

Engaging with environmental uncertainty in Northeast Siberia (Seminar)

Reading reindeer shoulder blade

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The latest environmental calamities such as extreme wildfires in Siberia, California and Australia highlighted limitations of and hindrances to human capacity for rescue, survival and adaptation to different scales of exposure to technogenic catastrophes and the effects of climate change. The questions of how we understand human limitations to avert risks and hazards, how we take into account the increasing vulnerability of the affected communities and how we comprehend human and non-human feedback to new and emerging forms of ‘normal’, stress importance of recognising and acknowledging that expert knowledge emerges in many forms and that it can be communicated in many ways. The understanding of complex networks of risks and strategies undertaken for risk reduction and amelioration will depend on how they are interpreted and articulated, and by whom. Olga Ulturgasheva examines technologies and practices of reading environmental uncertainty in Northeast Siberia while evaluating human capacity and its limits to avert and mitigate the impact of wildfires.

<https://www.youtube.com/watch?v=ajBAh9UznjY>

Good evening everybody. A short intro for our guest tonight. It's very exciting to welcome Olga. She is a senior lecturer, university of Manchester, an indigenous Siberian scholar.

Her research has focused on childhood and adolescence, narrative and memory, animist and nomadic cosmologies, reindeer herding and hunting, climate change, and the latest environmental transformations in Siberia and Alaska, and the response of indigenous communities.

So yes, I'd just like to welcome Olga.

Thank you so much Camilla, for inviting me to present. it's very nice to see this amazing community and members of the seminar called Radical Anthropology. If anything, radical is the most useful term these days, I think, and I love the, the term for the chosen for the seminar.

So the title for my seminar paper today is Reading Ranger Shoulder Blades Engaging With Environmental Uncertainty in Novi Siberia.

The need for effective responses to Unpredictable Climate events faces many peoples over the world.

This is a time when human capacities for adaptation and adjustment to different scales of exposure to technogenic catastrophic and the effects of climate change are being profound.

The questioned the narratives of the dramatic, oops, just a second. I need to change. The, the narratives of the dramatic change offered by indigenous communities and international climate scientists have been ceaselessly pointing to, immense sense of unpredictability generated by the rapidly disappearing cryosphere.

These are reports of the unprecedented extinction of ice dependent worlds and of increasing likelihood for thousands of towns in villages located along the arctic coastline to be threatened by rising sea levels and loss of the ice.

All of the above will only intensify in the course of the next couple of decades with methane released by rapidly thawing permafrost.

The continuous rapacious extraction of subsurface resources makes increasingly clear that the eyes free Arctic is no longer allocated in the distant future, but it's lurking just around the corner.

The questions of how we understand human and non-human capacities to avert risks and hazards.

How we take into account the increasing vulnerability of communities and how we comprehend the relationship of multi species feedbacks to new in emerging forms of normal highlight the importance of the need to recognize the urgency of a acknowledging that expert knowledge emerges in many forms, and this knowledge may be communicated in many ways.

The understanding of complex networks of risks and strategies undertaken to ameliorate them will depend on how they are interpreted and articulated and by who.

The forthcoming scenarios require attentive consideration of the capacities, local, original, national, and international of the human resources, including available infrastructures that could be utilized and build upon while dealing with the unexpected emergency situations.

The case, the cases, or in the graphic vignettes rather, I'm presenting today will offer the discussion of first, how total reliance on the data generated by this satellite undermined local firefighting efforts during recent Siberian wildfires.

Second, how reindeers practice of reducing environmental uncertainty through the everyday reading of a reindeer shoulder blade saved human and lives. And the third, what type of expertise is activated in a situation that requires urgent response? And in particular, I shall look at the rescue operation performed by local drivers when 30 passengers got stuck in the middle of extremely cold winter tonight in the middle of [unknown] mountains, the free cases will encourage us to consider what actors, as well as networks and forms of knowledge are mobilized or failed to be mobilized to provide rescue an emergency response.

In all cases, I consider the ways actors are articulating both their sense of threat, their understanding of causality, their strategic responses, and what type of preparations or lack of preparations enable or disabled mobilization efforts. In sample.

In summer 2020 aspel of abnormally hot weather across large territories of Siberian Arctic, so nearly 300 wildfires blazing at once, causing record high carbon emissions, burning entire settlements to the ground, profoundly jeopardizing human and on and non-human lives, and speeding up degradation of permafrost.

I experienced the impact of those wildfires when I traveled with locals from the city of Yakutsk to arrange a hering community located in the northeast part of the region.

