources Institute Finland (mia.pihlajamaki@luke.fi); Kati Pitkänen, Finnish Environment Institute; Matti Salo, Natural Resources Institute Finland & Kristina Svets, Natural Resources Institute Finland*

Despite the rapid expansion of scientific knowledge on water related environmental problems and the various policies designed to tackle them, many of these problems have persisted and, in some cases, have become crises. This underlines the limits of the techno-scientific and political solutions in use, and calls for novel ways to observe, understand and communicate on the socio-ecological challenges, and to mobilize legitimate actions. Diverse and inclusive ways of knowing and means of communicating, including new narratives and concepts, have been shown to be effective in fostering individual and collective care for the environment, thereby providing hope and meaning needed for action. Care for the environment emerges from a personal process based on a sense of place – a perception of belonging to and acting as part of one's own surroundings through individual and shared feelings and emotions. Through transdisciplinary research that engages stakeholders, who are affected by or are affecting hydrological changes, and integrates science and art, we develop the boundary concept of Sense of Water to explore how the personal translates into collective care for water. The paper provides insight on the roles of knowing, doing and feeling, and their interconnections to caring for water.

### **2. Green transition or cultural genocide? On the enactment of different realities of the Arctic Railway**

*Anna Ott, Finnish Environment Institute (anna.ott@syke.fi)*

This presentation focuses on the conflict that emerged in the Sámi homeland when in 2017, the Arctic Railway, i.e., the construction of a railway from Rovaniemi to Kirkenes, was promoted by Finnish national, regional, and municipal politics. Utilizing the concept of 'enactment' (Law, 2004) and based on data gathered during fieldwork in Lapland in 2019, it is shown how different conflicting parties created two contradictory realities of the Arctic Railway: The Arctic Railway as a necessary contribution to the green transition and the Arctic Railway as a threat to the environment and Sámi cultural survival.

Applying a political ontology lens (e.g., Blaser, 2009, 2013) and utilizing literature on settler colonialism (e.g., Coulthard, 2014; Wolfe, 2006), the two realities are analysed to establish 1) how the conflict over the Arctic Railway is also a conflict over onto-epistemological justice and 2) whether the construction of the Arctic Railway would promote just transition towards carbon-neutral Finland.

It is discussed how the fight by Sámi in Finland against the Arctic Railway is an attempt to maintain basic conditions necessary for the continuity of Sámi traditional livelihoods and knowledge and how it illustrates both political and material limits to Sámi's efforts to revitalizing their culture. The Arctic Railway is found to be a project that would dispossess Sámi's access to land, thereby deepening settler colonial relations oppressing Sámi as well as disrupting Sámi's relationship of care and reciprocity with reindeer and the land.

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### **3. Architecture as a regenerative practice of care – the need for a cultural and paradigmatic shift**

*Panu Savolainen, Aalto University (panu.savolainen@aalto.fi)*

My talk explores architecture in the framework of decomposition, repair and regenerative. Architecture and construction uses 50 % of all new raw materials unearthed for human technology, produces 40 % of waste and produces a significant loss of biodiversity through several harmful processes. It is self-evident, that regenerative design, circular economy and new green technologies are needed, but seldomly we address the cultural and paradigmatic aspects and worldviews around architecture when seeking answers to the polycrisis.

I will examine the possibility of a cultural shift in architecture, which contests the technologically oriented means for solving polycrisis, and instead contemplates the questions of tolerance, maintenance, care, and apostasy (sic) of newness, purity and cleanliness. I argue that more than the technological solutions and developing all the time more complex technologies upon failed ones, is secondary to the "soft" means of tuning attitudes, preferences and worldviews into a regenerative and humble direction in our understandings of decent and good architecture and built environments. Finally, I also suggest some easy, practical tricks in order to achieve this!

