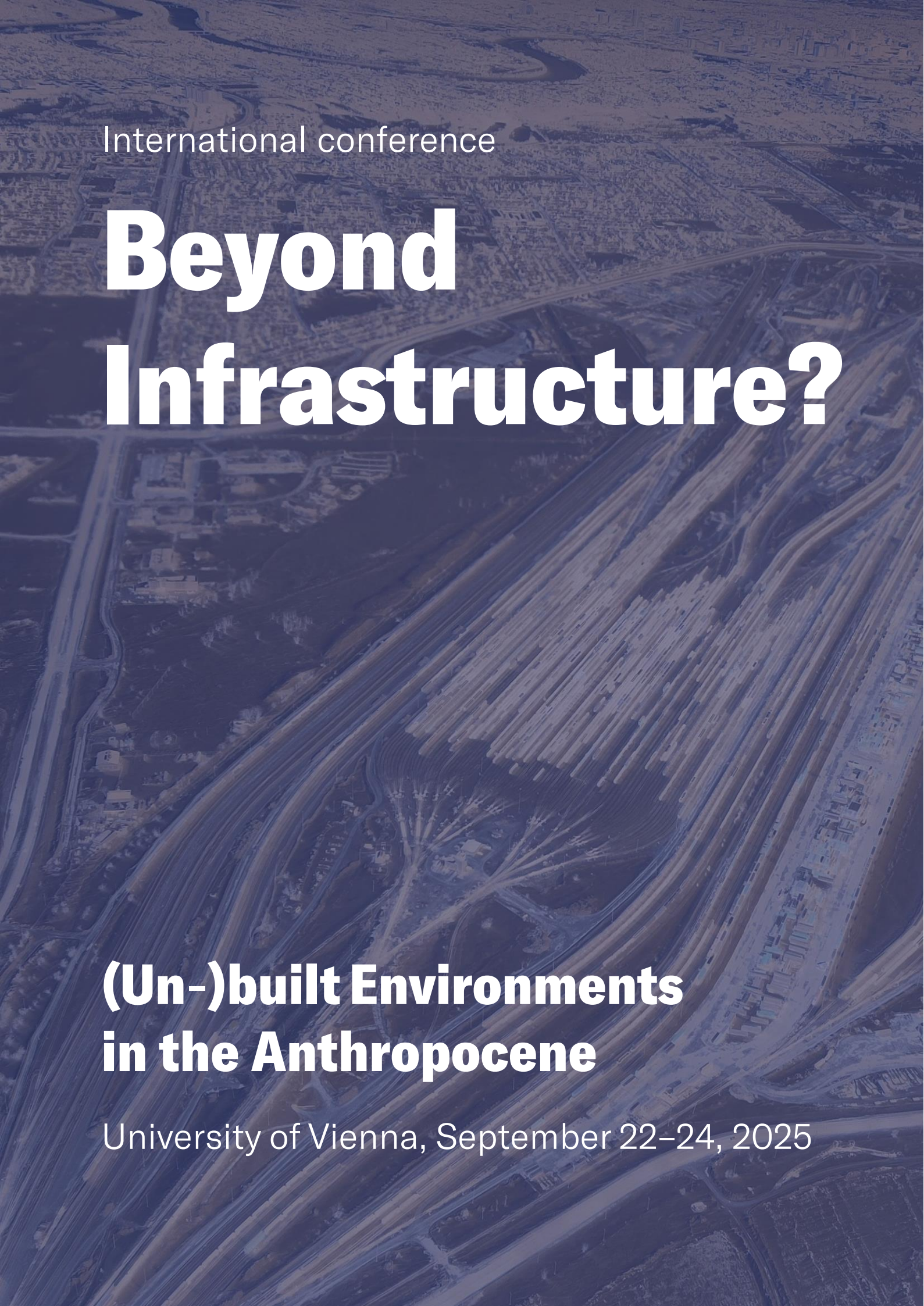

International conference

Beyond Infrastructure?

(Un-)built Environments in the Anthropocene

University of Vienna, September 22–24, 2025

September 22, 2025: Aula am Campus (Hof 1.11), University of Vienna Campus

September 23, 2025: Department of Social and Cultural Anthropology, University of Vienna

September 24, 2025: Department of Social and Cultural Anthropology, University of Vienna

KEYNOTE LECTURE **SEPTEMBER 22, 2025**

Aula am Campus (Hof 1, Room 11),
University of Vienna Campus.

Anthropocene landscapes?
Or, a renewed anthropology of infrastructure for the current times

A logging road, an abandoned plantation, an artisanal mine, an impromptu factory—these are the erratic features of a shifting landscape. Nearby, other plans unfurl: a new highway, a smart city, a Special Economic Zone. Surrounding it all: war, displacement, and environmental degradation. Those images conjure up an Anthropocene landscape, that is, a landscape steeped not just in development fantasies but punctuated by the relentless fluctuations of extractive booms and busts. Some might label it a frontier. Alessandro Rippa explores it as an extended infrastructure space.

In this keynote lecture, he argues that extended infrastructure space unveils our planetary crises in ways the notion of "frontier" cannot quite capture. It prompts a rethinking through the anthropology of infrastructure, multispecies studies, and scholarship that accounts for the geological in our everyday lives. This perspective steers us away from apocalyptic narratives bound to the Anthropocene, challenging the exceptionality ascribed to frontier spaces.

For those who inhabit these terrains—the disparate communities threading their lives through them—regard this space as ordinary, filled with aspirations, plans, and hopes.

By cultivating this renewed anthropology of infrastructure, Rippa invites us to contemplate both everyday space and (deep) time, as well as spatialities and temporalities that are not only human. This keynote lecture traces a journey across the China-Burma borderlands to examine Anthropocene landscapes as extended infrastructure space.

About the speaker

Alessandro Rippa is Associate Professor at the Department of Social Anthropology at the University of Oslo. His research concerns infrastructure, global circulations, and the environment. He is the PI of the ERC Starting Grant project *Amber Worlds: A Geological Anthropology for the Anthropocene* (2023-2028).

17:30	Doors open
18:00—19:30	Keynote by Alessandro Rippa
19:30—21:00	Reception

DAY 1

SEPTEMBER 23, 2025

Department of Social and Cultural Anthropology, Neues Institutsgebäude (NIG), 4th Floor, Universitätsstraße 7, 1010 Vienna.

09:00—10:40	Session 1.1: Mediating Spaces, Shifting Digital Lives	Session 1.2: More-than-Human Entanglements	Session 1.3: Geopolitics and Political Ecology
10:40—11:10	Coffee Break		
11:10—12:50	Session 2.1: Ways of Knowing, Worlds of Being: Epistemologies and Ontologies in Dialogue	Session 2.2: Infrastructuring Energy Transitions	Session 2.3: Scaling Infrastructures: From Emissions to Emotions (Part I)
12:50—14:20	Lunch Break		
14:20—16:00	Session 3.1: Adapting in Urban and Rural Environments	Session 3.2: Mining and Infrastructure or The Built Environment of Extractivism	Session 3.3: Politics of Dis-connection
16:00—16:30	Coffee Break		
16:30—18:10	Session 4.1: Cultural and Food Practices Across (Un-)built Landscapes	Session 4.2: Infrastructuring Climate Futures	Session 4.3: Affective and Sentient Infrastructure

DAY 2

SEPTEMBER 24, 2025

Department of Social and Cultural Anthropology, Neues Institutsgebäude (NIG), 4th Floor, Universitätsstraße 7, 1010 Vienna.

09:00–10:40	Session 5.1: Dwelling, Housing, and Place Abandonment	Session 5.2: Beyond Disposal: Governance, Labor, and Environment	Session 5.3: Practicing Mobility, Rethinking Power
10:40–11:10	Coffee Break		
11:10–12:50	Session 6.1: Form and Space of Infrastructure	Session 6.2: Tracing Hydrosocialities: Between Nature, Politics, and Technology	Session 6.3: Tracing Power, Adapting Loss
12:50–14:20	Lunch Break		
14:20–16:00	Session 7.1: Ruins and Infrastructural Life Cycles	Session 7.2: Scaling Infrastructures: From Emissions to Emotions (Part II)	Session 7.3: Building and Imagining Futures

Parallel Sessions #1

1.1. Mediating Spaces, Shifting Digital Lives

09:00–10:40 ROOM 1 (NIG) Chair: Mia Bennett

The slow death of state infrastructures: On the platformization of street-corner media

Rivka Ribak

The proposed presentation traces the transition of street-corner media – public payphone booths, mailboxes, and siren horns – from state infrastructures to privatized and personalized handheld mobile platforms. Drawing on Billig's (1995) concept of banal nationalism, I argue that street-corner (or, as J.D. Peters suggests, logistical) media served as banal reminders of the state, practically and poetically (Larkin, 2013) concretizing its presence even in its most remote territories and colonies. To consider some ramifications of this transition, the presentation will focus on the emergency notification app, which augments the siren horn and enhances the ability to alert specific citizens to imminent danger while preserving the resilience of the home front as a whole. Drawing on walkthroughs of emergency apps and an analysis of related materials, I suggest that this app not only manifests in but also enables three interrelated processes: the dissolution of the national collective into individually-alerted users; the blurring of the distinction between emergency and routine; and the delegation of preparedness responsibility from the state to individual users. I argue that these three processes – facilitated by the seemingly life-saving, deeply personalized emergency app – carry critical political consequences. By creating an illusion of personal safety, these processes, which materialize in the handheld emergency app, allow for a prolonged state of exception and the indefinite protraction of war and danger.

Seeing "Digital" in (Non?)Continuity with Offliner Life: Theoretical Perspectives For Locating Computer-Based Structures in Ethnographic Practice

Marco Sassaro

This contribution explores the "oddity" that "being added" to digital spaces represents as a phenomenon in ethnographic fieldwork, drawing from personal experiences with LGBT+ student organizations in Milan, Italy. Collaborating with these groups as a researcher often involved dealing with WhatsApp group chats, where the transition from "out" to "in" is

instantaneous and clearly defined by software. This seems to contrast with the otherwise nuanced relations between researcher and participants, as well as with traditional ethnographic accounts, where access to “the field” is gradual and boundaries are fluid. In a WhatsApp group, however, membership is binary, participants are neatly listed as such and access to the shared communicative space is the same for each member, regardless of their closeness to others. Borrowing concepts of non-graduality and non-continuity from Science and Technology Studies and Semiotics, this intervention makes a case for the “numerality” of bit-based structures as the reason for these differences between digital and analog fieldwork. Digital media inherently define clear boundaries and unambiguously grant or deny access. Understanding how to interpret the gap between neat, non-gradual digital spaces and murky, fluid analog spaces requires understanding the positionality of digital media in our field. In order to do so, this paper suggests extending the conception of “digital” to other instances of non-gradual, non-continuous spaces and structures traditionally understood by ethnographers: initiation, rites of passage or borders. Therefore, computer-mediated structures are to be considered in continuity with other “digital” structures, the relevance of their features always contextual to the field.

Can digital technologies help to overcome the limitations in spatial design of urban spaces?

Paulina Dobroć

Currently, governmental as well as non-governmental organizations point out that in order to achieve sustainability goals, social change must occur and, in that context, urban spaces are receiving increasing attention. Modern technologies such as digitalization are proposed as solution to existing problems. However, they should actually be seen as part of a solution rather than the solution itself.

To achieve societal change the values that underlie the culture must be re-examined. In my presentation, I will explore the question what relationship between humans and nature in the city can we derive from the spatial design of cities and ask if digital technologies can help to make this relationship more sustainable, using water management in the city as an example. The observation shows that social life in cities is highly fragmented, which is reflected in the spatial design of water management. This affects people in cities by enabling but also limiting their actions. The question is if through changes in spatial design, supplemented by new possibilities offered by digital technologies, the limitation caused by can be improved.

Using the vision assessment methodology (Lösch et al. 2023; Dobroć et al. 2023), I reflect on the current visions of the city and further on the shortcomings that can be identified in

the spatial design of water management in cities and how they can be overcome by reorganizing spaces and applying digital technologies. I also ask, how digital technologies are changing the practices and perceptions of city residents and what consequences it has.

1.2. More-than-Human Entanglements

09:00–10:40 ROOM 2 (NIG) Chair: Greca Meloni

Fishy borders and sense-making with salmon: politics of pink salmon removal at Njauddâm and Deatnu rivers

Sunna Kokkonen

For centuries, humans inhabiting Barents Sea riverbanks have depended on the abundance of Atlantic salmon for livelihoods, social and cultural significance, and kindship. No longer: native Atlantic salmon numbers are plummeting, and the numbers of a displaced species, pink salmon, are on the rise. People at the rivers – locals, researchers, tourist fishers – are coming to face the situation, attempting to understand it, and finding ways to continue living together in the changing more-than-human river community.

In 2021, pink salmon were declared an “invasive alien species” by Norwegian authorities, who commissioned and financed large scale efforts to remove the species from Norwegian waters. The fish are caught by, for instance, dams, fish ladders, and traditional salmon fishing methods. first glance, it may seem that the policies, methods, and infrastructure for pink salmon removal treat the fish as mindless machines, and that humans oversee the operation. In the paper, I argue that that politics of pink salmon removal – such as an interspecies border created by the operation – arise from the constant, iterative interaction and sense-making between humans, salmon, and other doers at the river. I will illuminate the coproductive nature of these interspecies political processes with ethnographic data and discourses from Njauddâm and Deatnu rivers, both located in Sámi lands on the Finnish–Norwegian border.

Forest-Water Coordination at Infrastructural Margins: The Making of “Wiener Wasser” as More-than-Human Infrastructural Work

Paul Katterl

In Vienna’s aquifer forests around the Höllental, renderings of built and unbuilt environments become blurred as water management is negotiated in unruly landscapes. In this paper, forestry practice is shown to be entangled in the making of “Wiener Wasser” at

the aquifer forests, conceptualizing forest-water coordination as the spatio-temporal coming together of materials, agencies, and actors. By positioning more-than-human environments as intersecting the material infrastructure at hand, I aim to complicate notions of built-unbuilt, infrastructure-environment, and human-nonhuman. The ethnographic fieldwork – played out through participant observation, photography, illustration, and an expert interview – that was conducted in and around the aquifer forests, provides the basis for these arguments. As foresters navigate these landscapes, they evoke a "living archive" of human and nonhuman interventions around the aquifer. Entangled within agencies of different intensity and reach, their practices are one of many interactions between, against, and along the various actors in the forest. I situate forestry practice as the fragile interface of water provision efforts by the City of Vienna in which co-living is regulated through techno-scientific and legal knowledge devices. Showing that forest worlds are drawn into the continuous management efforts of infrastructural projects, the paper contributes to understandings of infrastructural work as water is rendered imaginable, knowable, measurable and manageable by way of forestry practice. Yet, the forest-water assemblage at the aquifer forest goes beyond human control schemes, complicating the virtual lines defining where infrastructure begins, where it ends, and whose actions are entangled in it.

From Svalbard to Ellesmere Island: A Journey of a Fox in Solitude

Rojda Tuğrul

Like a saga, in March 2018, a young female arctic fox made an unprecedented journey by trekking from Svalbard, Norway to Ellesmere Island, Canada. Covering a distance of 3507 km over seventy- six days, this unconventional migration stands as one of the fastest irregular migrations ever recorded. This paper aims to unfold the rapid transformation that occur on a planetary level while delving into the cosmos of the arctic fox through her remarkable journey, exploring its implications for our understanding of animal behaviour, space, and time.

By examining the fox's journey, this paper aims to investigate the irregular migration patterns of animals, to understand the factors driving such migrations, and the implications for both scientific and artistic inquiry. In addition to the research paper, an animation speculates on the fox's journey, providing a visual representation of this extraordinary migration. Furthermore, the paper aims to explore the artistic and scientific significances in the cross-contextualisation of certain incidents. In other words, when considering certain incidents within different contexts or perspectives, how these incidents can be understood or interpreted from both artistic and scientific viewpoints, especially when they are examined in relation to each other or within multiple contexts. Through this exploration, I aim to shed light on the phenomenological experience of animals, including their perception of space

and time, and their ability to navigate unfamiliar territories. By examining the fox's bodily compass and clock, memory, and sensory perception, I hope to gain insights into the complex relationship between animals and their environment.

The journey of the arctic fox serves as a poignant reminder of the intelligence and resilience of non- human creatures. By studying their behaviour, we not only gain a deeper appreciation for the world we live in but also humble ourselves in the face of their remarkable abilities. This research highlights the importance of understanding more than humans and their implications for our own understanding of the world.

Linear Infrastructures and their More-than-Human Ripple Effects

Zachary Caple & Pierre du Plessis

This paper presents emerging research from the Infrastructural Cascades (IC) research group at Aarhus University. The notion of infrastructural cascade builds on the concept of trophic cascades in ecology. A trophic cascade occurs when a change in predator ecology catalyzes a series of effects through a food web. For example, an increase in predator numbers can cause herbivores to decline which results in reduced grazing pressure and an increase in plant growth. In an IC, the construction of a human-made infrastructure––a dam, a highway, a network of drainage ditches––initiates ripple effects within an ecosystem. Very often these effects lead to the degradation of historical ecologies and the proliferation of conditions associated with the Anthropocene. In this paper, we present two case studies of linear infrastructure. The first explores how seismic lines––linear clearings etched into the boreal forest for oil and gas exploration––have altered wolf-caribou interactions in the Canadian Tar Sands. Seismic lines function as "wolf highways," enabling the predator to more efficiently hunt prey, causing caribou populations to collapse. In Botswana, the construction of the Kuke fence––a 300-km veterinary fence––has cut migratory animals off from historical water supplies, leading to mass die-offs of wildebeest. In response to the die-offs, the state has developed artificial watering ponds in a large conservation zone south of the fence. The effect has been to create a new population of sedentary wildebeests that are trampling local vegetation and are targeted by large predators like lions and hyenas.