The area that we traveled across was covered with a thick haze of smoke.

It felt as if the entire earth was executing plumes of smoke just as my eyes were irritated and my nose congested.

My fellow passengers also continuously cast and sneezing and sneezed during the entire trip. Soon after reaching the village, I had a chance to speak to a group of local men who volunteered to fight local forest fires.

My interlocutors informed me how their efforts at extinguishing the fire ended up being fruitless because the regional and federal authorities failed to listen to them. Instead, it looked like the authorities had done everything to prevent accurate identification of the location of fires and timely mobilization of firefighting crews. This organizational failure was due to several factors, one of which was the authorities' reliance on a digital mobile application that was expected to provide accurate readings of the current state of the surface grounds. In the spring of 2020.

These authorities indeed invested several million rubbles in the development of a mobile phone application for receiving satellite data on wildfires and floods.

The application was expected to identify the allocation of fires as well as mapping and monitoring their developments.

The mapping data was then transmitted across all departments of the regional emergency infrastructure. On the basis of the provided data, the original officials made decisions and developed their fire fighting plans.

These technology-based decisions were communicated in a top-down manner, leaving no space for human ground-based observations.

The visual information transmitted by application consisted of images of blue and yellow spots.

So as you see on this slide, how it shows what this 20 20 20 data looked like.

The blue spots indicate the areas where the fire is almost extinguished and the firefighting is ongoing, and the yellow ones other areas where new wildfires have just started and where firefighting measures are needed.

What is obvious is that such satellite images grossly oversimplify a complex landscape.

This visual oversimplification reduces the complexity of events on the ground to one type of color reading that often demands the efforts people put into fighting the fire according to one of the local members of the firefighting brigade.

The problem was that because of the unusually high air temperature, the grounds got heated to an extent that the satellite took the heated surface for the fire.

Such an accuracy delayed rescue from the center where it was most needed for several weeks.

The satellite readings also conflicted with the observations from the community members who were witnessing the developments of wildfires near the village.

The people had to walk on extinguishing the fire with no support from federal and regional emergency forces, and the efforts of their efforts was minimal as they were trying to do these with their bare hands. Moreover, instead of showing that the place

was already over the satellite read the smoke from an already burned area as an active fire.

The satellite data also missed fires that was starting up and gave a full sense that there was no need for an immediate emergency response.

The forces were that directed to the wrong location.

The application DA data was the basis upon which authorities could decide whose responsibility it was to fight the fire.

If the fire was located on federal lands, it was the responsibility of Aus of federal authorities to organize firefighting and implement risk prevention measures. If the fire was within municipal lands, it was the responsibility of the local administration to organize firefighting brigades out of the local population.

The effort to identify whose responsibility it was to organize firefighting delayed the urgently needed response by weeks.

What became clear from our conversation is that this application works according to a specific algorithm that identifies the data selectively.

It does not generate an an inclusive view that takes into account not only surface temperature, but also cloud thickness and specific specificities of the landscape, whether it is mountains or tundra, high rocks or hills.

Above all, it cannot see the the heterogeneous constitution of the permafrost soils.

The interaction between fire and permafrost generates a terminal regime that may not necessarily match the satellite receptors through which temperature is read. In 2020, the satellite's capacity to provide a accurate readings of the permafrost bound land turned out to be limited. Moreover, the application took the high temperature regime on the top of the mountains for fire while real fire in less obvious locations was not read. Thus, this mobile application data could only provide an approximate snapshot of a real life time situation. The descr, the discrepancy between snapshot and reality, proved dangerously vast endangering an area already ravished by wildfires.

The latter highlights how the total reliance on digital technologies, including satellite data, may prevent effective responses to emergency situations.

The question of whose lands will prevail in such situations reveals the power symmetry of visions where the perception and the view of the emergency by Van Reindeers cannot compete with the one of the state space corporation called RAs Cosmos.

In the financial stakes and power assertion game in which the Space Corporation RAs Cosmos is involved, it is obvious that the vision of the state wins as an exclusive viewer with a superior controlling perspective.

As HOK theory of an optimal perspective asserts, it is the perspective which makes rest of the perspectives appear to be a orient towards it. But as we saw, as Cosmos is engaged in a self defeating game, but the fire still spreads and moves from more or less controllable to extremely uncontrollable control is not the point and this is not what really matters here.

What matters is that the defy still burning.

So any sort of power games are actually leading only to the defeat and extreme insecurity.