#### **4. Building repair as an act of care**

*Iida Kalakoski, University of Tampere (iida.kalakoski@tuni.fi) & Riina Sirén, University of Tampere (riina.m.siren@gmail.com)*

Maintenance and repair studies highlight the material vulnerability of our world. "Broken world thinking" implies acknowledging the importance of fixing and reconfiguration. Repair is evidently everywhere in the history of living, building, and architecture, from premodern practices to industrial craft. As we face the challenges posed by climate change, it should be increasingly clear that we need to find appropriate ways of upgrading existing buildings rather than constructing new ones. Building less is an obvious way to preserve and utilize precious resources.

Our paper examines building repair as an act of care that takes care of both, the building, and the repairer. It can be interpreted an act of engagement to buildings, building traditions, and building materials, but also as an attempt to safeguard material resources and deal with the spirit and the historicity of the place. In our view, repairing is a meaningful activity and an art of existence in the world. It brings benefits for both the object and the creator, arising not only reciprocally but also from the doing itself.

Different building materials and construction methods require different levels of care and expertise. Our paper illustrates these different levels by sharing notions of different arenas where building care and repair have been expressed, such as conservation camps, home decoration magazines, building preservation activism and experts' discourse on architectural conservation. Through the overviews we showcase that building repair is a multidisciplinary field that has unused potential to promote the pluralistically resilient future world.

### **Session 10. Policies and practices for sufficiency**

Tina Nyfors, University of Helsinki (tina.nyfors@helsinki.fi)

Senja Laakso, Tampere University

Kristoffer Wilén, University of Helsinki

#### **1. About fostering sufficiency in social work education and practice**

*Satu Ranta-Tyrkkö, University of Jyväskylä (satu.ranta-tyrkkö@ju.fi)*

As the sustainability transition underway requires major social and cultural, and not only technological change, social work, among other social scientific disciplines and practice fields, has potential to be(come) an important field in the cross-sectoral and transdisciplinary transition endeavour. Social work has, for example, specific knowledge about social vulnerability, inequality and social sustainability, and knowhow on promoting change in the lives of individuals and communities. However, for the time being this potential is far from realised, as internalisation of and commitment to the transition also requires renewal of social work as a field and discipline. Nevertheless, social work is already involved in numerous ecosocial practices, for example, when organising rehabilitative work opportunities, which often centre repair and recycling activities.

Overall, social work is process of remodifying its ideals of good life, which is likely to manifest as a turn to less materialist understanding of wellbeing. As part of organising and promoting locally meaningful practices of living, care, support, and recreation accessible, among others, to frail and marginalised people, social work can play a role in the creation of sustainable livelihood options. Further, social work can support the emotional process that the transition requires and finding meaning and satisfaction from materially simpler ways of life. All this puts new demands on social work education. My presentation summarises the challenges and opportunities ahead and how they are currently addressed. The presentation is based on the work done in the University of Jyväskylä ecosocial work research group and my own work on futures and materiality in social work.

## **2. Sufficiency overshadowed?**

*Kaisa Matschoss, Laura Salmivaara, et al. University of Helsinki  
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In order for the society to become sustainable, it needs to go through a radical change. As a step towards this goal, major reductions in the carbon footprint and an absolute reduction in consumption are needed. Reaching this goal without any policy guidance is hard to imagine. Sufficiency is a concept examining ways of living that are based on meeting a reasonable level consumption without excess. Energy use is a major cause of CO2 emissions but previous research has found that energy sufficiency policies have been overshadowed by policies related to energy efficiency and renewable energies (e.g. Cordroch et al. 2022; Zell-Ziegler et al. 2021).

This study examines the results of a deliberative process engaging Finnish researchers working in the area of consumption and/or sustainability organised in 2022 from the point of view of sufficiency. Researchers were asked to evaluate and propose policy measures in various sectors such as food, housing, mobility and other consumption to gain a 50 % reduction in consumption-based emissions. We examine a mix of policies focusing directly on housing and cross-sectoral measures having an impact on housing in terms of whether the proposed policies have a sufficiency dimension. Such policies are further scrutinised in terms of their acceptability, implementability and efficacy.