Geopolitics of (un)built environments: from infrastructural (de)territorialisation to the (de)territorialisation of infrastructure

Vesa Väätänen

The relation between infrastructure and geopolitics is often approached through the prism of territorialisation and deterritorialisation. In terms of territorialisation, infrastructure is

treated as a component through which political, economic and social control is established and exerted over a territorial space. The geopolitics of deterritorialization, in turn, become manifest in the growing importance of cross-border flows enabled by infrastructure projects. My key contention is that such an emphasis on what I call infrastructural (de)territorialisation misdirects our attention when it comes to the geopolitics of infrastructure in the Anthropocene. This is because the geopolitical character of infrastructure is expressed through a human-centric, and often state-centric emphasis on political struggles concerning, and power relations feeding into specific infrastructure projects. I argue that by recasting the notion of territory to include the socio-material relations of co- dependence on which infrastructures themselves rely, it becomes possible to foreground the (de)territorialisation of infrastructure and the inherently geopolitical character of this process from a more-than-human viewpoint. By drawing on assemblage thinking I outline an approach that envisions infrastructure as coextensive with its territory, which itself is an ever-becoming relational assemblage. Consequently, I suggest that geopolitics can be located in the process of (dis)assembling the territories of infrastructure, which underlines both the imaginative/affective and material aspects of built environments that are, were, or may (never) be. I will illustrate my argument through two Arctic infrastructure projects: the Canadian High Arctic Research Station, and the Arctic Ocean Railway project in Finland.

1.3. Geopolitics and Political Ecology

09:00–10:40 ROOM 3 (NIG) Chair: Alexandra Meyer

Facing geopolitical turmoil through planned or promised infrastructures: The case of Canada

Giuseppe Amatulli

The lure of development, intertwined with promises of creating endless growth, well-being and socio-economic opportunities, has been used in Canada, and in British Columbia in particular, to shape a specific narrative around resource exploitation while justifying the continued approval of development projects. Pipelines and LNG liquefaction facilities projects in BC have been approved and praised as infrastructures that can bring prosperity to locals while fostering the global green transition by shipping “clean” gas and resources to Asia.

The discourse around the necessity of such infrastructures has revamped since Donald Trump took office as the 47th president of the United Stated on January 20, 2025. The trade

war sparked by Trump's newly imposed tariffs have had the effect of bringing back the conversation about the necessity Canada has of specific infrastructures, e.g. coast-to-coast pipelines, national energy corridors, and LNG liquefy facilities. Such a new reality, combined with the ongoing U.S. threat to Canadian sovereignty provide industries and financial actors with a strong argument to foster the discourse around the need of new infrastructures, with Canadian politicians using such narrative to shape Canada's 2025 federal election campaign.

Combining all these elements, this contribution explores how infrastructures have been used to shape and strengthen the narrative around the perpetual need for further development while highlighting the impact infrastructure development has had on people's daily lives and their ability to envision the future.

Chipping away at the monolith: reframing the Valle di Lei cross-border dam

Stella De Luca & Isabella Traeger

The Valle di Lei dam, situated on the Italo-Swiss Alpine border, can appear as the embodiment of Anthropogenic might reshaping landscapes, rivers and borders to its will. The dam is the central element of a territorially scaled system of hydroelectric infrastructure managed by a Swiss-Italian consortium. The system was built at record speed: in just six years, five damns, three power plants, and an extensive network of cross-border roads, tunnels and channels were constructed. For national security reasons, the Swiss army levied a modification of the border demarcation, so that the Valle di Lei dam – initially located in Italy – would be within Swiss territory. This extensive commodification of the territory geared towards extractive use profoundly modified what was a prevalently pastoral landscape. It further created as a significant source of income for local communities, with ambivalent effects on demographic and economic marginalisation processes.

Based on a fieldwork and interviews with various experts and local stakeholders, the proposal adopts an Urban and Transboundary Political Ecology lens to propose a critical re-framing of the Valle di Lei dam. By conceptualising the dam as a boundary object, positioned at the intersection of multiple and transcalar interests, territorial uses, and governance structures, this contribution seeks to unravel and compare the asymmetric territorialisation processes it has spurred on both sides of the border. Furthermore, the proposal investigates how recent paradigmatic changes – ranging from the rise of increasingly structured grassroot and institutional counterclaims, to the wide-ranging shifts in hydroelectric metabolic systems driven by climate change – are redesigning power relations, creating novel spaces for negotiating.

Conjuring the effects of the unbuilt: the Pucallpa – Cruzeiro do Sul infrastructure project

Pilar Delpino Marimon

There are different types of unimplemented infrastructure projects (Carse & Kneas, 2019). There are those unbuilt projects that represent "paths not taken", those that are "nostalgic futures", and those that have gone through a series of cancellations and revivals, also known as "zombie projects" (Carse & Kneas, 2019, 22). This article is about a zombie project located in Western Amazonia, in the borderland region between Peru and Brazil. The Pucallpa – Cruzeiro do Sul link is an infrastructure project idea meant to connect the Peruvian city of Pucallpa and the Brazilian city of Cruzeiro do Sul. It was originally envisioned in the early 1900's, officially proposed in the 1960's, and since then cancelled and revived many times over until its most recent revival in 2021. This presentation is part of a broader research project that explores the effects that the recurrent invocation of the Pucallpa – Cruzeiro do Sul link has on how actors envision the borderlands between Peru and Brazil. While most of the research on this link has focused on the social, environmental, and economic impacts the infrastructure project might generate when realized (Glave et al., 2012; Hopkins et al., 2014; Koga et al., 2022; Mandle & et. al., 2013; D. Salisbury et al., 2013; Velez Zuazo & Romo, 2021; Vilela et al., 2020), this article stems from the idea that unbuilt infrastructures already have social and environmental effects (Graef et al., 2022; Haines, 2018; Peyton, 2017; Reeves, 2017). The objective of this paper is to explore some of these effects.

Polar frontiers, polar orbits: The vertiginous rise of Arctic commercial spaceports

Mia Bennett

A rush is underway to build spaceports across the Arctic and sub-Arctic. These infrastructures are intended to support the commercial satellite sector and launch satellites into polar orbits. Since Earth-observing satellites pass more over the polar regions than anywhere else, the Arctic bears a disproportionate burden of the construction of spaceports and ground stations, whose antennas downlink data from overpassing satellites. Seven spaceports are proposed in the UK, which aims to be the global leader in spaceports by 2030, one in northern Norway, and one in Sweden. Arctic spaceports are remote and being built on and near Indigenous and rural lands. This distinguishes them from traditional "portal infrastructures" like maritime ports and airports, which are built in urban hubs to connect people. Spaceports are instead being constructed to move machines and data. Governments and investors alike are promoting them as transformational infrastructures that will upskill economies and rocket countries into the New Space Age, which commercial actors dominate. Yet the little-used Pacific Spaceport Complex, which opened on Kodiak Island,

Alaska in 1998, offers sobering lessons in the realities of spaceport development and impacts on local communities. Current plans to expand operations – notably, without the construction of any additional accommodation – face local pushback due to frustration with launch-related road and beach closures, explosions, and pollution. In this talk, I will compare the off-Earth and digital mobilities that spaceports promise versus the terrestrial ones they uproot.

Parallel Sessions #2

2.1. Ways of Knowing, Worlds of Being: Epistemologies and Ontologies in Dialogue

11:10–12:50 ROOM 1 (NIG) Chair: Giuseppe Amatulli

Ice as an Epistemic Framework: Infrastructural Toxicity and the More-than-Human Turn

Annouchka Bayley, Delfina Fantini van Ditmar & Jennifer Schooling

Ice is not neutral; its frozen matter holds layered histories and meanings, which emerge as it melts and travels, reshaping our understanding of justice with infrastructures and the existence of others.

Taking the lens of ice itself as an epistemic framework, we unpack the more-than-human in relation to toxic infrastructures and what futures these foreclose. Ice and permafrost are melting in the Arctic Circle, causing issues with the major extractive colonial infrastructures built in the last 100 years in the region to extract and export mineral wealth, little benefiting indigenous communities.

Through materialized polyphony and critical fictioning, we will examine infrastructural failure as a way into this epistemic challenge. Taking as a starting point the phrase “Going South”, a term laden with colonial and linguistic violence—where “South” is metaphorically equated with failure, we explore ways in which the notion of failure in the practice of building environments laden with colonial and anthropocentric histories that produce/foreclose so many futures. How can an examination of failure in the practice of building environments laden with colonial and anthropocentric histories help us to reimagine infrastructure and the ways of knowing that build it? How can a respectful dialogue with indigenous ways of knowing change the way we imagine and design infrastructures of the future to work with nature while still meeting the needs of all? What needs to be unlearned and unbuilt? How can a material-discursive approach reveal how infrastructures produce meaning and how we might intervene to change this in service of building new futures for multiple lifeworlds?

Through considering the figure of ice and figuration processes, we will address how vital it is to rethink infrastructure, not just as a system of support but as an evolving entity intersecting with humans and the more-than-human world, shaping how we understand and intra-relate.

Cosmologies in More-than-Human Research: Bridging STS and Amerindian Perspectivism to Inquire the Natures (That) Cultures Give Rise To

João Fernandez Pereira

With the recent “infrastructural” and “animal” turns, social research has increasingly adopted more-than-human perspectives to inquire social phenomena. While this is a broad multidisciplinary field, the core methodological approaches in more-than-human research privileges material entry-points for inquiries, such as specific animals and built materials and their interactions with humans and between them. In this paper, I locate these approaches as deriving from Science and Technology Studies linked to the Ontological Turn to bring in insights from another set of ‘ontological’ literature developing primarily from Brazil and in direct dialogue with STS: Amerindian Perspectivism. Building from more-than-human fieldwork in Rio de Janeiro, I show how cosmological understandings also matter in the making of the city, specifically informing intentional action that shapes beings and materials, with a specific focus on security dogs – taken here as lively infrastructural devices. I then contextualize these more-than-human dynamics historically, showing how these security dogs – if not the city itself – are material realities that are not only enacted today, but which gradually developed from the actions of specific humans, informed by their understandings of nature and humanity. Showing how other material realities in the region developed from other cosmological understandings, often mapped in connection to Amerindian Perspectivism, I argue that more-than-human research can adopt not only “natural” or material entry points for analyses of natures-cultures to understand their enactments, but also start analyses from “cultural” entry-points, looking to observe which natures cultures give rise to. This may be especially relevant as we stride into the Anthropocene/Plantationocene.

Ontological infrastructures of extractivism: Supporting (un-)’sustainable’ commodities for Global Supply Chains

María Soledad Paz

In this article, we incorporate the idea of evolving and enduring (ontological) infrastructures of extractivism as the patterning mechanism that directs and sustains the flows, practices, and actions of people, land, and water toward global commodity networks based on agricultural extractivism, leading to the transformation, overexploitation, and destruction of two rivers, Petorca and Aconcagua in Central Chile. These infrastructures invisibilize and naturalize the ecological destruction of place in so far as they transform not just ways of being and relating to the land but the entire composition of the landscape, its (flow of) water, and human and multispecies life according to the needs of global markets and capitalist

accumulation. Based on the analysis of observations, interviews in the field, and documented material, the study identifies four (ontological) infrastructures (economic development policy, water regulation, coloniality, and imaginaries) that have enabled the emergence of large-scale avocado cultivation. Ontology is here understood as a way of being and relating to other than humans that makes worlds (realities, existence) come into being. Drawing from a rich body of literature on extractivism, water ontologies, and infrastructures, we problematize how each one of these infrastructures has transformed the ways of organizing life and relating to the land and water to deepen the debate on what is sustainable in the contemporary political economy.

Geoengineering in Iceland: Infrastructural Ontology and Moving Beyond the "Natural/Artificial" Divide

Cody Skahan

Environmental debates in Iceland have long put infrastructure at the heart of the debate, creating two opposing nationalistic views between seeing nature as a resource to exploit for modernization, and the other seeking to protect certain "natures" as symbols of national identity (Ögmundardóttir 2011). The former view has been named by Karl Benediktsson (2021) as Iceland's "Steamscape of Modernity" through which geoengineering technologies have become part of intensifying debates as possible solutions to environmental issues. Benediktsson (2021) also gives voice to a widespread criticism of how international climate logics have been prioritized over local nature conservation issues, and as a result of these criticisms, geoengineering projects have been relatively small-scale. However, the utilization of nature conservation discourse by locals in Iceland in opposition to larger geoengineering projects often creates an artificial divide between certain forms of human infrastructure and an anthropocentric view of ecosystems--a practice increasingly challenged by the literature on more-than-human infrastructure (Barua 2021; Howe 2019; Saxena et al. 2024; Tsing et al. 2019). For example, Barua's (2021) call for a "a wider infrastructural ontology" insists that infrastructures are inherently relational and that they often "become a medium of life as natural and infrastructural ecologies meld". Drawing on ethnographic research amongst the environmental activist scene and an analysis of recent developments of geoengineering projects in Iceland, I demonstrate the possibilities of applying Barua's infrastructural ontology to nature conservation and geoengineering projects in Iceland, pointing to a non-anthropocentric/non-nationalist "third way" within the intractable conflict between modernists and nature conservationists.

The Apocalyptic Blaze: Reckoning with Fire, Destruction, and Unsettled Futures

Cecilia Vasquez & Aaron Gregory

In this paper we wrestle with apocalyptic pasts, presents, and futures through the lens of fires produced by climate change. Climate change and the disruption of ecosystems is not a new advent, nor do we argue the industrial revolution as our starting point.

Climate change traces back to colonization and early suppressions of fire as integral to cultural knowledges and practices, a violence that impacts people, animals, and native ecosystems. It is for these reasons that we understand climate change and the specter of fire as being intertwined with white supremacy and apocalypse. We recognize apocalypse as relative, as Indigenous, Black, Latinx, and communities of color have long lived in apocalyptic "sacrificial zones". We simultaneously recognize this present as we are living in an undeniable apocalyptic moment as climate change, and more specifically the return of fires growing increasingly rampant in California. In this paper, we argue that "wild" fires are not just environmental catastrophes but manifestations of settler-colonialism, serving as tools to stratify populations, extract resources, and designate who is deemed disposable. White supremacy, a settler-colonial tool, further dictates whose losses are mourned, whose labor is exploited, and whose survival is rendered expendable—all under the guise of fire as a neutral and 'natural' disaster. Fire as a settler colonial violence transcends these internal and external colonial modes; it is a lens of mapping power.

2.2. Infrastructuring Energy Transitions

11:10–12:50 ROOM 2 (NIG) Chair: Peter Schweitzer

'Pending': Navigating renewable energy, futures, and 'not-yet-built' wind farms in the Faroe Islands

Róisín Kennelly

On the crest of a hill on a wind-swept island sits a tall, thin metal structure. Near invisible to the naked eye from afar but for a red light blinking periodically, this wind measurement mast has been standing here, in the outfields of Sandoy, Faroe Islands, for over a decade with little reverberation. Things changed recently, when long-debated plans for the construction of a 7-unit wind farm were finalised. Now, the mast is flanked by the shadows of the unconstructed, the promised infrastructures holding nearby communities in a temporal plane of 'not-yet'.

The village of Sandur now sits with bated breath: anticipating, hoping, dreading, dreaming, and imagining the arrival of these energy infrastructures. For some, this is a welcome addition, a 'step in the right direction' and a small part to play in the national renewable energy transition. For others, it is an invasion of rights, an intrusion on nature, and an unwelcome extension of power and control of central governance into rural lives.

This paper is part of anthropological PhD research into renewable energy transitions on the Faroe Islands and is based on a year of ethnographic fieldwork conducted in 2023-2024. It explores a 'not-yet-built' wind farm, navigating unconstructed environments and the futures, imaginaries, and realities that these encounter. It will discuss techno-dystopian and utopian futures, NIMBYism, responsibility, resistance, sacrifice, and the call of the 'greater good' as unbuilt renewable energy infrastructures inspire communities to pre-emptively reconstruct human-environment relations and to experience a landscape under transformation.

Between Development and the Green Transition: Towards Sustainable Arctic Infrastructure?

Olga Povoroznyuk

In the Arctic, the concepts of sustainability, the green transition and climate adaptation are challenged by a rapidly changing natural environment, expanding resource extraction and other development plans, colonial legacies and militarization. In this paper, I employ anthropological and social science inquiries into the built environment and infrastructure to explore the transformative potential and pitfalls of Arctic urban, transport, and energy infrastructure designed under the labels of the green transition, innovation and adaptation. To answer my research question – What kind of infrastructural development can contribute to equality, sustainability and prosperity of local communities? – I will draw on my anthropological research in Alaska and Northern Norway. I will compare the social roles and consequences of infrastructural developments and innovations and analyze sustainability discourses and tensions between extractivism and the green transition in these two regions. Based on ethnographic data (interviews, participant observation), insights from participatory scenario building workshops, and the analysis of media and policy documents, I will argue for a more critical and nuanced understanding of local social and cultural impacts of infrastructure designed for sustainability and energy transitions in the Arctic.

The ‘not yet’ of a post-Arctic peninsula

Janike Kampevold Larsen

The Varanger peninsula is the northeastern-most region on the Norwegian mainland, and parts of it have been within the Arctic climate zone until a few years ago.

Communities on the peninsula have historically been turned towards the sea, supported by hunting and a certain degree of smallholder farming. A 50-year decline in population due to failing fishing policies is the reason why the peninsula sees a very limited degree of on-land development and is still largely rural.

As the climate rapidly warms, however, the peninsula sees a sharp rise in tourism and a potential populations growth which may lead to head of heal decisions on area management. The entire region of Varanger as part of Finnmark county is also included in the Norwegian government’s expansive plans for wind energy development. More than 60 % of the peninsula has been subjected to forms of conservation, and historic grasslands and reindeer grazing pastures are subject to prolific overgrowth.