This resonates well with Cath Western discussion of techno futurism and techno fixes that tend to equate new with good or better.

It is a particular techno vision that is obsessed with soft techno solutions with a shiny, ingenious and seductive.

Just like the firefighting application in the techno futuristic vision, climate change presents a problem. Technology offers a solution.

The proposed solutions vary, but they draw up on the modernist lineage of industrial tops, aash, audacious ideas, and innovative machines.

For a erde, the latest dynamic of environmental calamities, including wildfires, only confirms all over again importance of mobility, flexibility and constant alertness, constant alertness conditions, the everyday necessity for accepting uncertainty in each situation of uncertainty, emergency and risk. As I said, with climate change, there is always a novel element or an element of uncertainty which emerged unpredictably despite all preparations.

It is not that the situations are completely new, but their scale and intensity show that there is always an unexpected twist to a family situation of the emergency.

That is to say people have to be ready to navigate the uncertain while relying on the unknown strategies that embrace ontological uncertainty.

Such readiness and acceptance requires skills and mindset honed and mastered in the course of everyday movements along risky roots and passages.

The acceptance of uncertainty together with flexibility and a alertness entail that a broad set of variables is required for taking a decision on a plan for action.

In spring of 2020, several reindeer herding families made a collective decision to change their usual itinerary and move to the highest point of the ver mountains.

This decision was made following the ritual of reading a wild reindeer shoulder blade reindeer had to carry out the di, the diiv, the divination with the animal shoulder blade ritual right before taking a long distance trip usually undertaken when the reindeer required change of pastures.

If the shoulder blade burn before a forthcoming trip cracks along a straight line, the trip is meant to be uneventful and smooth.

If the crack, if the crack creates a hole in the blade, it is understood as a sign of potential misfortune, it that can be very hard to avert. However, in, in this case, an experienced reindeer header and leader, one of the Hering camps Simone Bar told me the following, the quote during last spring.

I read the reindeer shoulder prediction several times and several times or so signs that looked almost identical.

I kept the dry shoulder blade over a wild reindeer that has just been hunted by my brother over the fire until I saw the first cracks. The cracks resembled the flames of the fire, and I felt that a large wildfire ease on its way.

Next time I read the shoulder blade again and saw the shape of the mountains and hi rocks. After I saw hi rocks several times, we decided to change location of theia pastures.

We moved further up, circumventing our usual seasonal route, and enriched the alpine meadows at the top of mountain range.

The area turned out to be safe for our ranger and our families all summer. It is our mountains that saved us. End of quote, I need to add the reindeer.

Her techniques to predict the future include not only meticulous observations of the present, including science appearing on a ranger shoulder blade, but also in an attempt to prevent calamity by appeasing the spirits of the land who, when properly fed and not disturbed by the loud presence of humans of their greedy behavior do not cause harm.

People understand the chances to contain the threat from powerful non-human forces may increase if they give the first piece of the hunted game to the land reserve date is respond by providing benevolent protection.

The ritual of appeasing these periods of the land is aimed at containing their whims and encouraging their benign protective influence.

By conducting these rituals, people attempt to generate a reading out of uncertainty, but they also understand the decision to take an action, need to be based on their warness. That there is, that there is no single answer to a complex situation, and that the experience and knowledge that people gained and developed over lengthy course of time play crucial role in devising a strategy, diverting a potential disaster.

Now I would like to consider another episode of rescue that illustrates what actors, as well as networks and forms of knowledge are mobilized to provide rescue and what type of preparation makes such mobilization effective. Again, we will shall see how technological communication system literally fails and we sh we shall see how local ability to provide rescue is formed and built upon a network of support forged in the course of a practice of mutual aid support and rescue.

On, on January 14th, 2022 vans with 30 passengers set off for long ride to reach original hub located 300 kilometers away from a remote village of AVEs. The Vener village, which sits on one of the highest points of the rugged of Kki Mountain Ridge, has been one of the remotest points in the region.

The only connection it has with an outside world is maintained by the road built by Gulak prisoners between 1930 in 1960s.

The road runs like a serpentine through dangerous high passes, numerous frozen rivers and brooks along collapsed bridges and abandoned vestiges from the Gulag era, marked by watch towels and barbed wire fences, the traveling villages that they included local reindeer headers traveling to attend various errands and visit their relatives, settled in the District Harbor, students returning to the city for the beginning of the college term, and a number of elderly men, pregnant women, children and toddlers in need of specialized medical care available only in the hub as no alternative transportation was available. I joined the group when we departed.