## **3. Sufficiency in sustainability transformations: how collective capacities operate in local governance?**

*Maija Faehnle, Finnish Environment Institute (maija.faehnle@syke.fi); Jani Lukkarinen, Finnish Environment Institute & Hanna Nieminen, Finnish Environment Institute*

Municipalities are recognized as an important context for transforming the society towards sustainability, with sufficiency strategies as a part of the local future making (Karhinen et al. 2021). However, when pinning sufficiency to the embedded contexts of municipalities, sufficiency becomes constantly redefined in terms of fairness in what is sufficient for good living as regards use of material resources. While addressing this, local officials face issues of sufficiency as players in collective action: what will suffice for making the transformations true together? What can be requested from whom? The local action in the transformations can be unpacked by analysing collective capacity, an

approach unpacking the cross-scalar action needed in transition governance (Hölscher, 2019). In each context, the local actor ecosystem shapes the future through four capacity dimensions: stewarding, unlocking, renewing and orchestrating capacity.

In this paper, we elaborate how issues of sufficiency are faced in local governance and how collective capacities make sense in addressing them. We arranged a series of group interviews in six Finnish municipalities with specialists from climate work, participation and built environment to gain different insights on how the collective capacities unfold contextually. We sought to trace down whether and how the municipalities have acted collectively with citizens, companies and other relevant actors in times of energy crises and potentially enabling new energy communities. We present the conceptual approach of our study, the main methodological steps and the main findings to enable discussions on sufficiency in municipalities and similar experiments in other geographical and substance contexts.

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#### **4. Frugal Innovations for a more resilient future: lessons learnt from an open innovation challenge targeting under-represented citizen groups**

*Hanna Saari, VTT Technical research Centre of Finland (hanna.saari@vtt.fi); Maria Åkerman, VTT Technical research Centre of Finland & Giovanna Sanchez Nieminen, VTT Technical research Centre of Finland*

Frugal innovation is a concept that refers to technological innovations focusing on the core-functionalities without excessive resource use for non-essential luxury features. Its origins are in the attempts to tailor affordable, accessible and fit-for-purpose products to serve the needs of the communities of Global South suffering from resource-scarcity (Hossain 2018). As the Global North societies seek new paradigm of consumption based on sufficiency, frugal innovations are becoming a potential framework for the shift also in resource affluent societies.

The bottom-up needs of communities usually characterize frugal innovations, which means that frugal products and services tend to be context specific, drawing also from the resources that are locally available. Therefore, they may be difficult to commercially scale-up. Thus, the ability of frugality to open up novel pathways towards sufficiency-oriented economies depends on our ability to learn from these initiatives.

This paper introduces the lessons learned from an open innovation challenge organized by an EU-funded Horizon2020 project FRANCIS1. The innovation challenge aimed at bridging the interests of industry and citizens, targeting various citizen groups that are usually under-represented in

innovation activities. The challenge departed from the needs and ideas of citizens to develop frugal products for industrial and commercial utilization through a co-creative process. Germany, India and Turkey were the primary target countries. This presentation will focus on the factors that enable and obstruct genuine exchange and learning for the citizen groups and industry representatives in the context of an online open innovation challenge.

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## **5. Acceptability of sufficiency consumption policies in Finnish households**

*Essi Nuorivaara, University of Helsinki (essi.nuorivaara@helsinki.fi)*

In our on-going research, we study the acceptability of sufficiency consumption policies among Finnish households. In the context of energy demand mitigation, sufficiency is defined as a complementary approach to shifting to renewable energy and improving energy efficiency, which aims at reducing the final energy consumption level in absolute terms (Burke 2020; Millward-Hopkins et al. 2020). The object of the study is to find out how Finnish households experience sufficiency as a guiding principle for sustainable consumption. The focus is on housing since it accounts for nearly a third (29 %) of the carbon footprint of an average Finn (Nissinen and Savolainen 2019).

Our research material consists of household interviews (n=39), which were conducted as part of the ENUSE – research project between 26th January and 16th March, 2023. Most of the interviewees (31) lived in Uusimaa region and the rest in Päijät-Häme (1), Central Finland (3) and Lapland (4). In addition to the place of residence, a variety of background information, such as the gross annual income of the household, was gathered about the interviewees before conducting the interviews.