This paper reflects upon heritage futures in a region that has yet to see a large degree of change – by human or non-human actors, but paradoxically where much of the area is bound up in regulations and overtaken by encroaching species. Evoking questions of ecological heritage, and influenced by current ideas of radical preservation, is looks critically at the binary of preservation and use. Furthermore, it provides examples of place-based care practices that nurture softer infrastructures in a rural geography that will most certainly be facing desires for high revenue infrastructural development.

Agricultural Infrastructure and the Transition to Renewable Energy in a Desert Farming Community

Liron Shani

This study examines a desert agricultural community in southern Israel undergoing a transition from intensive farming to renewable energy production. Using the concept of agricultural infrastructure, I explore the imaginaries, materiality, and practices that sustain life in this space and the environmental transformations accompanying this shift.

Agricultural infrastructure is inherently political: it defines hierarchical boundaries between communities, reinforces land control, and structures relationships between humans and non-humans in the Anthropocene. It enables the construction of material and semiotic worlds composed of pipes, insects, labor, seeds, water, and, increasingly, solar panels.

Through ethnographic research, I analyze how farmers have been incentivized to install solar panels on agricultural structures and land, selling electricity to the national grid. This shift

alters the meaning of agriculture, providing financial stability—especially for older farmers—through a fixed state income, independent of market fluctuations. However, it also raises key questions: How does renewable energy reshape agricultural infrastructure? How does it affect farmers' self-perception? What are the political and environmental implications of this transformation?

This study demonstrates how agricultural infrastructure evolves in response to economic, geopolitical, and social pressures. By integrating renewable energy, it simultaneously reinforces existing power structures while also generating new socio-environmental configurations.

You have bats in your 'spouw' – Repurposing the Dutch housing infrastructure for the energy transition by constructing with bats

Lucas Brunet

In the Netherlands, the term 'spouw' designates the narrow air gap between the inner and outer walls of buildings. In the first part of the twentieth century, Dutch builders popularised this construction technique to improve the insulation of a rapidly expanding housing sector. Today, as part of a national insulation strategy, these empty spaces are being filled-up with more efficient insulating materials to accelerate the energy transition. In the meantime, however, bats – a cave- dwelling species strictly protected under European regulations – have taken up residence in the abundant spaces offered by Dutch housing cavities. As small nocturnal animals, bats are difficult to detect and are directly threatened by filling the spouw, when not inadvertently killed by careless insulation practices. Drawing on an emerging scholarship on environmental infrastructures in Science and Technology Studies and anthropology, I ethnographically follow the influential efforts of a Dutch group of ecological scientists advocating for the recognition of bats to decision-makers and construction companies. Their work led to the development of a specialised sector of regional regulatory agencies and consulting ecological companies, culminating in the early 2025 national decision to make the inclusion of bat spaces mandatory in all newly constructed commercial buildings. Yet, the acceptance of bats for these new habitats, often taking the form of bat boxes or bat towers, is fraught with uncertainties. This article traces how ecologists assess, experiment with and negotiate construction techniques for bats conservation in order to repurpose the Dutch housing infrastructure in the context of sustainability transitions.

2.3. Scaling Infrastructures: From Emissions to Emotions (Part I)

11:10–12:50 ROOM 3 (NIG) Chair: Katrin Schmid

Adverse incidents and management in northern areas: Case studies from the Norwegian-Barents Sea Region

Erik Henriksen

This study investigates the potential adverse events in the civil sector that may arise in the region due to Anthropocene activities and climate change. Both the current climate and the paleoclimate significantly impact the societal security and well-being of the inhabitants.

The increased temperatures during the Anthropocene era and rising sea levels have serious implications for low-lying coastal areas. The melting of the Greenland and Antarctic ice caps could raise sea levels by tens of meters, leading to potentially catastrophic consequences. Warmer waters will affect marine species, causing fish to migrate to different locations, while algal blooms already threaten fish farms. Onshore, climate change and altered precipitation patterns may create high-risk situations for local industry, citizens, and tourists. The effects of high sea levels following the last ice age, approximately 10,000 years ago, have led to several serious incidents in local areas due to mobilized quick clay.

Conflicts of interest may arise along the Norwegian coast between various offshore industries and tanker transport, as multiple stakeholders vie for control of offshore areas. Satellite surveillance and international regulation enforcement play a crucial role in monitoring offshore operations and traffic.

The geopolitical dynamics in the North Atlantic region and the Nordic countries have attracted considerable attention due to the security concerns of individual nations, influenced by both civil and military factors. Different interests and strategic approaches may challenge the efficiency and undermine joint international cooperation.

An oasis in the desert. Khorgos: Infrastructure without completeness, environment without borders

Francesco Carota, Sofia Leoni & Michele Bonino

This paper examines the Belt and Road Initiative as a global environing infrastructure—not merely a technical project, but as process that actively reshapes territories and reconfigures socio-spatial relationships (Belanger, 2016; Nesbit & Waldheim, 2023). In particular, some of the areas reshaped through these processes can be characterized as Worlds of Special

Rules: territorial configurations where human labor, capital investment, and digital data converge to generate new forms of spatial governance and control (Bonino & Carota, 2025).

Among many of such places we can find everywhere in the world, the ICBC Khorgos presents itself as a logistic oasis in the desert: a strategic dry port on the China–Kazakhstan border which exemplifies the infrastructural remaking of desert frontiers - previously framed as marginal or unproductive - into speculative logistical hubs embedded in transnational circuits of capital, data, and governance (Bonino & Carota, 2025). As it is clearly evident in Khorgos, these special zones are increasingly regulated through regimes of exception, automation, and new legal frontiers. In a way, the transformation occurred first by modifying arid landscapes into logistical infrastructure, special economic regimes, and data systems underscores the entanglement between ecological reengineering and infrastructural world-making (Henni, 2022).

However, its unfinished masterplan, made of empty streets, skeletal buildings, signals the incompleteness inherent to global infrastructure (Carse & Kneas, 2021). Rather than a functional city, Khorgos emerges as a performative zone, where incompletion becomes a governance strategy: instrumentalized as a spatial script for attracting investment, signaling geopolitical alignment, and staging connectivity. As such, incompletion becomes a strategic mode of governance, one that keeps the zone in a perpetual state of becoming, open to revision and reconfiguration.

Through a series of critical architectural drawings, such as urban maps, diagrams, and axonometries, the presentation unfolds the socio-spatial transformations driven by global infrastructures (Silver, 2023), revealing Khorgos as a complex border zone shaped by transnational exchange, logistics-driven development, regulatory exception and a sense of incompleteness that allow multiple, diverse and unpredictable social and mechanical practices to happen.

Mapping and weighing global terrestrial infrastructures: implications for resource demand

Helmut Haberl, André Baumgart, Jan Streeck, Fridolin Krausmann & Dominik Wiedenhofer

The artefacts accumulated by humans globally in ‘societal material stocks’ in the year 2016 weighed over one thousand billion metric tons, more than the dry mass of all organisms living on the planet, and grew approximately 25-fold since 1900. Most materials are in infrastructures (buildings, transport infrastructures, etc.). Machinery, vehicles and all other products together account for 1-2% of total mass, transport infrastructures roughly one-third. We will summarize recent achievements in quantifying and mapping material stocks globally, based on two approaches: (1) Inflow-driven methods allow quantifying stocks for

1900-2016 at the national scale. (2) Stock-driven methods allow mapping of built structures at high spatial resolution, nationally and globally. We distinguish roughly two dozens materials (e.g., gravel, cement, steel or glass) and one dozen stock types stocks (e.g., buildings, roads, civil engineering or vehicles). We will present high-resolution maps of (transport) infrastructures and discuss the implications of infrastructures for resource demand and social wellbeing. In cross-sectional studies we found that patterns of built structures influence per-capita demand for natural resources (materials, energy) and CO2 emissions almost as strongly as GDP/cap, on top of GDP and other factors. We analyzed the role of material stocks for well-being measured as years of good life (YoGL) together with other potentially relevant factors such as income, education, health services or air pollution, as well as resource-indicators. In a global panel study for 1990-2016, we found that resource-efficient and moderately rich countries had highest YoGL, not those with highest GDP/cap, which is relevant for sustainable development. Overall, design of infrastructures emerges as a key component for achieving a high level of well-being at sustainable levels of resource use.

Green Infrastructure for Blue Economies: Risk, Matters of Care, and the State

W. Alex Webb, E Christian Wells, Rebecca Zarger, Maya Trotz

A new model of environmental governance that treats ecosystems as infrastructure is taking shape across the globe. In Belize, coral reefs and mangrove forests are being repositioned as natural assets, capable of reducing flood risk, sustaining fisheries, storing carbon, and supporting tourism. The government's commitment to a "blue economy," centered on evidence-based management, depends on making these ecosystems visible to planning and investment.

This reframing opens access to infrastructure finance but also brings a logic of performance and return that often outpaces realities on the ground. Data are sparse. Priorities shift. Climate change undermines ecological stability. Communities face insecure livelihoods and uneven enforcement of regulations. As reefs and mangroves are reclassified, institutional ambitions collide with the rhythm of everyday life, testing what forms of care, value, and responsibility are possible.

To convert nature into infrastructure, development banks, consultants, and agencies are building tools to link ecological functions with economic activity. Participatory maps, biophysical simulations, and valuation models attempt to translate benefits into economic terms. In the process they shape how risk is framed, how futures are imagined, and how material and affective practices are operationalized into matters of care (Puig de la Bellacasa 2017).

These reflections draw from three years of ethnographic research conducted through a multi-institution U.S. National Science Foundation project working in Belize. What emerges is both a novel role for ecosystems and a shift in how futures are assembled. The question becomes: what kinds of infrastructure are being invented, and how might communities utilize them to enact their own matters of care?

In the Land of the Giants: Weird Infrastructure in Canada's Oil Sands

Clinton Westman

In recent decades, mainly owing to the growth of oil sands extraction in northern Alberta, Canada has moved near the front of the global pack as an oil-exporting nation. Due to increasing bitumen production, pipeline bottlenecks had restricted prices in recent years, leading to increased transport of oil by rail.

Currently, with new pipeline capacity to the US and the Pacific Coast, the future of Canada as a major long-term supplier of fossil fuels to the US and Asia-Pacific is increasingly clear (notwithstanding recent threats of tariffs and annexation, which have led to increased public support for pipelines to tidewater). Such infrastructural networks will be critical to the sector because production levels of the mature oil sands industry will remain stable for decades, continuing to constitute Canada's principal export. Fossil fuels are key to public finances in Canada and Alberta. Further, Canada's extraction and processing of oil sands is its most significant source of greenhouse gas emissions and the sector's emissions are growing, putting climate commitments in jeopardy. Currently, new forms of infrastructure are being proposed: in addition to nuclear reactors to power oil sands in situ extraction and refining, these proposals include large-scale carbon sequestration projects, which will involve piping emissions to central locations and injecting them into geological formations. Former Prime Minister Stephen Harper called oil sands infrastructure "Brobdingnagian" (gigantic) but I have called it hubristic. In this talk, I want to develop ideas of hubristic, even weird infrastructure, which will allow for continued growth in production.

Parallel Sessions #3

3.1. Adapting in Urban and Rural Environments

14:20–16:00 ROOM 1 (NIG) Chair: Timothy Heleniak

Vernacular architecture in the Anthropocene: Resilience, adaptation and abandonment in the Himalayas

Hubert Feiglstorfer & Calum Blaikie

Ladakh is a trans-Himalayan region of north-western India characterised by narrow valleys, glacial rivers and high mountain passes. Over the centuries, settlements were established and linked by trekking paths, embedded within an extensive sacred and ritual infrastructure marked by numerous monasteries and temples, votive structures, prayer walls and cairns. During the latter half of the 20th century, a further infrastructural layer emerged as an airport was built, roads were carved out, dams constructed and an electrical network established. These interventions brought large numbers of military personnel and tourists to this border region, adding another layer of army camps, hotels and service facilities. The roads also brought in cement, steel and other building materials, altering the region's architectural makeup through rapid urbanisation and the widespread construction of modern style buildings.

This paper explores emergent interactions between these various infrastructural layers as Ladakh faces unprecedented transformations due to climate change. We focus on the environmental, material, technical and social factors influencing the way buildings are situated, constructed, altered, used and valued. Some villagers bolster resilience by adapting their vernacular houses to the changing climate, others are replacing them with modern houses or hybrid forms, while large numbers are moving to the city. As water supplies become unreliable and extreme weather events more frequent, each infrastructural layer is impacted in particular ways, with significant implications for settlement structure, building design, transportation, economic activity and ritual landscapes, while raising the possibility that entire areas may have to be abandoned altogether.

Heat in the Air: The Role of “Colourless” Infrastructure in Exposure and Adaptation to Urban Heat

Franciszek Chwałczyk

Urban planning and climate change adaptation discourses often focus on the green (fauna and flora) and blue (water) infrastructures. In scientific and public discourses, urban heat is predominantly framed from a meteorological point of view in terms of air temperature. This presentation argues that we can distinguish another type: „colourless” infrastructure - air and practices connected to it (approach inspired by Susan Leigh Star works).

This infrastructure - although it usually remains invisible - is equally important to green and blue and provides better understanding of heat within the city than just air temperature readout. Urban heat is modified by air and its infrastructures in different scales - from the individual practices of opening windows through aggregate of A/Cs to urban-scale “air corridors”, „green wedges” and belts. The colourless infrastructure combines attitudes, practices, empty spaces, material boundaries and devices, including people, fans or plants, that move or change the air around the city and affect urban heat.

By bringing together different scales this presentation demonstrates how air is a medium of both exposure and adaptation to urban heat. Research this presentation is based on focused on older adults, who are one of the most vulnerable to heat stress groups. It builds on data from EmCliC project: focus groups conducted in the summer of 2021 (81 participants over 65 years old) and ethnographic research (combined with sensors) in Warsaw (19 participants over 65 years old) conducted in the summers of 2021-2022 (plus analysis of urban adaptation and planning policies).

Urban nature as critical infrastructure: examples from Finland

Hannah Strauss-Mazzullo

This paper reports on public discourses and civil mobilization over and against imagined infrastructure, i.e. infrastructure in the planning and negotiation phase by looking at examples from Helsinki and Rovaniemi, where urban forests are threatened by transport and housing development. All three urban forests are popular local recreation destinations and thus part of city dweller’s regular outdoor dwelling. The forests have an important role in urban biodiversity conservation and are part of the cities’ blue-green infrastructure.

East of Helsinki, the Stansvik old growth forest is threatened by housing development. A protest movement has formed challenging the city’s plans and suggesting alternative options of development, which would leave much of the forest intact. Examples from Rovaniemi concern 1) the urban forest Mortin Männikkö, which has been suggested to make

way for a four-lane road. This road would cut through remaining green spaces of a residential area and would require a new bridge across the adjacent river, which reflects the city's intention to develop more urban forest on the opposite shore into residential districts. And 2) contested plans concern the urban forest Ounasvaaara, a highly popular skiing, biking and hiking destination, with protected areas, to be further developed for touristic purposes in the context of Lapland's rising mass tourism.

At the centre of these conflicts is the contradiction between densification versus greening of cities and the question if these aims can be reconciled. Reviewing the conflict lines, we can observe an administrative negligence of existing, "critical infrastructure" in terms of ecosystem services and recreational purposes.

Unsettled at Sea: Offshore Renewable Energy and the Social Life of Infrastructural Experimentation

Marianna Betti

This paper explores the still nascent offshore renewable energy sector as a domain of unsettled infrastructural experimentation. Based on ethnographic fieldwork among seafarers and engineers in Norway, I follow the social dynamics surrounding the rollout of floating wind platforms and other "green" infrastructures experimented with in northern waters. These projects are highly visible, heavily subsidized, and publicly celebrated—yet they remain institutionally and politically adrift, poorly regulated and "unsafe". Through the lens of infrastructural immaturity, I investigate how these technologies generate new frictions: between civil and military uses of ocean space, between climate urgency and regulatory inertia, and between global visions of energy transition and local labor uncertainties. The paper argues that these infrastructures are "displaced" not in the literal sense, but because their social, legal, and ecological embedment is still in formation. Offshore renewables are thus less a solution than a site of struggle—where the future of ocean governance is being materially negotiated in the present.

The Gift of the Abandoned Frontier: Fireweed and the Rhythms of Recolonization

Rusana Novikova

My paper examines the post-socialist ecologies of Russia's Asian periphery that have been created by the humanity's most ambitious project in social and economic engineering. Today these ecologies became the arena for the Hectare, Russia's newest settler colonial project aimed at boosting the local economy, improving security, and reversing demographic trends by resettling its Asian borderlands. The paper interrogates the image of the open, untamed

frontier promoted by the Hectar program through an ethnographic exploration of land use and development on the ground and archival research on the historical processes that shaped these post-socialist frontiers. Specifically, the paper focuses on a fireweed tea collective operating in the central Magadan region whose work reveals the tension between the notions of the 'wild' and 'unbuilt' environment. To account for the limitations and opportunities afforded by this unbuilt environment, my paper introduces the concept of the 'feral drift' that emphasizes the processual, material nature of post-socialist environmental transformation. The ultimate goal of the paper is to shift the academic discussion from critiquing 'frontier' and 'wilderness' as problematic discourses to appreciating material change emerging from historically-contingent, human-nonhuman interactions that makes it easier for these landscapes to be interpreted as wild, empty or pristine.

3.2. Mining and Infrastructure or The Built Environment of Extractivism

14:20–16:00 ROOM 2 (NIG) Chair: Olga Povoroznyuk

(Un)built Arctic Deep Sea: Imagining Mineral Extraction

Marta Gentilucci

Deep-sea mining is not yet a commercial reality. In Norway, the licensing round initially expected by the end of 2024 has been postponed. This emergent industry remains elusive: intangible, dislocated, and for anthropologists excluded from the so-called "call for science," often difficult to grasp. Yet some marine scientists, engineers, and industrial actors are already imagining and constructing the future shapes of the deep sea, aiming to "unlock" the ocean's value.

Never before has there been such a rush for data—quantitative, computational, and predictive. Remotely Operated Vehicles (ROVs), Autonomous Underwater Vehicles (AUVs), and specialised drilling systems—purpose-built to explore, sense, map, model, and digitise the seabed and water column at extreme depths—are constructing a deep sea rendered in lines, glowing colours, numbers, and datasets. This environment is building as a datascape—a layered, coded terrain where ecological complexity is translated into visualisations, models, and probabilistic forecasts. But what — and who — is leaving out? What new interactions between humans and non-humans, or among non-humans, are being constructed — and which ones are being overlooked, excluded, or actively unbuilt?

Drawing on ongoing ethnographic research in Norway among corporate actors, marine scientists, and subsea engineers, this paper explores how the (un)built Arctic deep sea is

shaped techno-politically, economically, and culturally. In particular, it examines how this environment is imagined, by whom, and the political and socio-material relations that underpin this emerging, sea-born infrastructure.

Cryospheric Challenges: A Comparative Look at Arctic and Alpine Infrastructural Environments

Peter Schweitzer

High altitude and high latitude environments in Europe share structural similarities, ranging from oversized climate change impacts to low human population densities to long histories of resource extraction and shorter engagements with the tourism industry. Infrastructural development, which started in the European Alps earlier than in the Arctic, typically served the twin purposes of transporting goods through these regions and extracting resources from them. Despite these similarities, current living conditions in European Alpine and Arctic communities often differ significantly.

The aim of this conceptual paper is to raise questions. Among them is the overarching goal to identify factors that might be responsible for these similarities and differences. Obviously, any causal suggestions might have to include spatial and temporal specifications, as not all parts of these macro-regions have developed similarly. Likewise, the temporality of mining and other extractive activities differs a lot from region to region. Finally, the question arises whether the historical and contemporary constellations in the Arctic and in the Alps can provide lessons for the respective other macro-region as to how to best deal with the cryospheric challenges of the present and future.

Dis-continuing coal mining infrastructures with more-than-human mobilities

Eva Kotašková

The ongoing extraction of black coal is being addressed in many places, and in light of current knowledge about its environmental consequences, the question of dis-continuing the extraction is increasingly being answered by abandoning or re-configuring the extraction infrastructures. The key issue that cannot be disentangled from the continuation and discontinuation of (un)built mining infrastructures in and beyond the Arctic, is environmental mobility. Human and nonhuman movements are critical for the existence, sustenance, expansion or abandonment of mining infrastructures. In turn, the dis-continuation of these infrastructures results in various human and nonhuman movements. The coal deposits are being formed, extracted, repositioned or sold with engaged movement of people such as miners and geologists; technologies such as maps and drill machines;

animals or other a/biotic entities including reindeers, waters, chemicals, soil, minerals; and finally, ideas such as societal values, capital, knowledge or labor. In other words, movement is a condition for infrastructures and infrastructures condition movements. This paper explores the potential of thinking (un)built mining infrastructures as they emerge with different kinds of mobilities that are more-than-human. It does so by focusing on a particular geosocial element, a black coal on Svalbard, and on how it co-creates various infrastructural flows that mobilize different actors across the landscape and contribute to building mining histories and (post)mining futures. The paper invites to think (un)built infrastructures as entangled with more- than-human movements that simultaneously ruin and create, configure and re-configure industries, beings, relations and generally lives on a damaged planet (Tsing 2015, Stengers 2015).

3.3. Politics of Dis-connection

14:20–16:00 ROOM 3 (NIG) Chair: Michael Anranter

Transborder Roads and Mobility Control: The Borderwork of Infrastructure across the Eastern Indo-Nepal Border

Mélanie Vandenhelsken

The section of the Indo-Nepal border separating northeast Nepal from Sikkim was, for a long time, marked by nothing more than a stone—an exception in a region otherwise defined by heavily fenced and closely guarded borders. A few kilometers south, a several roads cross the border, used daily by vehicles transporting people and goods. Indo-Nepal treaties since 1950 uphold the concept of an 'open' border, allowing citizens to live, work, and trade freely. A newly constructed road further north reinforces these connections. Foreigners' mobility, however, remains restricted to designated crossing points.

Yet for Indian and Nepali citizens, the border does exist—though not necessarily where maps place it. This paper examines transborder mobility between Nepal and Sikkim, focusing on how infrastructure—and its shifting material presence—expresses and enacts border regimes, often concealed by the rhetoric of 'open border.' Drawing on Rumford's (2012) concept of borderwork emphasizing the processual nature of borders and the multiple, sometimes conflicting, agencies involved in their making, this paper approaches infrastructure both as a means of borderwork and as a manifestation of border regimes.

Based on ethnographic fieldwork conducted as part of a former FWF-funded project hosted by CIRDIS, University of Vienna (2016–2021), this paper examines the effects of both the absence and presence of infrastructure on the mobility of people from the region across the

Singalila border. It links these dynamics to broader shifts in capitalism, international relations, and nationalism, in particular the increasing presence of China in Nepal, and new laws increasingly controlling non-citizens' mobility.

"Unpaved Arteries": The Social Consequences of Roads in Nome, Alaska

Alex Griffin

In the Alaskan Arctic, the development of natural resource extraction sites coincides with the construction of a road. However, roads do not exist merely to transport natural resources from a point of extraction to a point of production. Rather, roads are fundamental to human mobility and access to greater livelihoods.

Drawing on political negotiations of past road construction efforts, this paper aims to assess roads in Nome, Alaska beyond a narrow context of mining and environmental impact assessments. The goal is to highlight how roads meet the needs for human mobility and rural-to-urban access. Through a mixed methods approach, this paper quantifies existing Nome transportation networks with remote sensing and then qualitatively analyzes how access to a road can impact perceptions of scale and connectivity using mental mapping techniques. In the Arctic context, remoteness is not only a lived reality but a spatially perceived concept. This paper examines how remoteness is perceived and distorted by prior notions of a frontier imaginary. Further, it underscores the social consequences, both positive and negative, of an Arctic road. There are social, economic, and environmental values embedded within a road landscape. Roads are discursive objects, shaping our metaphors, ecosystems, and understandings of what places in the world mean to us.

Phantom Infrastructure? Environment, Politics and Futures of Unfinished Bay Bridge in Taiwanese Contested Archipelagic Borderlands of Kinmen

Chengyu Yang

Kinmen is a Taiwanese archipelago located just a few kilometres from mainland China, bearing a unique geostrategic significance in the Asia-Pacific. Since the early 2000s, the resumption of cross-Strait links has fostered the rapid development of cross-border infrastructures—ferry routes, undersea fibre-optic cables, and water pipelines—reshaping cross- strait economic entanglements and everyday mobilities. Infrastructure in this archipelagic borderland connects places, reconfigures livelihoods, spatial imaginaries, and makes the islands' precarious centrality between antagonistic powers.

Yet infrastructures that remain unbuilt/half-built have received scant attention. This presentation examines the Kinmen–Xiamen Bay Bridge, an ambitious cross-Strait

connectivity project first initiated over three decades ago but still unfinished. While framed by its promoters as part of a broader vision for integrated air–land–sea transport, the bridge has evolved as two disconnected endeavours: each side constructing domestic links while suspending the cross-border span. This infrastructural incompletion forms a contested assemblage of sovereignty, environmental extraction, and speculative development. For instance, PRC's preparatory dredging for a connecting airport has led to extensive undersea sand mining near Kinmen's maritime borders, causing coastal erosion and the displacement of Kinmen's local ancestral graves.

Drawing on ongoing ethnographic research, this presentation thinks beyond the forward-looking understanding of infrastructures that often promise a prosperous and connected future; but I argue that the 'absent' of infrastructure itself is a productive force keep shaping and engaging with inhabitants' ways of living and multifaceted prospects of the future livelihoods. As a 'phantom infrastructure,' its persistent absence continues to haunt, animate, and structure local visions of the future and negotiation of borders.

The Broken Promise of Connection: Solitary Road and the Unfinished Infrastructures of the Anthropocene

Tarja Salmela

Sitting in a tightly packed, dimly lit cinema at the 2025 TIFF International Film Festival, I embarked on a journey I believed would last just 76 minutes. That is the runtime of Johan Palmgren's Solitary Road (2024)—a film that traces a 20-kilometre stretch of road in Sweden's far north, linking five villages yet leading, in the end, to nowhere. Its original Swedish title, Vägen till ingenstans—says it all.

But the film is more than a portrait of a road. It is an ode to the entanglement of infrastructure with life and landscape. It reveals the quiet absurdities of mobility in the largely forgotten Arctic: snowmobiles crossing the frozen Torneträsk in winter, boats gliding its waters in summer, helicopters descending onto remote villages. It evokes the surreal, half-built quality of a project suspended between intent and abandonment—haunted by geopolitical realities, yet animated by a human persistence that, in its entanglements, always was more- than-human in nature.

In my talk, I invite my fellow participants to travel through the broken promises of connection embodied by this un/finished road—a symbol of the unfinished infrastructures of the Anthropocene. Through Solitary Road, we encounter how un/built geographies stretch beyond utility into the affective, the absurd, and the unresolved. This is an opportunity to revisit the road not as a symbol of progress, but as a site of ambivalence and endurance in the North.

(Un)built roads and waterways in the Alps: economic interests and demanding materiality

Margareth Lanzinger

The infrastructural development in the early modern Alps was primarily driven by economic and (trade-)political interests. In the eighteenth century, priority was initially given to the development of connections in the east of the Habsburg Monarchy around Vienna: in the 1720s, the Habsburg main trade roads (Hauptkommerzialstraßen) were built, including one directed from Vienna through Inner Austria to Trieste, which had become a Habsburg free port in 1719. Connections between economic regions in the west were of interest as well.

From the late 1760s, the Swiss Planta and the Viennese government discussed a road linking Milan via Chiavenna through the Swiss Engadine with Tyrol, but it was never realised.

Economic arguments were in favour, but the new route would have been in competition with existing routes and their operators, and other problems soon became apparent: roads would have had to be maintained, cleared and repaired. This would have involved and obliged the adjacent villages – and that apparently caused difficulties. During this period, both the history of the Alps and the debates on the Anthropocene assume a change in the understanding of nature in the wake of the eighteenth century-Enlightenment. The question is whether this was reflected by contemporaries in the context of such a road-building project. At the same time, authors in this field argue for a ‘new ontology’ to ‘reconfigure our orientation to the material world’ (Benson 2019). The paper attempts to draw these threads together, using the road project between Chiavenna and Innsbruck as a starting point, and to refer to some others.

Parallel Sessions #4

4.1. Cultural and Food Practices Across (Un-)built Landscapes

16:30–18:10 ROOM 1 (NIG) Chair: Sophie Elixhauser

A field can be a wall

Lucas Rinzema & Jim van der Steege

Milk industries dominate Dutch landscapes. Monocultures of protein-rich grass alone take up nearly a quarter of all land mass. Corn, also produced to feed cows, takes up another five percent. More than a million-and-a-half “dairy” cows—excluding the calves they birth on a yearly basis—live and die under the biopolitical control that this land grab enables. For humans populating these animal-industrial landscapes, these cows remain largely invisible. Invisibility here is instituted by nationalist-conservative and technological solutionist imaginaries, but also conditioned by industrial infrastructures.

A field can be a wall is an attempt to disturb these imaginaries by interrogating these infrastructures. It deploys landscape images, textual fragments, a screen recording of a map and music played on two stereochords (self-built vegan instruments) to defamiliarize the landscape and interrupt its spectatorial regime. Taking cues from critical animal studies scholar Dinesh Wadiwel’s attentiveness to violence’s structuring role in human-animal relations (Wadiwel, 2015), and filmmaker and postcolonial theorist Trinh T. Minh-ha’s thought on the complex interplay between visibility and invisibility (Minh-ha, 2015), the film confronts infrastructures and thematizes the ways in which they condition perception. Caught up in the representational binds issued by the infrastructures of the animal-industrial complex (Hunnicutt et al., 2025; Twine, 2013), it asks: can attention be resistance?

Biodiversity by Design: Experimenting with Agricultural Infrastructures

Pieter Lagerwaard

This contribution examines the ways in which biodiversity is brought into being in agricultural infrastructures. The research focuses on a so-called living laboratory in the Netherlands, where farmers experiment with biodiverse and sustainable farming methods aimed at developing scalable food infrastructures. Building on participant observation and semi-structured interviews, I study this laboratory, where scientists, politicians, and citizens have joined forces in a 10-year experimental research project. The experiments take place

on 30 hectares of purchased farmland, where the water level has been raised to preserve the (peat) soil, combat salinization, capture CO_2, and prevent land subsidence. Currently, four experiments are underway: the cultivation of rice, cranberries, water plants, and the planting of a 'food swamp.'

Drawing on literature at the intersection of Science and Technology Studies (STS) and International Relations (IR), I study how biodiversity is made and unmade in these farming experiments. Inspired by Mol's work on The Body Multiple (2002), the paper considers biodiversity as an "object multiple" that is brought into existence differently. Biodiversity is incorporated into the bio-technical designs of the experiments, serving as miniature proxies for future-to-be large-scale biodiverse food infrastructures. I ask: How are these different versions of biodiversity being constructed through these bio-technical and socially imagined future infrastructures? How do these versions of biodiversity relate, conflict, and entangle? How are they governed and coordinated?

Fish, Feathers, and the Limits of the Law: The Rampart Dam Controversy and U.S.-Canada Industrial Politics in an Age of Transition, ca. 1950-1965

Andreas Mentrup-Womelsdorf

In 1964, the Canadian minister Arthur Laing complained about a U.S. proposal to construct a gigantic hydropower facility in the middle of the Yukon riverlands, at Rampart Canyon in Alaska. For Laing, the 'Rampart Dam' endangered long-standing international agreements between the United States and Canada. Yet, while the Canadian government vehemently opposed construction of Rampart Dam, its abilities to challenge the United States appeared surprisingly limited since the dam and its reservoir lake were not expected to flood lands that Ottawa claimed. Moreover, from the early 1950s onwards, U.S. and Canadian officials continuously engaged in confidential talks about how to turn the waters of the Yukon River and its tributaries into electrical energy to power homes and factories. While in the early 1950s, Canada weighed U.S. proposals for extensive investments in hydropower facilities in the Yukon riverlands and the development of electrochemical industries, Ottawa now sided with a broad coalition of opponents: from Indigenous inhabitants of the riverlands to wildlife enthusiasts and hunting tourists, even notorious hydropower advocates such as Floyd E. Dominy of the U.S. Bureau of Reclamation. Canada's policy was conditioned, in large parts, by the environmental features of the riverlands themselves—and by Ottawa's fear that wreaking havoc on northern environments could quickly endanger rather than bolster federal coffers. This paper addresses the peculiar conceptual space of environmental diplomacy—between landscape(s), law(s), and politics—by juxtaposing Ottawa's strategies to oppose the Rampart Dam proposal with earlier development schemes affecting the Yukon riverlands, most notably the Yukon-Taiya project.

Patchy Deliveries and Seasonal Foodscapes: Provisioning of the Chukotkan Regional Hub, Russian Arctic

Elena Davydova

Transport infrastructures in Chukotka operate on a seasonal basis, temporally complementing one another while also contributing to both connectivity and disruptions in the food supply for communities. Ports serve to transport goods in the summer (navigation) season, while winter (ice) roads function only from late winter through early spring. Even aviation and year-round roads are affected by natural conditions more dramatically than elsewhere: there are favourable and challenging seasons for flying and driving. Cyclical fluctuations in the functioning of transport infrastructure impact food supply patterns creating gaps in deliveries. Food items are particularly vulnerable to these fluctuations, as the materiality of foods changes more rapidly than that of other commodities.

Drawing on qualitative ethnographic data collected in the coastal town and regional hub of Egvekinot in Chukotka Autonomous Okrug, Russia, the presentation explores how the seasonality of transportation modes shapes the food distribution patterned in space and time. Building on Tim Ingold's works (e.g. 1993), I introduce the term foodscape, which functions as both landscape and taskscape, specifically in relation to food. I argue first that foodscapes in Chukotkan contexts are inherently seasonal, as supply fluctuations follow a dominant seasonal rhythm that either enables or restricts the use of specific infrastructures and transportation methods for delivering food to the community. Second, local residents and actors manage seasonal interruptions in chains of food supply and impact local foodscapes through future-oriented dwelling activities.

Dynamics of Built and Unbuilt Infrastructure through Cultural Extensions

Michael D. Fischer & Sally A. Applin

Societal adaptations to innovations drive the emergence of new material and ideational infrastructures, creating conditions for further adaptations and innovations. These are dynamic, and are frequently subjected to various disruptions that contribute to them being either fully or partially built, unbuilt, dismantled or destroyed. Thus, they reflect ongoing societal needs, embedded in existing layers and chains of other infrastructure, these are rarely fully abandoned, concurrently undergoing transformative processes that build and unbuild their manifest procession and expression. Hall's "cultural extensions" framework in Beyond Culture can be applied to examine widespread infrastructural change, including disruption, creation, maintenance and rebuilding. Hall posits that everything beyond an individual's innate biological presence and capabilities is a cultural extension that enables new capabilities. These extensions, ranging from basic tools to complex systems based on

chains of cultural extensions, have material outcomes that motivate further extensions. These cultural extensions also have ideational outcomes. Hall observes that people often substitute manifestations of extensions for the outcomes these facilitate, leading to misjudgements about causality. Extensions lead to unforeseen systemic disruptions when arbitrarily invoked. For example, if tariffs, extensions within a system of exchange incentives, are linked directly to a specific outcome of regulating markets outside the context intended for tariffs, disruptions will follow. This paper explores how Hall's concept of cultural extensions can help understand the dynamic relationship between the built and unbuilt infrastructure as expressed through societal needs, the consequences of conceptualising extensions as outcomes, and how these impact the stability and evolution of infrastructure systems.