In the analysis, we utilize the categorization of the acceptability profiles by Ahvenharju (2021) in which the interviewees are grouped into progressives, moderates and sceptics based on how they reacted to the suggested policy measures. The acceptability profiles are then compared with different background factors to see how they impact households' opinions and arguments for or against the suggested policy measures.

## **6. On the way to sufficiency: A circular economy as a springboard to degrowth**

*Heta Leinonen, Tampere University (heta.leinonen@tuni.fi) & Roni Lappalainen, Jyväskylä University*

Our current linear economic system is the root cause of our ecological and social challenges. Thus, transforming the economic system is key to building a sustainable society. A circular economy and degrowth are more sustainable alternatives to a linear economic system. The circular economy and

degrowth have many things in common—both approaches challenge the entrenched notions of the current economic system—but they also have differences. Unlike the circular economy, degrowth raises criticisms of continuous economic growth: economic growth is neither good for the environment nor socially necessary. The circular economy, on the other hand, offers a model of economic activity that already has a recognized place in social and economic decision-making and debate. This role is lacking in degrowth. Thus, the circular economy, which is generally considered feasible and widely accepted, can act both as a stepping stone towards degrowth and in parallel with degrowth.

The purpose of our paper is to challenge the seemingly unshakable hegemony of economic growth and to provide literature-based practical policy recommendations in the intersection of the circular economy and degrowth. We feed views on alternative, thoroughly social and ecological, ways of carrying out economic activity for those exercising social power, such as politicians, to accelerate the sustainability transformation of the economy at the national and municipal level. The text also provides opportunities for grassroots movements to challenge the current paradigm.

## **7. Already at minimum? Perceptions of energy use reduction and energy renovation in Finnish households**

*Jenny Rinkinen, LUT University (jenny.rinkinen@lut.fi); Kaisa Matschoss, University of Helsinki & Tuija Kajoskoski, University of Helsinki*

To combat the global problem of unsustainability, absolute reductions in energy use are needed particularly in the Global North. Public participation, as in the forms of citizen surveys, is seen to enhance trust in policy making and inform policy interventions towards more inclusive and just transition. It is also one means to increase understanding of the citizen perspectives and approaches to consumption reduction.

Using data from open-ended questions of an online citizen survey organised in Finland in 2021, this paper examines how citizens perceive possibilities and barriers of energy use reduction and energy renovations at their homes. The findings show that identified possibilities for reduction include technology-enabled change in energy efficiency, competencies to reduce energy demand, financial support and coordination, and continuation of current levels and patterns of consumption. The findings indicate various reasons to continue with current levels and patterns of consumption: some perceive that their consumption is already at minimum while others are not willing to compromise on comfort. Our analysis of the consumer perceptions has the dual role of illustrating the consumers' understandings of reduction, and of demonstrating how these understandings are shaped by both policy initiatives and individual-centred methods of public engagement.

## **Session 11. Decolonialization and moving towards environmental collaboration**

Irmeli Mustalahti, University of Eastern Finland (Irmeli.mustalahti@uef.fi)

Patience Mususa, The Nordic Africa Institute (patience.mususa@nai.uu.se)

### **1. A study on confrontation between the Sámi people's decolonising action and industrialisers' tactics**

*Tiina Jääskeläinen, Hanken School of Business & University of Eastern Finland  
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I discuss how industry organisations work to shape relations between ethnic groups by benefiting from and fostering tensions in the local communities. The study is located in the Vuohčču/Vuotso community and the Lappi reindeer herding cooperative in the southernmost part of the Sámi homeland, and, in the Northernmost part of the municipality of Soađegilli/Sodankylä, the majority of which lies outside of the Sámi homeland border. The community members are Samis and Finns and relatively united in how they relate to reindeer herding as the foundations of their way of life and future livelihood strategy. The Sámi Parliament of Finland, as the elected political body representing the Sámi in Finland, opposes growth in industrial scale activities in its homeland. The development policy of the municipality of Soađegilli/ Sodankylä, on the other hand, is built on further industrialisation. Vuohčču/Vuotso thereby marks the borderland of this contestation, where the decolonising activities of the Sámi people and the expansion of industry-based development strategy are in confrontation.