4.2. Infrastructuring Climate Futures

16:30–18:10 ROOM 2 (NIG) Chair: Susanna Gartler

Biomass Energy, Work and Nature Restoration: The Forest as an Infrastructure to Reshape the Landscape in Times of Climatic Emergence. The Case of Vall de Lord

Paolo Macrì Antkiewicz

From an interest in new forest management initiatives in response to wildfires and climate change in the Vall de Lord (Catalan Pre-Pyrenees, Spain), my attention has quickly moved to how the forest can be considered as an infrastructure to redesign and control the landscape. According to experts, the Pre-Pyrenees is at great risk of burning down because of forest transition and climate change, and this is of great concern to some of the valley's inhabitants. However, increasing water availability through sustainable forest management, as expressed in the climate credit system, is considered by the forest administration to be the most attractive way to generate projects with a high social impact. Through the ethnographic fieldwork that led to my Master's thesis, I was able to visualise the forest as a key element in understanding some power hierarchies and class differences in the use and control of natural resources. Right now, I transformed this material into an academic article that will be part of a monograph (due for release in July 2025) entitled 'Wilderness and landscape as socio-cultural constructions in the era of climatic emergence and the Capitalocene'. For this, I have chosen to talk about three elements (energy, nature restoration and work) and three ethnographic objects in the valley (the Vall de Lord Forestry Association, the multinational company Knauf and the Climate Credit project). I would like to share all of this and eventually receive suggestions on how to introduce audiovisuals to communicate and expand my research.

Future-oriented imaginaries of island life, environment, and infrastructure in Finland

Erika Takahashi & Kirsi Sonck-Rautio

The Archipelago of Southwestern Finland is one of the world's largest, with tens of thousands of islands and islets. While 30,000 people reside there permanently, the population increases up to fivefold in summer. Some islands are connected by bridges, but many inhabitants of smaller islands rely on ferries or connection boats. As a result, residents' lives are strongly shaped by these infrastructures. At the same time, infrastructure planning is guided by future-oriented imaginaries of island life. For instance, the continued operation of a public ferry route suggests an expectation of a viable community beyond it. Thus, infrastructure planning is not just about physical connections but also about envisioning the future by linking past and present, and perceptions of environmental change play a crucial role in these processes.

Over recent decades, climate change has transformed the archipelago. Until the 1990s, the sea froze in winter, allowing residents to travel across the ice. Today, winters are too mild for this, necessitating new mobility solutions. Environmental shifts have also altered local fauna, forcing the realignment of spatial perceptions and travel routes.

Amidst these changes, what kinds of infrastructure are planned or left unplanned? What do people advocate for, dismantle, or choose not to build? Drawing on ethnographic research from the projects Aging with Nature and Infrastructure of Care in the archipelago, this paper examines the interplay between infrastructure, environmental change, and future-making through older residents' life histories and narratives and participative observations of the transportation network.

Infrastructures of Risk Management

Felix Ansmann

The proposed paper contextualizes financial markets as socio-technical infrastructures of risk management and investigates the ways in which they mediate between human and environment. It argues that financial markets mediate the environmental conditions of the Anthropocene as calculable volatility, and thus as an opportunity for profit, paying special intention to finances central technical innovation: the derivative (e.g. weather and agricultural derivatives). The concrete risk of lived reality (often that of others) is thus transformed into risk in the abstract - a risk to be managed, in the neoliberal sense - through a series of computational and economic operations, as well as social rituals. This gives rise to the economic discipline of risk management as well as to a specific postionality of the

risk manager (both emblematic of capitalism in its current incarnation) vis-a-vis environment. The guiding question of this exploration is what kind of ontological position of human vis- a-vis environment, of an in-group of financial professionals vis-a-vis others, is perpetuated by the infrastructures of finance. In this way, it positions itself within the context of an anthropology of ontology as well as of infrastructures.

Planning for Doomsday: The Ike Dike that Isn't Yet

Nataya Friedan

The Ike Dike is a proposed coastal spine meant to protect the Gulf coast of Texas. It was named after Hurricane Ike in 2008 and has been revived in rhythm with major storms threatening a very specific doomsday scenario. The fear is that a hurricane would hit Galveston at the mouth of the Houston Ship Channel sending unprecedented floodwaters through oil refineries and into Houston City where storm surge would meet heavy precipitation. In the summer of 2018, a 2.5 billion-dollar bond was passed at the county level for future flood infrastructure projects. This paper draws on eighteen months of ethnographic and archival fieldwork from 2018-2020 in Houston in the aftermath of Hurricane Harvey including six months embedded at Harris County Flood Control District. Amidst this surge in public funding, private sector actors manipulated the recovery process in an effort to garner support for public expenditure that would protect the physical and reputational interests of private industry. This paper will show how funding for the Ike Dike has become a project of defining the responsibilities of the corporation and the citizen amidst climate change impacts.

4.3. Affective and Sentient Infrastructure

16:30–18:10 ROOM 3 (NIG) Chair: Rusana Novikova

Listening as Intangible Infrastructure: Countering Over-generational Amnesia in Arctic Environments

Kimmo Hokkanen

Infrastructure typically evokes solidity, permanence, and physical form. Yet, in the Anthropocene, reconsidering infrastructure as relational, sensory, and ecological becomes essential to addressing over-generational amnesia—the gradual loss of environmental and cultural relationships over generations. This amnesia arises both in built environments (through abandoned or erased infrastructures) and natural environments (as shifting

baselines obscure memories of richer ecological states). This paper introduces listening as intangible ecological infrastructure, emphasising two rapidly transforming Arctic environments: melting glaciers in Iceland and endangered boreal old-growth forests in Finland. In these sensitive ecological contexts, listening practices emerge as critical responses to environmental loss, actively renewing and sustaining cultural-environmental memories and connections. Intentional listening—careful attunement to changing landscapes and more-than-human communities—helps communities reconnect present experiences with intergenerational ecological knowledge that otherwise risks being forgotten. Drawing from Nordic cultural contexts, I explore how deep ecological listening functions as intangible infrastructure, counteracting the erosive force of amnesia by preserving collective ecological and cultural narratives. Such listening practices reframe abandoned, unfinished, or vanishing infrastructures not merely as absences but as fertile spaces for imaginative ecological renewal. Ultimately, this expands our infrastructural imagination, positioning sensory and relational practices at the heart of sustainable, culturally grounded futures. This paper draws upon interdisciplinary research developed in my Master's thesis on cultural heritage futures and the Listening with Nature project, which explores deep listening practices in Arctic, Nordic, and Baltic environments.

"For the Love of Nabucco!": Affective Excess for an Unbuilt Fossil Gas Pipeline Project

Bilge Firat

The Nabucco pipeline project, initially proposed in 1998 to transport natural gas from Turkmenistan and Azerbaijan to Austria through Turkey, was ultimately abandoned in 2013. Its abandonment gave way to the Trans-Adriatic Pipeline, which, as part of the Southern Gas Corridor, was subsequently built to deliver Azerbaijani gas to Italy via Greece and Albania. Over fifteen years, the Nabucco pipeline project, from its conception to its eventual abandonment, underwent significant highs and lows but also so much hype and political fanfare such that when it was finally scrapped, many of its actors had hard times to cope with and move on with their personal and professional lives. Based on ethnographic fieldwork conducted during 2021-2023, this paper discusses the excessive emotional investment in a shelved fossil gas pipeline project among its project actors. These were predominantly white, cisgender/cismale experts in their late twenties and early forties at the time of their involvement in the pipeline project, who came from urban middle-class backgrounds and who held mid-level/mid-career positions in energy security and geopolitics from two dozen national governments, national/multinational energy firms, and international organizations. I argue that Nabucco was one of the first fossil gas pipeline projects that made the idea of bringing previously untapped, new fossil gas from geographically distant

locations to Europe via uncharted routes viable in the minds and everyday geopolitical work of infrastructure's actors. It ultimately effectuated a new geopolitical imaginary of energy supply security ("infrastructural geopolitics") by transnational, geopolitico-infrastructural means.

'I Hear the Sea': Local Lived Experiences of Disaster Mitigation Infrastructure in Northeast Tōhoku

Jesse Bia

In the wake of the Great East Japan Earthquake and Tsunami of March 11, 2011 (3/11), many rural communities in northeast Tōhoku heavily impacted by the tsunami have been rebuilding/rebuilt. Significantly, this involves construction and operation of new large-scale disaster-mitigation infrastructure which drastically alters the prior environment: extensive high sea and river walls; shelter mounds; planting of new forests; permanent emergency tsunami survival structures in town centers; clearing new evacuation pathways to elevated ground. Though some of the infrastructure is reconstruction, the majority of this built environment is novel: post-3/11 projects both financed and mandated by the central government and prefectural initiatives. Similar to the 3/11 tsunami itself, this new infrastructure drastically reshapes the local environment, fundamentally changing locals' subsequent experiences within (and perceptions of) their lived environment and surroundings. This infrastructure has transformed residential options, employment opportunities, and often reshapes how locals interact with and view the coastline - figuratively and literally. It has simultaneously both hindered and facilitated local communal memorialization efforts. This paper presents and discusses diverse local lived experiences and personal perspectives of this new infrastructure and (re)built environments. It represents results gathered as part of an ongoing long-term participant observation fieldwork project in the region, focusing specifically on communities in the northern 3/11 impact zone, working directly on-the- ground in small communities on the coast of northeast Tōhoku.

Speculative Connectivities: Caring for the Future across the Strait of Messina

Sabrina Stallone

In the decades-long discourse surrounding the unbuilt "ponte sullo stretto", the bridge across the strait of Messina, the proponents of the project have emphasized how the mega-infrastructure would connect two economically disadvantaged regions - Sicily and Calabria - and realize a greater one "as if there were no longer a sea dividing them" (Gattuso 2024).

This rationale echoes both globally reverberating promises of infrastructure, as well as local hopes and anxieties lodged in the long-standing socio-cultural imaginary of Southern Italy as disconnected from the rest of Italy. In this quest for progress and prestige, connection and recognition, the negative environmental and social impact of the "longest bridge in the world" have repeatedly been obfuscated.

The most recent version of the "ponte sullo stretto" plan has been met with robust resistance: Ever since the unbuilt bridge resurfaced on Italy's current far-right government's budget planning agenda, Messina's feminist collectives - among others - have been flagging it as a transfeminist issue, warning that the plan, if materialized, would result in a domination of the earth and of the gendered bodies living with and lining the strait. Through an ethnographic lens on feminist organizing in resistance to the "ponte's" most recent plans, this paper asks: In what ways do (feminist) visions of care "burn the bridge" over the strait, and let different, non-authoritarian futures rise in its stead? I put in conversation feminist attention to infrastructure provision as care and as struggle (Puig de la Bellacasa 2017) and the cultural-architectural history of Sicily (the "Siciliano Incompiuto"), shedding light on the speculative connectivities that emerge from alternative future imaginaries for the sites that the strait straddles.

Walking-with cracks: un-making infrastructures for imagining otherwise

Kate Monson

In this paper we walk-with Canvey Island's seawall, a 7m high, 3.2km long concrete barricade in the Thames Estuary, Essex. Built as a direct result of the catastrophic North Sea Flood of 1953 – and after recent substantial improvement, projected to protect the island until at least 2070 – this wall is the defining characteristic of Canvey today. It is the island's material border, and an iconic object that characterises Canvey culturally, articulates its past, determines its future, and creates community through social interaction and storytelling. But instead of (only) paying attention to the wall's concrete fortitude, here we also explore it's cracks; ruptures through which alternative understandings and imaginings can be glanced (glanced here meaning both 'to look briefly' and 'to knock of course'). For alongside the 'oficial' and very visible narrative of Canvey exist other, less salient, more permeable ones. Drawing on Hamilton, Zettel and Neimanis's concept of "feminist infrastructures" (2021) and Lauren Berlant's "glitch" (2012), this paper engages Canvey's sea wall as a concrete idiom of enduring precarity, one that represents both "a loss of faith in a fantasy world to which generations have become accustomed" (Berlant et al., 2012, 166) and the "glitch" that ofers opportunities for transformation.

Parallel Sessions #5

5.1. Dwelling, Housing, and Place Abandonment

09:00–10:40 ROOM 1 (NIG) Chair: Tarja Salmela

Detachedwhere: Inhabiting Finnish Wilderness Cabins to Reimagine Infrastructures

Mari-Sohvi Miettinen

Finnish wilderness cabins lie in fragile nature environments, detached from contemporary infrastructures and conveniences. Over 500 cabins scattered around Finnish forests, fells and archipelago are open for a temporary stay for anyone who can make the journey. What kind of potential do these modest dwellings hold for reimagining a more sufficient future of living?

Infrastructures are characterised by transparency and invisibility. They are collective division of labour that takes care of the metabolism of our everyday living. On a modest cabin, this metabolism becomes visible through active efforts required by the dweller. This can help to reveal and reflect our relationship with unsustainable systems of “normal living”.

When inhabiting a wilderness cabin, the lacking infrastructures are replaced by manual labour, practices, skills and knowledge. These intangible infrastructures of dwelling are continuously reshaped and reimagined by the changing dwellers. Simultaneously, the use of the cabins is characterised by communality, sharing and dialogue. They are cultural heritage in the crossroads of nature and culture, past and future, material and immaterial, and can act as vehicles for collective reimagination of the ecological future of our living.

This paper explores experiences on reflecting and reshaping infrastructures related to water, energy, waste and communality through interviews and autoethnographic methods carried out on site in Finnish wilderness cabins.

Abandoned places considered from a Heideggerian framework

Diana Paula Fuhr

The objective of this work is to consider the symbolic implications of abandoned (unfinished or ruined) places, using Martin Heidegger’s text “Building, Dwelling, Thinking” (1951) as a frame of reference. Following this author, space is delimited by what is built, with building taking care of *physis* and erecting through techne, consecrating, letting dwell, letting things

be, through the poetic residence of man on this earth as a mortal. Building is *poiesis*. Space is not something prior, identical, fixed, homogeneous, or static, but a gestation, an indefinite and undefined appearance. Within the framework of the relationship between building, dwelling, being, and space, we will analyse possible symbolic implications of abandoned places: are building and nature antithetical? What type of build protects nature, and which one degrades it? How do human beings relate to their spaces? What happens to abandoned places? Are they places we no longer inhabit? What traces of dwelling do they bear? If building creates space, does abandoning it imply closing it off? If building is taking care the *physis*, does abandonment transform into destruction? This are some of the questions that we will try to answer. First, we will consider the Heideggerian concepts above mentioned. Then, we will analyse the case for abandoned places. To conclude, we will mention possible implications.

Unbecoming beasts: The agency of unbuilt infrastructures across time and space

Beril Ocaklı, Gretchen Bakke & Timothy Moss

It is unusual to think of the unbuilt environment as a product of human activity—as an 'active' mode of not building something rather than just letting the place be and thrive without intervention or even absent humans entirely. In this co-authored presentation by three members of the Infrastructure Working Group at Humboldt University, Berlin, we consider the temporal and multi-scalar implications of infrastructural plans that never came to be yet proved impactful. Historian Timothy Moss presents the fears and aspirations surrounding water transfer plans for Berlin that have re-emerged over the past 100 years to address rapid urbanization in the Weimar Republic, growth predictions for the post-Cold War city and concerns over water shortages today. This long-term perspective permits insight into how an unbuilt infrastructure reverberates across time. Geographer Beril Ocaklı situates contemporary global infrastructural push in the transcontinental 'East-West Highway' that is being (re)built in Georgia, South Caucasus, to connect China with Europe. Grand (geo)political plans so often come to nothing(ness) even as materials participate in their own collapse, unbuilding themselves before completion. The case illustrates how the highway, in its built and unbuilt forms, rescales both agency and accountability. Cultural Anthropologist Gretchen Bakke brings these cases together with her own work on the future unbuilt in which visions of reconstructed fossil-fueled futures are disrupted by resistances and failures of many types that cause very big things never to come into being but which, in their failure, allow for surprising emergences.

Urban infrastructure, the housing right, and everyday life in Brazilian favelas

Isabelle Caroline Damião Chagas

Brazil's favelas and their infrastructures, which are both precarious and creative, form a landscape known worldwide. In the spatial and social margins of large urban centers, the favelas are home to populations who often lack access to basic rights such as water, food, and health. In such circumstances, disputes over fundamental resources are quite common. In the Vila Nova community, located in the city of Belo Horizonte, for example, conflicts over the ownership of houses, "lajes" (second floors), and walls are part of the sociability of the neighborhood. This community emerged as an "urban occupation" in the early 1990s and, as it is not yet legally regularized, the residents face various difficulties in accessing legal mechanisms to regulate their right to housing. Consequently, the women, in particular, have to develop multiple survival strategies, in which the making and unmaking of houses emerges as a continuous process marked by a series of violent events involving relatives, state agents, drug dealers, and social movements. Based on my fieldwork in this community since 2018, I propose to reflect on how houses, bodies, relationships, and environments are mutually made and unmade in everyday life.

This proposal is part of my ongoing doctoral research project. The aim is to investigate the food and aid circulation networks in this same community since the outbreak of the COVID-19 pandemic. The methodology employed is ethnographic in nature, developed in both face-to-face and online contexts. The theoretical framework is based on urban anthropology and intersectional and postcolonial feminist theories.

5.2. Beyond Disposal: Governance, Labor, and Environment

09:00–10:40 ROOM 2 (NIG) Chair: Elena Davydova

Backwater Urbanism: Amphibious infrastructures and the politics of opacity in Kochi, India

Matt Barlow

Early in my ethnographic fieldwork in Kochi, a city on the southwest coast of India, I had a conversation with the director for the Center for Heritage, Environment, and Development. In this conversation, he lamented that "Kochi is a big house without a toilet". He was referring to the fact that despite Kochi's trajectory as a sophisticated modern city, there was no sewage infrastructure and instead, much of the city's sewage flowed directly into the

many canals, rivers, and lakes that Kochi sits within. These waters, collectively referred to as the backwaters, were once the lifelines of this city, enabling transportation of goods and the identity of the city as a quaint tropical paradise which draws thousands of domestic and international tourists every year. Today the backwaters have become the collective sink of the city, and according to many, this was primarily due to the dumping of sewage directly in the waterways. But this narrative of the decline of the backwaters due to informal and illegal sewage dumping hides another reason for the ongoing deterioration of the backwaters, the constant dredging of the harbor to enable large container vessels to dock at the Cochin Port and the International Transshipment Container Terminal. Drawing connections between these amphibious infrastructures and their politics, this paper aims to build toward an anthropology of opacity where what is physically absent is politically present, and what is physically present is politically absent.

Technopolitics of Infrastructure Transitions: Managing Water and Waste in Southern Belize

E. Christian Wells & W. Alex Webb

After a massive hurricane devastated the Placencia Peninsula on Belize's southern coast in 2001, sustainable tourism was the national government's strategy for spurring redevelopment. As part of this process, the state envisioned critical infrastructures, especially water and wastewater, as the levers for pro-poor economic growth aimed at reducing poverty and improving the well-being of the poor. The social and technical entanglements in infrastructure design that followed, however, reveal technopolitical practices undergirded by cost-benefit assessments and embedded in a rhetoric of sustainability that were used to influence how water and waste are governed in Placencia. Through environmental assessments, feasibility studies, public consultations, and other calculative practices, the project brought together state agencies, development banks, consultants, and residents. These activities did more than prepare for construction; they defined the problem, shaped expectations, and positioned the state as the legitimate arbiter for coordinating competing desires and concerns. Our ethnographic research from 2012-2022 finds that these "matters of concern" (Latour 2004) for infrastructure design and development were powerful forces that organized and channeled new forms of postpolitical governance. Though the project stalled before construction, its influence has persisted by serving as a reference point, not for what it promised, but for the organizational work it once demanded. In this way, suspended infrastructures have social effects even when unrealized, or to paraphrase Mary Douglas, they can be fences or bridges. They give form to publics, reveal state practices, and leave behind partial and uneven forms of knowledge that continue to shape how future infrastructures are perceived and imagined.

Unbuilt Landfills: Social and Geographical Influences on Waste Management in Remote Alaskan Villages

Kaori Ishii, Go Iwahana & Kumiko Nakano

In recent years, waste disposal in remote villages in the Arctic has been a topic of growing interest. This issue stems from a complex interplay of factors, including life style changes caused from assimilation and modernization carried out by the majority, and environmental changes such as the melting of permafrost due to global warming, which affect infrastructure. My previous study focusing on villages in Alaska have suggested that government and non-profit organizations provide financial and technical support to villages in a “wait-for-call” approach, reflecting a stance that respects the indigenous self-determination. Yet, challenges remain in achieving equitable outcomes. Additionally, Alaska is vast and contains significant geographical diversity. Therefore, even when referring to “indigenous villages,” the situation regarding waste management is likely to vary by village.

This study aims to examine whether there are differences in waste management among the approximately 200 villages in Alaska, and to investigate how social and geographical conditions influence these differences. To understand the status of disposal sites in each village, we used disposal site audit scores published by the state. We used GIS to visualize the relationship between these scores and possible factors such as vegetation and economic conditions, and examined the relationship with regional differences in waste disposal. We also conducted interviews with an NPO that provides waste management training to villagers throughout the state.

5.3. Practicing Mobility, Rethinking Power

09:00–10:40 ROOM 3 (NIG) Chair: Alexis Sancho Reinoso

Infrastructural Sovereignty and the Social Life of Transport: Ethnographic Insights from Northern Manitoba, Canada

Philipp Budka

Churchill, Manitoba—a remote Subarctic town of approximately 870 residents—offers a compelling site for examining the sociopolitical entanglements and affordances of transport infrastructure, community futures, and northern governance. Dependent on the Hudson Bay Railway, the Port of Churchill, and a regional airport, the town exemplifies how mobility

systems are embedded within processes of Arctic sovereignty, environmental transformation, and livelihood strategies. The 2017 railway washout, which severed overland access for 18 months, catalyzed a shift from external corporate control to a community-based ownership model. Through the Arctic Gateway Group and the community-led OneNorth consortium, Churchill reconfigured its infrastructural governance and asserted greater control over material and political trajectories. Ethnographic fieldwork—including 43 interviews, a questionnaire survey, and archival/media analysis—highlights how residents understand and navigate the layered significance of infrastructure. Transport systems are not only technical assemblages but also socially and culturally meaningful, affording and constraining specific forms of economic activity, mobility choices, and senses of place. Future scenario workshops invited residents and stakeholders to co-imagine and discuss possible futures, from extractive expansion to ecological preservation. Participants largely advocated for a middle path: emphasizing tourism, environmental stewardship, and locally grounded planning. While climate and geopolitical crises, market fluctuations, and policy shifts continue to affect Churchill's infrastructural landscape, the town's experience underscores how northern communities articulate autonomy and sustainability through collective infrastructural engagement. In Churchill, infrastructure operates as both a practical necessity and a lens into broader questions of governance, identity, and future-making in the North.

Moving around the north: Migration in Greenland and the Faroe Islands

Timothy Heleniak

While Greenland and the Faroe Islands differ geographically, they share in common similar size populations spread across a limited number of settlements and being part of the Kingdom of Denmark. This paper examines current patterns of both internal and international migration in these two countries and the factors explaining these movements. Both Greenland and the Faroes Islands have high-quality population data based on complete registration of their populations. This allows quite detailed analysis of both internal and international migration in these two countries. Three factors drive migration in these two countries. The first is urbanization, the movement from smaller to larger settlements because of better employment and educational opportunities and more amenities. The second is the role of infrastructure. In the Faroe Islands, this is a system of bridges and tunnels, some undersea, linking settlements together. In Greenland these are international airports. The third factor are links with Denmark as it is quite common to migrate there for a period of study or work or permanently.

Thinking Infrastructure: Local Perspectives on the Fehmarnbelt Tunnel

Ute Hablesreiter

This contribution examines how large-scale infrastructure projects become the subject of public expectations, concerns, and imagined futures. Focusing on the Fehmarnbelt Tunnel— a central element in the EU's Scandinavian–Mediterranean transport corridor— it explores how people anticipate the consequences of spatial transformation in their everyday environments. Rather than treating infrastructure as a purely technical intervention, the project investigates how individuals and institutions envision its impact on regional identity, economic conditions, and the built environment.

The research draws on qualitative interviews and the analysis of planning documents and public communication. It focuses on how residents, institutional actors, and civil society groups formulate expectations about the tunnel, often referencing ideas such as mobility, identity, sustainability, or regional belonging. These visions reflect different ways of relating to the future and assessing anticipated changes to quality of life. The project explores how these expectations influence attitudes toward infrastructure, shape engagement and distance, and contribute to perceptions of legitimacy or opposition. It shows how planning processes intersect with everyday experiences and historically grounded perspectives.

As a PhD project in progress, this research contributes to anthropological infrastructure studies by examining how people express hopes, concerns, and expectations in relation to planned spatial change. It offers an empirically grounded perspective on how infrastructure projects are linked to imagined futures—shaping how affected communities anticipate changes to their built environment, daily life, and economic conditions.

Unexceptional Infrastructures and the Changing Intimacies of Travel in the Arctic

Sophie Elixhauser & Susan Vanek

Air traffic terminals are a common feature of life in many areas of the Arctic, where roads, railways, and other forms of transportation infrastructure are limited or completely absent. Far from being exceptional spaces of transit, these remote, often older, heliports and small airports are not segregated from the mundane flows of everyday life but are instead deeply embedded within them - places to sit and chat with outgoing friends and relatives, to stop and eat, or to casually wait for guests or goods to arrive. Yet, many of these older edifices are being renovated or replaced by new terminals, incorporating global transportation standards and security protocols designed to ensure ease of travel, enhance safety, and open new opportunities for tourism and trade. Divided between public and passenger spaces, these new constructions are not only reorienting the physical space of air travel but

also the role of heliports and airports in community life. Focusing on the ongoing changes to Greenland's air traffic system with particular attention to air traffic terminals in Nuuk, Kangerlussuaq, Tasiilaq, and Kulusuk, this presentation examines the unexceptional, informal, and intimate air traffic infrastructures that punctuate the far North, the promises attributed to their renovation or replacement, and boarder shifting in community life and the experience of travel of which they are a part.

Walking against the grain of infrastructure: Gender and infrastructural subversion in Karachi

Aseela Haque

This contribution focuses on mobilities, particularly practices of walking, of poor and working- class women residing in riverside locales in Karachi, Pakistan. It highlights how the construction of an elite expressway on the Malir riverbanks has fractured and erased longstanding routes for riverside residents, whose lives and livelihoods are connected to the river. Through ethnographic research, this paper traces how women, many of whom are domestic workers in middle class homes and schools, navigate the river and expressway through risky and non-conformist forms of repurposing incomplete infrastructure. Walking against the grain of infrastructure, these women and their wayward mobilities enact everyday forms of infrastructural subversion by moving in and through environments despite the material designs that threaten their capacities to be mobile and earn a livelihood. As a concept, infrastructural subversion builds on STS scholarship and draws attention to material fluidity and ontological multiplicities in practices of inhabiting infrastructure. Furthermore, drawing on the framework of mobility justice, the paper reflects on how power and inequality shape interactions between bodies and infrastructure and give rise to new but ultimately risky forms of inhabiting the urban.

Parallel Sessions #6

6.1. Form and Space of Infrastructure

11:10–12:50 ROOM 1 (NIG) Chair: Beril Ocaklı

When Infrastructure Becomes Architecture: Crisis, Cosmopolitics and Latent Forms

María Páez González & Brendon Carlin

Faced with mounting, interrelated crises, human and more-than-human communities are rejecting the abstract, instrumentalising separation of bodies, land, water, and the 'resources' essential to life— separations reproduced by colonial and technopolitical representations, law, architecture, and infrastructure. Across diverse geographies, communities are 'misusing', appropriating, or experimenting with broken, failed, and even 'efficient' centrally planned and managed state and corporate infrastructures. They are transforming them and establishing direct relationships with the ecologies they keep at a distance and exploit—through immediate, situated, participatory forms of spatial practice, protection, legal designation, governance, care, and enjoyment.

In Northern Japan, five-metre tsunami walls—built by state and corporate actors following the failure of previous ones—have become stages for knowledge-sharing and ritual dances organised by communal governance bodies that reweave the rhythms of the sea through towns and domestic space. In Ireland, following mounting water and loneliness crises, dams, harbours, and data centre pipelines are being reimagined as cultural and political spaces through experiments in collective watershed leisure, art, and infrastructure stewardship, alongside efforts to grant the Shannon River legal personhood. On the Canarian island of La Palma, after a volcanic eruption destroyed existing grids and social fabric, new infrastructures that asymmetrically redistribute land and water have sparked a creative dismantling of laws and infrastructures rooted in the Conquista. Communities are designing cultural practices and educational programmes that embody an awakened sense of embracing the uncertainty of being "volcanic people."

We refer to these decentralised practices and forms of governance that operate from within and against modern abstraction and exclusionary concepts of nature, property, and infrastructure as latent form. Beyond their supposed technical and scientific neutrality and fixity of their engineered function, infrastructures might become explicitly unfinished common cultural forms—and thus stages for decentralised, multispecies politics. Bolstering these ground-up experiments could open new fields of architectural practice, diverging from

the profession's historical subservience to centralising control and profit. How might architecture support decentralised, cosmopolitical movements that privilege co- productive, hybrid ways of seeing, building, and governing? What might an infrastructure look like that refuses the separation of body from land, technology from politics, culture from nature, human from nonhuman, or life from its form?

'Defence Before Beauty'? Infrastructure and the operational landscape of Fylingdales early warning station

Richard Brook & Luca Csepley-Knorr

Landscape architecture is frequently the unwitting camouflage in the visual amelioration of infrastructure. Large-scale designed landscapes became commonplace in post-war Britain as society modernised – motorways, power stations, reservoirs, gas and oil terminals, all had landscape architects employed by the state in attempts to mitigate against the disruption of development. Moreover, landscape architecture was used to project an image of responsible landowners.

Desirably invisible, RAF Fylingdales, is a British Cold War listening station in a National Park in northern England. The site raises debates around perceived 'natural' landscapes, tensions between legislation for beauty and ecology versus demands for militarised security, and the actions of campaign bodies. Fylingdales is one visible, albeit deliberately obscured, cursor of an invisible global network of defence systems. These spaces occupied discrete, remote locations, often in sensitive and iconic landscapes, often assuming similarly iconic forms. The original complex of 1962 was composed of three 40m diameter geodesic domes. It was rebuilt 1989-92 in its current tetrahedron structure.

Using archival research concerning the planned landscape at Fylingdales, and wider context of the National Park, this paper explores the 'operational landscape' as a 'technical land' with entanglements within, and well beyond, its physical borders. Considering the landscape architecture as a real and metaphorical 'cloaking device' that attempted to mitigate the protests of various campaign groups, we examine the relationships between the visible and the invisible human and non-human actors in a series of complex networks and question a perceived role of beauty in the context of defence infrastructure.

Cracks in the Glass Wall. From Connection to Collision with the More-Than-Human World

Noemi Quagliati

This paper explores the prominence of glass in architecture, tracing its evolution from glasshouses—once used to cultivate 'exotic' plants in the context of European colonial expansion—to its widespread adoption in modernist and contemporary urban landscapes. Today, glass curtain walls envelop anonymous skyscrapers worldwide. Glass's widespread success is driven by two key factors: its transparency allows natural light to flood interior spaces and fosters a sense of openness to the natural environment, while its reflective qualities integrate buildings seamlessly into their surroundings. As a result, glass has become the ideal medium for connecting the built environment with the natural world. However, while glass represents a connection with nature for humans, it often proves fatal for nonhumans, particularly birds, which collide with glass surfaces in significant numbers. By examining the evolution of glass use in gardens and architecture from the 19th century to the present, this paper explores how plants and animals have been interpreted over time and how the "nonhuman turn" is shaping new approaches to building design.

Indigenous architecture in South Asia (India) and the blend of cultural with the spatial

Subhadra Mitra Channa

There has been a continuity as well as transformation in the architecture typical of upper class/caste living in South Asia that had traditionally incorporated the social values and principles of caste, purity, pollution as well as gender norms into the architecture. The front and back, inner and outer realms, the masculine and feminine spaces were clearly spelled out in the houses of the elite but in contrast the houses of the poor and marginal were built in entirely different fashion emphasizing upon community values, gender- based cooperation and mutuality rather than separation. In this paper I would like to demonstrate the interweaving of cultural values and social norms with traditional architecture and the transformation in these with the changing patterns of construction.

6.2. Tracing Hydrosocialities: Between Nature, Politics, and Technology

11:10–12:50 ROOM 2 (NIG) Chair: Alexandra Meyer

Infrastructural Landscapes: Everyday Life, Maintenance, and Water Supply Management

Anna Lehr Mueser

The drinking water for millions in and around New York City has depended on the day-to-day activities of people living more than 100 miles away in a rural region which provides almost all of the city's water. I think about this rural watershed as an infrastructural landscape. In this paper, I theorize the idea of an infrastructural landscape. Building on concepts such as envirotechnical systems or sacrifice zones, I use this term to think about places that are profoundly shaped by and also participate in the management of infrastructures. In framing New York City's rural watershed as an infrastructural landscape, I draw attention to how the landscape—ecologies, farms, and villages— participates in the maintenance of the water supply infrastructure. In the twentieth century, New York City constructed six large reservoirs, displacing some 5,800 people in 23 villages. This region has been made and remade over the past century in order to provide the city's drinking water: Tree planting in the early twentieth century reforested farmland around reservoirs, New York City owns and manages many miles of roads in this region, and the city purchased or protected more than 20% of the rural watershed, covering an area far larger than the city itself. I argue that framing some spaces as infrastructural landscapes illuminates the complex ways that distance places are linked and interdependent. The infrastructural landscape of New York City's watershed illustrates how human and more-than-human worlds are enrolled in the maintenance of infrastructure.

Making Watershed Worlds: Environmental Infrastructure and Watershed-based Management in Cleveland, Ohio

Magnus Olav Nyaas Ravnå

This paper examines the stormwater management practices of a regional urban park district and regional sewer district in and around the city of Cleveland, Ohio, USA. With ethnographic examples from the implementation of "green infrastructure", river restorations, stormwater fees, and public outreach campaigns, I show how these watershed-based approaches physically, narratively, and bureaucratically figure built infrastructures as 'nature', and

unbuilt ‘nature’ as infrastructure, blurring the boundaries between them. Based on this I argue that turning environments into infrastructure, and vice versa, is not just a conceptual, bureaucratic, or narrative endeavor, but is also accomplished practically and physically through everyday routine inspections of rivers, and the careful cultivation of drainage fitted with flowerbeds. I further argue that an understanding of “nature as infrastructure” is not something that is simply or readily accepted vernacularly, but is an understanding of the landscape that requires these infrastructures to be continually justified and made publicly visible. This again challenges the anthropological trope that infrastructure mainly becomes visible when it breaks, or is at least supposed to be invisible, as in this case the institutions responsible for stormwater management are themselves working hard to foreground nature as water infrastructure for it to function as such.