I pay particular attention to two issues: 1) (mis)recognition for the Samis' own priorities concerning the well-being of land, belongingness to nation and their livelihood strategies 2) Tactics through which industry-related organisations ignore the Samis' priorities and support counter-mobilisation against the Samis' decolonising action. The empirical material reveals that industry-related organisations and the municipality actively support counter-movements that mobilise discriminative discourses, mis- and disinformation about the Samis. This is done to get access to Sámi lands. An increased market pressure deepens tensions between the ethnic groups within these Northern communities, while preventing collaboration between the groups.

### **2. (De)colonizations in the Maya Forest? The Nexus of Science, Mayans and Conservation**

*Hanna Laako, University of Eastern Finland (hanna.1.laako@uef.fi)*

(...) decolonization may be something the land does on its own behalf. Tuck & McKenzie 2015

This paper has the objective of exploring the different dimensions of (de)colonizations in the case of the Maya Forest. The Maya Forest is a concept created by scientists and conservationist in the 1990s to conserve the humid tropical rainforest in the borderlands of Belize, Guatemala and Mexico. Today, the Maya Forest is a biodiversity hotspot composed of a multiscale conservation space with its protected areas, corridors, projects, actors and collaborations. Simultaneously, it is a transboundary region subject to territorial transformation that importantly taps into the "Maya": Riviera Maya, Maya Train, Maya Rivers, Maya Polis, and the Maya Forest have all appropriated from



these landscapes and terminology related to the Mayas. The Maya Forest is also a place for longue durée Indigenous struggles – and critical scholarship seeking to address it. Within the last-mentioned, calls for decolonization have been made and questions of settler/inner/science colonialism raised. Yet, what is decolonization and who can decolonize? This paper examines (de)colonizations in the case of the Maya Forest by shedding light to the nexus of science, Mayans and conservation. What can scientific and environmental collaboration achieve decolonially in the Maya Forest, and what are some of the pending dilemmas? Is capacity-building a friend or foe in the Maya Forest?

### **3. Decolonial environmental justice in landscape restoration**

*Sabaheta Ramcilovic-Suominen (sabaheta.ramcilovic-suominen@luke.fi); Susan Chomba; Anne M. Larson & Fergus Sinclair.*

This book chapter (Accepted and forthcoming in: Restoring forests and trees for sustainable development - Policies, practices, impacts and ways forward. Editors: Pia Katila, Carol J. Pierce Colfer, Wil de Jong, Glenn Galloway, Pablo Pacheco, Georg Winkel. Oxford University Press) presents ways of enhancing justice in international landscape restoration initiatives. We depart from the three-dimensional environmental justice framework to draw from decolonial and indigenous justice perspectives, placing particular attention to human nature binaries, epistemic justice, relational ontology, self-determination, and self-governance. We highlight the embeddedness of the current international landscape restoration efforts within the (neo)colonial and neoliberal natural protection efforts, risking similar injustices, violence and forms of oppression, including epistemic and political denial and oppression, ignorance and/or erasure of local people's histories, agency, their sense of belonging and ways of knowing, as well as weakening of their rights and access over their territories and livelihoods. Some of the major barriers to effective, just and equitable landscape restoration include: (i) prioritization of global over local knowledge systems, logics and politics in global landscape restoration; (ii) targeting of small-scale drivers of land degradation over large-scale and more profitable ones; (iii) offshoring burdens of global landscape restoration on the local people's shoulders; and (iv) reliance on state authority and institutional structures and bypassing of customary and indigenous authorities and legal systems. We conclude by proposing a set of questions and conditions for policy makers and scholars to contemplate and reflect upon when designing and analysing landscape restoration projects and activities.