‘Amorphous’ infrastructure and ‘slow’ resistance to long-proposed hydropower dams and water diversions in Southeast Asia’s Salween River Basin

Zali Fung

Critical human geographers are increasingly attending to the politics of unbuilt infrastructures and their effects. Extending this work, I show how speculation and rumour are mobilised to promote or resist long-proposed hydropower dams and diversions in the Salween River Basin. I draw on empirical research on the proposed Yuam River water diversion project in the Thai- Myanmar borderlands of the Basin. I develop a conceptualisation of proposed infrastructures as amorphous as these projects shift form and enrol an ever-shifting network of actors, financiers, and development plans and imaginaries over time. I show how the Yuam diversion becomes amorphous through the contested ‘facts’ of the case and protracted development processes, both for the current and previous iterations of the project. I also examine speculative ideas about how the Yuam diversion is intertwined with proposed dams across the border in Myanmar, including the Hatgyi Dam. The lack of confirmed developers and financiers for the Yuam diversion, and rumours of Chinese actors’ involvement under the Belt and Road Initiative, creates strategic space for project promotion and resistance. Even prior to materialisation, proposed infrastructures have a range of effects. This includes long-standing resistance movements, which are necessarily ‘slow’ and protracted over decades and generations. ‘Slow’ resistance is strategic, incremental, and interconnected over time, but not always overtly visible under authoritarian conditions. Such resistance incrementally (re)shapes the conditions of development, even if it cannot permanently halt project development.

6.3. Tracing Power, Adapting Loss

11:10–12:50 ROOM 3 (NIG) Chair: Philipp Budka

Future Audition: in the Offing

Julian Weaver

Future Audition: In the Offing presents an investigation of Nuclear Fusion, its ongoing quest to become the power source of the future, and its wider implications in terms of post-natural environment and energy landscapes.

Derived from field-work undertaken at Europe's leading fusion research centres during a research commission from the Centre for the Geohumanities, (Royal Holloway, UK), followed by four years working with EUROfusion (European Consortium for Fusion Energy) on their public engagement remit, Future Audition unpicks fusion's future of unlimited energy from unlimited sources by examining the infrastructures, processes and fuels required for experimental fusion research to pursue its energy dreams.

'Always 30 years away', as the joke would have it, Fusion energy is "a dream that haunts the future" [Pinkus, 2016]. By first putting fusion energy 'in place', thus re-entangling its mission to 'create a sun on earth' with environmental discourses around landscape and power, extractive economies, global resourcing, strong sustainability and energy equity, Future Audition will attempt to draw out those to-be-built infra- structures that the fusion energy project defers to the future.

Drawing on the project's fieldwork: audifications of reactor data, material science and virtualisation processes, *Future Audition* will transmit some aspects of these infrastructural imaginaries in the context of fusion as a perpetually forthcoming solution in the offing of energy landscapes.

Landscape of Atomic Optimism

Peter Williams

Some of the most heroic landscapes of the 20th century were shaped by post-war governments that invested heavily in power infrastructure to drive modernisation during the 1960s. Today, a push toward a clean energy future leads to coal and oil-fired power stations, along with their landscapes, being rapidly erased, taking their social and environmental histories with them. However, nuclear power station landscapes – vast and complex environments with a legacy that will endure long after the Anthropocene – invite us to

consider what happens to infrastructure when its function ends, yet its built form and cultural weight remain embedded in the land.

Landscape architect Dame Sylvia Crowe gained international prominence through her work on nuclear power stations. This paper will explore how Crowe developed a distinctly modernist approach to the Nuclear Picturesque in her project at Trawsfynydd. Never before had human intervention in a National Park, perceived as an 'untouched' landscape, been so visible on such a vast scale. This new landscape was not merely an exercise in picture-making; it is and remains a hybrid environment that intertwines rural aesthetics, politics, ecological futures, social networks, and industry.

The landscape contextualises the Ruination of a once optimistic nuclear dream. It encompasses the palimpsest of over a century of energy infrastructure- built, unbuilt, and yet unimagined environments shaped by the site's nuclear legacy. This paper will explore how we can examine landscapes as agents in their own right, aiming to contribute to the reimagining of infrastructure futures during a time of environmental precarity.

The Materiality of Deletion and Infrastructural Flow: Assemblages of Nucleic Acid Testing Booths in Post-Pandemic China

Xu Li & Yuan Yuan

In the wake of China's abrupt policy shift in November 2022, nucleic acid testing booths (NATBs)-once central nodes in pandemic data infrastructure-were rapidly abandoned, dismantled, or repurposed. This research starts from a neglected question in digital materiality studies: what is the material process of deleting data, and what infrastructural remains does deletion leave behind?

Using assemblage theory and forensic media approaches, this study traces the post-pandemic life of NATBs in Wuhan through field visits and interviews. NATBs, originally deployed as fixed data collection infrastructures, became zones of infrastructural failure and yet sites of socio-material reinvention. We examine how their life cycle-construction, collapse, and reassembly-unfolded through diverse human and non-human agents.

We identify three key phases: (1) NATBs as techno-political extensions of surveillance and spatial governance during the pandemic; (2) their decommissioning as a form of infrastructural "de-territorialization," involving material disintegration, data deletion and collective forgetting; and (3) their re-territorialization via both state-led community repurposing (e.g., health booths, book houses) and informal commercial reuse (e.g., breakfast stalls, cafés). Some transformations succeed, while others fail-revealing how infrastructures require new linkages and negotiations to persist.

Our findings argue that data deletion is never purely digital but deeply entangled with spatial, social, and material infrastructures. Although many testing booths still remain in the cityscape, they are largely overlooked—relegated to the background of everyday life. Yet they carry visible traces of their former functions, challenging conventional notions of infrastructure, memory, and urban erasure.

Fort Churchill: Social Adaptation to Military Infrastructure and its Loss

Roland M. Sawatzky & Matthew S. Wiseman

The town of Churchill in northern Manitoba, Canada was profoundly affected by the construction and then removal of a large military base in the mid-20th Century. Fort Churchill was established as a joint American and Canadian endeavor during the Second World War. During the Cold War it was used as a base for cold-weather testing and rocket experiments. Along with the base came an airport, radio services, a hospital, schools, theatres and sports facilities, used by both military personnel and local civilians. The health care and educational facilities had significant impacts on Indigenous communities, acting as a hub for a vast Arctic and Sub-arctic region. With the closures of the military base and research facilities, important services available to civilians disappeared, and the people of Churchill began to adapt to a new reality. Based in part on the personal memories of local residents, this paper will explore the ways in which the people of Churchill were affected by this military/civilian infrastructure, as well as its dissolution, and the adaptations they made to continue as a town under the shadow of government abandonment. In some ways, the early military and research infrastructure of Fort Churchill provided residents with a basis for imagining a way of continuing onwards. At the same time, the abandoned remains of some of the military and research structures created ecological and safety issues, but also social and economic opportunities. In the context of the rapidly changing geopolitics of the Circumpolar North, the story of Fort Churchill, as recalled by the community members directly impacted, ultimately reflects an experience essential for informing and planning new Arctic Canadian military installations.

Parallel Sessions #7

7.1. Ruins and Infrastructural Life Cycles

14:20–16:00 ROOM 1 (NIG) Chair: Andreas Mentrup-Womelsdorf

From Fish Nets to Feedback Loops: Circular Transitions and the Temporal Dimensions of Infrastructure in Norwegian Aquaculture

Rasa Zuzeviciute

This paper explores the invisible yet consequential afterlife of aquaculture infrastructure in coastal Norway, focusing on the downstream management of plastic equipment such as nets, ropes, and HDPE components. While infrastructure is often perceived as solid and forward-moving, this research situates used plastic gear within a temporal gap—no longer useful, not yet repurposed—to interrogate what it means to build, abandon, and imagine environmental futures through materials deemed obsolete.

Set against Norway's recent implementation of Extended Producer Responsibility legislation, the study examines how circular strategies emerge through complex interactions between regulatory frameworks, business models, cultural contexts, and material properties. The research employs a multi-dimensional analytical approach that integrates technical and economic feasibility assessments with cultural-historical perspectives on resource management.

By conceptualizing plastic infrastructure as a socio-ecological actor that mediates relationships between regulatory requirements, local knowledge systems, and environmental outcomes, the paper contributes to broader discussions on how material flows condition industrial transformation in the Anthropocene. It demonstrates how analyzing infrastructure temporality—from production ecology to cultural adaptation—can inform more resilient approaches to environmental governance.

Drawing on insights from architectural and urban planning perspectives, this research ultimately illuminates how material systems evolve across spatial and temporal scales, revealing how interventions designed for sustainable material management parallel challenges in built environment design—where solutions for immediate functional needs must simultaneously anticipate future adaptations, systemic interactions, and long-term material legacies.

From gravel pits to wetlands: biodiversity refuges on infrastructural ruins

Ander Achotegui-Castells & Maria Coma-Santasusana

Almost two thousand quarries and gravel pits remain abandoned in Catalonia (NE Iberian Peninsula). Extraction at these sites often comes to an end after the puncture of the water table results in permeation of groundwater and flooding of the quarry or gravel pit. On the ruins of these extractive infrastructures, new aquatic environments may appear, providing a home to numerous species of amphibians, reptiles, dragonflies, birds and fishes. In a context of rapidly declining biodiversity, particularly accentuated in freshwater ecosystems, these new and somehow unexpected wetlands are much welcomed by conservationists and environmental activists alike. This presentation looks at the ecological futures of abandoned extraction sites through the case study of *Les Llobateres*, a former gravel pit turned wetland. Nestled between a busy highway and an ever-expanding and water-intensive tree nursery, *Les Llobateres* remains a refuge for over seventy protected and endangered species such as otters, eels, pond turtles or purple herons. A team of conservationists currently works in the ecological restoration of the wetland. Together with volunteers, scientists, activists and local authorities, they develop an ethics of 'multispecies conviviality' in a precarious yet thriving environment.

From Polluters to Climate Solutionists: Leveraging Teesside's Industrial Heritage for a Green Industrial Transition

Jay Sinclair

This paper examines how Teesside leverages its strong industrial heritage to repurpose deindustrialised infrastructure into the UK's first decarbonised industrial cluster, obscuring its toxic legacies while reintroducing polluting industries under the guise of sustainability. Teesside has long been a cornerstone of the UK's manufacturing sector, evolving from coal, iron, and shipbuilding in the 19th century to steel and petrochemicals in the 20th. However, five decades of deindustrialisation has left Teesside grappling with socioeconomic decline as key industries, like ICI petrochemicals and the steelworks, closed, leaving behind many abandoned industrial sites. Despite the community's deep connection to these ruins as symbols of Teesside's prosperous heritage, high maintenance costs have led to widespread, company-driven demolitions. The Tees Valley Combined Authority is using this unbuilding to attract investment and repurpose existing infrastructure - like roads, pipelines, and brownfield sites - for decarbonisation technologies such as carbon capture, hydrogen technologies, and energy-from-waste production. Through this 'green industrial transition,' Teesside hopes to become the UK's first decarbonised industrial cluster by 2040, framing their industrial infrastructure as a vital asset for addressing climate change. However, while

these green technologies do offer some decarbonisation benefits, they still emit toxic pollutants that harm human, non-human, and environmental health. Using a post-anthropocentric lens, this paper critiques the use of industrial heritage as a tool for climate action, arguing that Teesside's repurposing of industrial infrastructure to facilitate a green industrial revolution does not erase but rather obscures its toxic legacies, thereby justifying the revitalisation of polluting industries.

Opportunity's aftermath

Evelina Gambino

The word opportunity comes from the Latin *opportunus: ob-* 'in the direction of' + *portus* 'harbour', originally describing wind driving towards the harbour. As I began researching the construction of a large port in the village of Anaklia, Georgia, I realised how I could not understand the project, without coming to term with the opportunities it promised to materialise. Beyond official forecasting of the port's immense returns, those living around it busied themselves to claim a piece of the prosperity to come. The port was left unfinished. This failure partially rested on its developers' inability to portray it as an opportune investment to potential shareholders. Without the port what remained was the wind. Blowing on the empty building site for months on end it lifted dust into nearby houses, submerging newly built homes and their inhabitants' hopes for a better future. Georgia's recent past is framed by a ruinous search for opportunity. Since its independence from the Soviet Union the country has sought to harness its geographical position at the edge of formerly competing geopolitical blocs to become an indispensable corridor for flows of goods and energy. From pipelines, to railways, to highways, to dams and to the port of Anaklia, now site of a new wave of investment. For the past 30 years, Georgia's development has been synonymous with infrastructure. Drawing on ethnographic fieldwork across several failed infrastructural projects, this presentation proposes a decoupling of opportunity and infrastructure as a means to reflect on more opportune future-making practices.

Ruderal Futures: Scrap Metal, Infrastructural Decay, and Precarious Ecologies in Post-Soviet Georgia

Esma Berikishvili

This paper explores how the collapse of Soviet infrastructure in the port town of Poti, Georgia, gave rise to scrap metal collection as a key form of informal labour and a mode of survival amid the ruins of the empire. In Georgia's post-socialist transition—marked by civil war, displacement, and economic collapse — Soviet-built environments were transformed

from symbols of modernist progress into precarious resources, amassed and reworked into capitalist commodities. This process reflects not only the adaptive strategies of marginalised populations but also the material and temporal textures of life lived within infrastructural decay.

I conceptualize Poti's ruined landscapes as ruderal worlds, where decaying infrastructures, human resilience, and more-than-human actors co-constitute fragile ecologies of survival. In this context, infrastructure is not simply broken or obsolete; it is continuously repurposed and reinvested with meaning, forming part of a dynamic informal economy that persists through state neglect and uneven development.

This ethnographic case invites a rethinking of infrastructure beyond its conventional associations with stability or connectivity. It highlights infrastructure as a living archive of past promises and a space of ongoing improvisation, where futures are not built anew but salvaged from what remains. Focusing on the labour of scrap metal collectors and their engagement with the material afterlife of Soviet modernity, the paper contributes to broader debates on infrastructure, informality, and the Anthropocene. It asks how people inhabit futures shaped not by construction but by endurance, transformation, and the improvisation of the undone.

7.2. Scaling Infrastructures: From Emissions to Emotions (Part II)

14:20–16:00 ROOM 2 (NIG) Chair: Bilge Firat

Migrant and Tourist Infrastructures on Land and at Sea: Nature Tourism in the North of Iceland

Magda Kopańska

Located in the northwest of Iceland, Akureyri is 60 kilometres away from the Arctic Circle. Throughout the past decades, Akureyri has experienced gradual developments which have transformed the historical harbour into a modern-day hub with expanded service and knowledge-based industries. One of the key sectors developed throughout the 21st century in Akureyri is tourism with a focus on nature tourism which profits from the local environment. The town's visibility in the globalised tourism market is enhanced thanks to several marketing campaigns marking out itineraries and points of interest for visitors.

Because of the development of roads, tunnels, a port, and an airport, the town and its surroundings have experienced the momentum of the most expansive global connectivity in its history. The material infrastructure, which facilitates the movement of locals and tourists, also serves migrant workers who come to the northern municipality to take up vacancies in the local service sector.

The ethnographic research I conducted in July and August 2024 looks into the developing field of migrant labour in the area of Akureyri. I investigate interactions between Polish workers of local tourism and infrastructure, facilitating the flow of people and goods on land and sea. The question I explore in this research refers to the relationship the tourism industry and its adopted management techniques have with ever-changing natural elements on which its operations depend. In turn, I investigate how these are put to use and regarded by Polish workers of the industry and what their relationships with Icelandic nature are.

A critical reframing of extrastatecraft infrastructuralisation in the Strait of Sicily

Isabella Traeger

In the summer of 1831, a volcano eruption in the Strait of Sicily gave birth to an *Insula in mari nata*, sparking competing sovereignty claims among several maritime powers. Though the island was submerged only months later, it is a striking example of the longstanding hunger for extraterritorial 'zones' able to control and facilitate global flows.

This episode is taken as basis to propose a 'thick' conceptualization of the Strait of Sicily as a palimpsest of existing and proposed infrastructural 'enclaves'. These range from offshore mining platforms, to cargo ships, to underwater data cables, gas pipelines and a speculative tunnel. They can be variously described as the built manifestation of what Keller Easterling defines as 'extrastatecraft', namely largely corporate-run powers 'outside' and 'in addition' to statecraft, able to generate intense infrastructuralisation processes based on legal and fiscal exceptions.

Due to its unique geomorphology and its strategic position at the crossroad between Eastern and Western Mediterranean, Sicily and Northern Africa, the Strait of Sicily hosts a dense network of such infrastructures. For the same reasons, it is historically a key site of (more-than-)human interrelations, sustained by a fragile equilibrium. In the face of intensifying extended urbanisation and climate change-induced disruptions, the contribution mobilises recent re-framings of the sea as a three-dimensional hotspot (rather than periphery) of urbanization processes. By taking into account the sea's plural temporalities and dimensionalities, the Strait of Sicily is framed as a laboratory to unpack maritime extrastatecraft infrastructuralisation, highlighting current and prospective frictions with local ecological relations and concurrent visions.

Bubbles of the Earth. Place, Accident and the Counter-plan in Bangkok

Andrew Johnson & Daena Funahashi

Urban planning builds on a rationalized distribution of space allocated by use and connected by highways and boulevards designed to increase efficiency of transport and production. But within the urban plan, the unforeseen emerges: a counter-discourse to the urban plan. Accidents take place, despite all attempts to plan. In Bangkok, Thailand, such accidents are often recognized as the insistence of entities that pre-exist all notions of plan, calculation, and urban design, calling to be recognized by a plan that ignores their existence.

Here, we argue that within the plan is a counterplan, one built on a counter-instrumental logic of the timeless sacred. Turning to roadside shrines of such chthonic beings, we explore how these sites are more than dedications to the lives claimed. Rather, they mark places that snag against the fabric of urban planning and rupture its smooth surface. These shrines thus mark the insistence of otherwise factual realities that insist of co-existing with a plan devoid of chthonic, non-human presences. Via an ethnographic look at these shrines, we see how they offer potential to not only rethink space, but also to re-theorize what is to be taken into account in planning.

Chemical Infrastructures of the Anthropocene

Lenka Veselá

This research explores chemical infrastructures as invisible yet pervasive architectures of the Anthropocene. Focusing on endocrine-disrupting chemicals (EDCs), it examines how these environmentally ubiquitous compounds extend beyond the skin—transporting, signaling, and reshaping internal processes. Integrating multimodal feminist STS and participatory artistic research methods, it investigates the embodied dimensions of toxicity. Using the concept of the Endocene—derived from the Greek *endon*, meaning “inner” or “inside”—it shifts attention from planetary-scale transformations to the micro- scale of biochemical alteration. By considering chronic exposure to EDCs and their effects on neurodevelopment, cognition, and emotional regulation, it reveals how perception, moods, and emotions may be reconfigured from within. This perspective foregrounds internalized, molecular infrastructures that shape life at its most intimate scales, offering a critical lens through which to rethink un/built environments in the Anthropocene.

7.3. Building and Imagining Futures

14:20–16:00 ROOM 3 (NIG) Chair: Ria-Maria Adams

To remain negative? The making of Panama's emerging environmental regime

Áron Rossman-Kiss

In 2021, Panama's recently established Ministry of the Environment announced that the country was one of the few 'carbon negative' nations worldwide. To sustain this claim, the state has since launched numerous projects, ranging from promoting the canal as global trade's 'greenest route' to preparing a national carbon emissions market. My doctoral research takes these announcements as a starting point both to map the ways different actors have mobilised these claims and to disentangle the material processes congealed within them. Carbon negative: how, for whom, and for how long?

A crucial node in global commerce increasingly exposed to climate change, Panama has also been the site of pioneering conservation efforts, financial speculation, and geopolitical contention. Against this backdrop, my research explores how the country's Ministry of the Environment emerges as a key site of contention, balancing between competing interests and visions for decarbonisation. As opposing visions rely on simultaneous timeframes and hypothetical futures to advance their claims, unrealised emissions and speculative 'green infrastructure become tangible parameters in emissions calculations and projections. How are the un-built and the yet-to-be built integrated into the carbon emission calculations that cast the country as 'carbon negative'? What speculative futures do these conjure — and preclude? And what does Panama's unique position reveal about environmental governance and futures at large?

Futurity and aspiration: imaginations of crisis response and future directions for humanitarian engagement in fiction and art

Bram J. Jansen

This paper examines humanitarian futures and crisis response through the lenses of design and (science) fiction. Specifically, it engages with Climate Fiction (Cli-Fi) and other forms of future-oriented imagination in literature, art, and design, in order to explore representations of future crisis response, humanitarian infrastructures, and interventions. The aim is to transcend conventional emergency discourses and temporalities in humanitarian studies, proposing alternative futures for individuals affected by crises, with a particular focus on forcibly displaced people and refugees, and the environments that host them. While crisis

response and durable solutions to disaster and conflict often center around the improvement and provision of infrastructure and institutional responses, humanitarian studies traditionally prioritize imminent and urgent threats. As a result, interventions and environments that don't exist yet or are yet to be realized are neglected or deemed irrelevant. This paper suggests however that

Cli-Fi and other future-oriented fiction and art are not constrained by the political and technological limitations that typically define humanitarian discourse. Therefore, these genres offer potential directions and creative solutions that are often overlooked in conventional approaches to crises and their societal, infrastructural, and institutional responses. Furthermore, instead of focusing solely on extrapolations of collapse, catastrophe, and dystopian futures, this paper adopts Cohen and Van Haer's suggestion of using Utopia as a methodological framework. This approach uncovers socio-technical imaginations that offer alternative future scenarios for crisis response, advancing more expansive and constructive possibilities for addressing humanitarian challenges now and in the future.

From global trends to local realities: A multi-scale scenario-building methodology for community infrastructure planning

Nikita Strelkovskii, et al.

This paper details a multi-scale scenario-building methodology designed to explore transport infrastructure futures in rapidly changing Circumpolar North communities, bridging global trends and national contexts with local realities. Focusing on Churchill, Canada, and Kirkenes, Norway, we employed a hybrid approach that combined top-down adaptation of existing global and regional socioeconomic scenarios with bottom-up, participatory ethnographic research to ensure local relevance and incorporate stakeholder knowledge. We developed coherent scenarios across global, regional (national), and local scales, allowing higher-level archetypes to manifest differently depending on locally specific features identified through fieldwork. This consecutive, nested process utilized morphological analysis and the Factor-Actor-Sector framework to maintain consistency while accommodating local specificities. The methodology centered not just on scenario creation but also on the function of scenarios as a tool for community dialogue, utilizing artistic visualizations in workshops to engage diverse stakeholders. This approach demonstrates a way to navigate the tension between global and national drivers versus local community needs, yielding distinct yet comparable local futures grounded in broader development pathways. It offers practical insights for deliberations and planning in uncertain environments, both built and unbuilt.

Imagining (and Imaging) the Planet: Earth Observation Infrastructures and Anthropological Opportunities

Michael Anranter

As technologies such as satellites are increasingly imagined as tools for managing planetary futures, they generate new forms of infrastructural imagination that go beyond their current functionality. This paper offers a brief introduction to how anthropology might engage with satellite-based Earth observation (EO) infrastructures - not as complete or fixed systems, but as speculative and evolving fields of intervention that promise opportunities.

A particularly telling example is the growing interest in assessing shades of biodiversity all over the world, or the evaluation of carbon sink potential at small scale that could support future carbon markets and 'nature-based solutions' to climate change. While some of these and other applications remain technically and politically unresolved (e.g. due to image resolution constraints or technical limitations), they illustrate how infrastructures can operate on promises, uncertainties and imagined capabilities long before implementation.

Rather than reporting findings, this paper opens up a field of inquiry: How can we ethnographically engage with infrastructures that are still taking shape? What kinds of futures are encoded in their designs? And how might anthropologists reflect on their own practices of observation in light of infrastructures that seek to observe the earth from afar? Based on an assessment of the interplay and a discussion of what is possible and what isn't by observing from space, this paper outlines different ideas about how anthropologists might approach infrastructures and services that are not yet built, partially built, or only imagined at a planetary scale.

DAY 1 SEPTEMBER 23, 2025

09:00 - 10:40

Session 1.1:

Mediating Spaces, Shifting Digital Lives

- The slow death of state infrastructures: On the platformization of street-corner media (Rivka Ribak)
- Seeing 'Digital' in (Non?)Continuity with Offline Life: Theoretical Perspectives For Locating Computer-Based Structures in Ethnographic Practice (Marco Sassaro)
- Can digital technologies help to overcome the limitations in spatial design of urban spaces? (Paulina Dobroć)

Session 1.2:

More-than-Human Entanglements

- Fishy borders and sense-making with salmon: politics of pink salmon removal at Njauddâm and Deatnu rivers (Sunna Kokkonen)
- Forest-Water Coordination at Infrastructural Margins: The Making of "Wiener Wasser" as More-than-Human Infrastructural Work (Paul Katterl)
- From Svalbard to Ellesmere Island: A Journey of a Fox in Solitude (Rojda Tuğrul)
- Linear Infrastructures and their More-than-Human Ripple Effects (Zachary Caple & Pierre du Plessis)
- Geopolitics of (un)built environments: from infrastructural (de)territorialisation to the (de)territorialisation of infrastructure (Vesa Väätänen)

Session 1.3:

Geopolitics and Political Ecology

- Facing geopolitical turmoil through planned or promised infrastructures: The case of Canada (Giuseppe Amatulli)
- Chipping away at the monolith: reframing the Valle di Lei cross-border dam (Stella De Luca & Isabella Traeger)
- Conjuring the effects of the unbuilt: the Pu-callpa – Cruzeiro do Sul infrastructure project (Pilar Delpino Marimon)
- Polar frontiers, polar orbits: The vertiginous rise of Arctic commercial spaceports (Mia Bennett)

DAY 1 SEPTEMBER 23, 2025

11:00 - 12:50

Session 2.1:

Ways of Knowing, Worlds of Being: Epistemologies and Ontologies in Dialogue

- Ice as an Epistemic Framework: Infrastructural Toxicity and the More-than-Human Turn (Annouchka Bayley, Delfina Fantini van Ditmar, and Jennifer Schooling)
- Cosmologies in More-than-Human Research: Bridging STS and Amerindian Perspectivism to Inquire the Natures (That) Cultures Give Rise To (João Fernandez Pereira)
- Ontological infrastructures of extractivism: Supporting (un-)'sustainable' commodities for Global Supply Chains (María Soledad Paz)
- Geoengineering in Iceland: Infrastructural Ontology and Moving Beyond the "Natural/ Artificial" Divide (Cody Skahan)
- The Apocalyptic Blaze: Reckoning with Fire, Destruction, and Unsettled Futures (Cecilia Vasquez & Aaron Gregory)

Session 2.2:

Infrastructuring Energy Transitions

- 'Pending': Navigating renewable energy, futures, and 'not-yet-built' wind farms in the Faroe Islands (Róisín Kennelly)
- Between Development and the Green Transition: Towards Sustainable Arctic Infrastructure? (Olga Povoroznyuk)
- The 'not yet' of a post-Arctic peninsula (Janike Kampevold Larsen)
- Agricultural Infrastructure and the Transition to Renewable Energy in a Desert Farming Community (Liron Shani)
- You have bats in your 'spouw' – Repurposing the Dutch housing infrastructure for the energy transition by constructing with bats (Lucas Brunet)

DAY 1 SEPTEMBER 23, 2025

14:20 - 16:00

Session 3.1:

Adapting in Urban and Rural Environments

- Vernacular architecture in the Anthropocene: Resilience, adaptation and abandonment in the Himalayas (Hubert Feiglstorfer & Calum Blaikie)
- Heat in the Air: The Role of “Colourless” Infrastructure in Exposure and Adaptation to Urban Heat (Franciszek Chwałczyk)
- Urban nature as critical infrastructure: examples from Finland (Hannah Strauss-Mazzullo)
- Unsettled at Sea: Offshore Renewable Energy and the Social Life of Infrastructural Experimentation (Marianna Betti)
- The Gift of the Abandoned Frontier: Fireweed and the Rhythms of Recolonization (Rusana Novikova)

Session 3.2:

Mining and Infrastructure, or The Built Environment of Extractivism

- (Un)built Arctic Deep Sea: Imagining Mineral Extraction (Marta Gentilucci)
- Cryospheric Challenges: A Comparative Look at Arctic and Alpine Infrastructural Environments (Peter Schweitzer)
- Dis-continuing coal mining infrastructures with more-than-human mobilities (Eva Kotašková)

Session 3.3:

Politics of Dis-connection

- Transborder Roads and Mobility Control: The Borderwork of Infrastructure across the Eastern Indo-Nepal Border (Mélanie Vandenhelsken)
- “Unpaved Arteries”: The Social Consequences of Roads in Nome, Alaska (Alex Griffin)
- Phantom Infrastructure? Environment, Politics and Futures of Unfinished Bay Bridge in Taiwanese Contested Archipelagic Borderlands of Kinmen (Chengyu Yang)
- The Broken Promise of Connection: Solitary Road and the Unfinished Infrastructures of the Anthropocene (Tarja Salmela)
- (Un)built roads and waterways in the Alps: economic interests and demanding materiality (Margareth Lanzinger)

DAY 1 SEPTEMBER 23, 2025

16:30 - 18:10

Session 4.1:

Cultural and Food Practices Across (Un-)built Landscapes

- A field can be a wall (Lucas Rinzema & Jim van der Steege)
- Biodiversity by Design: Experimenting with Agricultural Infrastructures (Pieter Lagerwaard)
- Fish, Feathers, and the Limits of the Law: The Rampart Dam Controversy and U.S.-Canada Industrial Politics in an Age of Transition, ca. 1950-1965 (Andreas Mentrup-Womelsdorf)
- Patchy Deliveries and Seasonal Foodscapes: Provisioning of the Chukotkan Regional Hub, Russian Arctic (Elena Davydova)
- Dynamics of Built and Unbuilt Infrastructure through Cultural Extensions (Michael D. Fischer & Sally A. Applin)

Session 4.2:

Infrastructuring Climate Futures

- Biomass Energy, Work and Nature Restoration: The Forest as an Infrastructure to Reshape the Landscape in Times of Climatic Emergence. The Case of Vall de Lord (Paolo Macrì Antkiewicz)
- Future-oriented imaginaries of island life, environment, and infrastructure in Finland (Erika Takahashi & Kirsi Sonck-Rautio)
- Infrastructures of Risk Management (Felix Ansmann)
- Planning for Doomsday: The Ike Dike that Isn't Yet (Nataya Friedan)

Session 4.3:

Affective and Sentient Infrastructure

- Listening as Intangible Infrastructure: Countering Over-generational Amnesia in Arctic Environments (Kimmo Hokkanen)
- "For the Love of Nabucco!": Affective Excess for an Unbuilt Fossil Gas Pipeline Project (Bilge Firat)
- 'I Hear the Sea': Local Lived Experiences of Disaster Mitigation Infrastructure in Northeast Tōhoku (Jesse Bia)
- Speculative Connectivities: Caring for the Future across the Strait of Messina (Sabrina Stallone)
- Walking-with cracks: un-making infrastructures for imagining otherwise (Kate Monson)

DAY 2 SEPTEMBER 24, 2025

09:00 - 10:40

Session 5.1:

Dwelling, Housing, and Place Abandonment

- Detachedwhere: Inhabiting Finnish Wilderness Cabins to Reimagine Infrastructures (Mari-Sohvi Miettinen)
- Abandoned places considered from a Heideggerian framework (Diana Paula Fuhr)
- Unbecoming beasts: The agency of unbuilt infrastructures across time and space (Beril Ocaklı, Gretchen Bakke & Timothy Moss)
- (Un)building Sanitary Infrastructures: Composting Toilets for Living in a Damaged World (Natalia Picaroni Sobrado)
- Urban infrastructure, the housing right, and everyday life in Brazilian favelas (Isabelle Chagas)

Session 5.2:

Beyond Disposal: Governance, Labor, and Environment

- Backwater Urbanism: Amphibious infrastructures and the politics of opacity in Kochi, India (Matt Barlow)
- Technopolitics of Infrastructure Transitions: Managing Water and Waste in Southern Belize (E. Christian Wells & W. Alex Webb)
- Unbuilt Landfills: Social and Geographical Influences on Waste Management in Remote Alaskan Villages (Kaori Ishii, Go Iwahana & Kumiko Nakano)

Session 5.3:

Practicing Mobility, Rethinking Power

- Infrastructural Sovereignty and the Social Life of Transport: Ethnographic Insights from Northern Manitoba, Canada (Philipp Budka)
- Moving around the north: Migration in Greenland and the Faroe Islands (Timothy Heleniak)
- Thinking Infrastructure: Local Perspectives on the Fehmarnbelt Tunnel (Ute Hablesreiter)
- Unexceptional Infrastructures and the Changing Intimacies of Travel in the Arctic (Sophie Elixhauser & Susan Vanek)
- Walking against the grain of infrastructure: Gender and infrastructural subversion in Karachi (Aseela Haque)

11:10 - 12:50

Session 6.1:

Form and Space of Infrastructure

- When Infrastructure Becomes Architecture: Crisis, Cosmopolitics and Latent Forms (María Páez González & Brendon Carlin)
- 'Defence Before Beauty'? Infrastructure and the operational landscape of Fylingdales early warning station (Richard Brook & Luca Csepley-Knorr)
- Cracks in the Glass Wall. From Connection to Collision with the More-Than-Human World (Noemi Quagliati)
- Indigenous architecture in South Asia (India) and the blend of cultural with the spatial (Subhadra Mitra Channa)

Session 6.2:

Tracing Hydrosocialities: Between Nature, Politics, and Technology

- Infrastructural Landscapes: Everyday Life, Maintenance, and Water Supply Management (Anna Lehr Mueser)
- Making Watershed Worlds: Environmental Infrastructure and Watershed-based Management in Cleveland, Ohio (Magnus Olav Nyaas Ravnå)
- 'Amorphous' infrastructure and 'slow' resistance to long-proposed hydropower dams and water diversions in Southeast Asia's Salween River Basin (Zali Fung)

Session 6.3:

Tracing Power, Adapting Loss

- Future Audition: in the Offing (Julian Weaver)
- Landscape of Atomic Optimism (Peter Williams)
- The Materiality of Deletion and Infrastructural Flow: Assemblages of Nucleic Acid Testing Booths in Post-Pandemic China (Xu Li & Yuan Yuan)
- Fort Churchill: Social Adaptation to Military Infrastructure and its Loss (Roland M. Sawatzky & Matthew S. Wiseman)

14:20 - 16:00

Session 7.1:

Ruins and Infrastructural Life Cycles

- From Fish Nets to Feedback Loops: Circular Transitions and the Temporal Dimensions of Infrastructure in Norwegian Aquaculture (Rasa Zuzeviciute)
- From gravel pits to wetlands: biodiversity refuges on infrastructural ruins (Ander Achotegui-Castells & Maria Coma-Santasusana)
- From Polluters to Climate Solutionists: Leveraging Teesside's Industrial Heritage for a Green Industrial Transition (Jay Sinclair)
- Opportunity's aftermath (Evelina Gambino)
- Ruderal Futures: Scrap Metal, Infrastructural Decay, and Precarious Ecologies in Post-Soviet Georgia (Esma Berikishvili)

Session 7.2:

Scaling Infrastructures: From Emissions to Emotions (Part II)

- Migrant and Tourist Infrastructures on Land and at Sea: Nature Tourism in the North of Iceland (Magda Kopańska)
- A critical reframing of extrastatecraft infrastructuralisation in the Strait of Sicily (Isabella Traeger)
- Bubbles of the Earth. Place, Accident and the Counter-plan in Bangkok (Andrew Johnson & Daena Funahashi)
- Chemical Infrastructures of the Anthropocene (Lenka Veselá)

Session 7.3:

Building and Imagining Futures

- To remain negative? The making of Panama's emerging environmental regime (Áron Rossman-Kiss)
- Futurity and aspiration: imaginations of crisis response and future directions for humanitarian engagement in fiction and art (Bram J. Jansen)
- From global trends to local realities: A multi-scale scenario-building methodology for community infrastructure planning (Nikita Strelkovskii, et al.)
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