### **4. Collaboration and capacity building as creating internal ruptures – the case of Wayuu community gardens and the Cerrejón coal mine in La Guajira Colombia**

*Liisa Varumo, Finnish Environmental Institute & University of Eastern Finland (liisa.varumo@syke.fi)*

The multinational Cerrejón coal mine in La Guajira, Colombia, is one of the largest open pit coal mines in the world. It expands over an area of 15 000 hectares, having thus displaced thousands of hectares of natural environments but also indigenous Wayuu communities that inhabited some of the areas currently mined. The intrusive presence of the mine has forced the Wayuu to find ways to

cohabit and collaborate with Cerrejón to secure the preservation of their society and culture. The opportunity for collaboration has occasionally ruptured communities as some are strictly opposed to interacting with Cerrejón, but also personal internal ruptures as individuals seek to justify collaboration to themselves after having seen their communities impacted negatively by the mine. In this presentation I analyse how Cerrejón has engaged with Wayuu communities through a foundation they created (Fundación Cerrejón) for social investment purposes in La Guajira. One of their activities included providing (technical) capacity building to create and run community gardens (plant nurseries) which provide Cerrejón with seedlings and help in restoration projects related to biodiversity offsetting requirements of Cerrejón's environmental permit. Cerrejón actively promotes these gardens in the media as illustrating the company's thriving relationship with local communities. The gardens also highlight the question of inclusion/exclusion as not all can participate due to limited needs. There is a clear imbalance in the interdependence in the partnership between the gardens and Cerrejón and the sustainability of these gardens in the future remains unclear and improving their autonomy seems challenging.

#### **5. Culture, Climate Change and Water Conservation: Water ecosystem and culture-based adaptation practices in Bangladesh**

*Shahid Mallick, University of Eastern Finland (smallick@uef.fi)*

This research focus on climate change, water conservation, and community development in Bangladesh. Bangladesh is one of the most climate-vulnerable country in the world, and water challenges especially in the coastal areas are severe and significant. The aim is to determine the socio-ecological effects of water-related climate change in coastal communities in Bangladesh, with a specific focus on the potential of traditional knowledge (TK) and local culture-based adaptation strategies to enhance resilience to water challenges in some of the poorest and most biodiverse region on the planet. Until now, most climate change water adaptations practices are based on grey infrastructure (e.g., dams, sea wall). Their functionality and effectiveness in storage, purification and supply of water are not at the intended level and create obstacles to the natural flow. TK-based solutions, on the other hand, are culturally appropriate, focus on biodiversity and ecosystems restoration and are easy to maintain as well as low cost. There is growing interest in nature-based and TK-based solutions at different scales. However, ecosystems are vulnerable to climate change and as TK is often based on historical knowledge of ecosystems, the question arises to what extent it can be helpful during radical change. Crucially the research asks how the potential of traditional knowledge can be harnessed to strengthen resilience. Using a mixed method approach grounded in ethnographic methodologies, the project will help to guide greater community-level adaptation and biodiversity and ecosystem conservation and also influence future policy and planning in this field.

#### **6. Forms of collaborative actions: Analysis of interactive methods, processes and their implication to support integrated landscape approach. Scoping review in progress**

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In times of polycrises there is a vast need for structural and practical changes in natural resources governance. Sectoral and temporally limited governance practises cannot cover constantly changing circumstances and different practices in landscapes. Responsive decision-making that promotes collaboration between actors from different sectors could foster a holistic approach to natural resource governance and thereby support sustainability transformation. However, there is a need to a deeper understanding of methods and processes that support collaboration in practice. To address this gap in research, we conduct a scoping review to identify and synthesize literature related to applied methods that foster collaboration in natural resource governance. We aim to learn from applied methods and practices and how they could support an integrated landscape approach (Reed, Deakin, and Sunderland, 2015). Integrated landscape approach could answer to the need for just transition and help to tackle new waves of ecological colonialization that can be caused by incautious resource extraction for green transition. The scoping review is a joint effort by a team of international scholars. The literature search identified 19 155 records, but through intensive literature screening the team identified 384 relevant articles. While this scoping review is an ongoing process, preliminary findings include that there is a wealth of different methods and tools available related to: knowledge co-creation, participatory mapping, participatory modelling and scenario development, participatory research, games and visualizations, creating common understanding, encouraging inclusive participation and creating consensus and agreements. However, we find that the majority of these tools fail to create long-term changes and build collaborative partnerships.