It was late afternoon, the sky was clear and bright blue and freezing wind air was refreshing and crispy.

I was invited to sit next to one of the vans driver, whose name was in Akini.

Due to the complete lack of technical aid stations along the road, local drivers always travel in twos to provide mutual backup.

In case of a breakdown, we were the only vehicles on a lonely icy road for almost the entire trip, which was uneventful and smooth until midnight when suddenly our advance engine started smoking.

I had fallen asleep and woke when I smelled the smoking engine engine.

The van stop and all passengers were asked to take a break.

Some passengers started slowly getting off the van when we saw how the other van had also started spreading smoke while producing strange noise.

The view of both vans with smokings was quite frightening. All of the passengers, when suddenly quiet, no one screamed.

Everything was going in almost complete silence, and I felt like time was not running anymore, but crawling very slowly, we realized that we had stopped in the middle of the high mountains, two kilometers away from the hub in the middle of the fridge at night, with the temperature now reaching minus 62 Celsius.

While we were trying to estimate both chances, both vans, chances of restarting the smoke go, the smoke got only worse in a Kennedy suddenly screamed all get out of the vans and run the van is about to explode.

When we run about three meters away from the van, I realized that one of the men took a bottle of fresh water out of his backpack, jumped below the van and snuffed the fire out by pouring water on the burning wire. This luted for about two or three minutes, the van didn't explode, but it went completely dead.

The second van couldn't restart either.

With extreme cold weather outside, both drivers started rearranging the passengers.

They moved all women, children and the elderly to the warmer van and asked all men to warm themselves by making fire from the trees outside.

They knew the temperature inside the van would gradually drop and it would eventually get dangerously called as.

Now the van could be re repaired on the sport.

The only chance of rescue was to form the emergency service in Kenchi. Fortunately, had a satellite firm with credit for two super short calls.

At the first attempt, he reached an emergency department of the regional government located in Yakutsk.

The passengers stopped breathing and preed their ears waiting for their response.

But what both and I heard was very unclear speech, which sounded like a rumbling in said to me, the guy on the other end is drunk.

He's asking weird questions and doesn't understand what I'm saying.

I had clearly heard in Akins short sta statement to the person on the other end called two vans with 30 passengers, a stack on the road called Yana. It is minus 60 Celsius.

We are about to freeze our request. Urgent rescue end of code.

The call ended at this point and was started waiting.

Almost three hours passed.

There was no sign of any rescue coming and in a can, he told me that it was probably too early to get anything. By this time, I offered in a cane the source button on my phone, and I actually at that point, my iPhone froze completely dead.

So he decided to use his final call, and as soon as the call was received, he said, please urgently phone this number.

He quoted the phone number, tell them that I'm stuck on the river in colle with 30 passengers.

They know what they, they know what to do. End of quote, and hung up. We waited for another three hours.

The van was steadily getting colder and colder.

We were about to freeze in those two vans.

When suddenly out of nowhere, two cars emerged on that lonely snow road. In deep darkness, the vocal lights made those cars look like two u f o ships.

The drivers were in a Ken's friends who brought everything needed at that moment. Hot food and warm blankets.

The first car took the woman and children we got into the second car and made it safely to the district. Harp later, Inna Kenji told us that the emergency response had been delayed as the operator understood that a van was stuck on the river Yana, not on the road Yana.

So he had phoned the wrong emergency units located nearby River Yana.

After looking for the lost van in the wrong place.

They reported that no verticals had been found along the river route.

If had not, ma made the second call asking the emergency per person to phone his friends.

We would not have been saved a perfect storm of adverse conditions, climatological or infrastructural, thus put us at extreme risk as if the extreme weather conditions with fall temperatures near zero night nighttime visibility and mountainous landscape and virtually impossible forests were not enough.

Rescue efforts were also hampered by poor roads and mistaken information about location. We will work.

This episode contains several important points for our discussion.

First, it is the risk situation that reveals the inadequacy of the regional emergency response infrastructure, including technology of communication that is dependent on faulty communication system.

One that enables the possibility for misinformation.

As we saw, any decisions made on the basis of misinformation have deadly potential to lead to casualties.

The miscommunication between the person asking for rescue and the rescue services was due to poor equipment, which could not properly work in that moment.

But the efforts were also hampered by the inability of the operator to understand the urgent language of our driver.

The driver was stressed and due to the restrictions of the communication, technology was unable to provide an intelligible request.

On top of that, there were many unknowns. First, the poor action made that sound drunk.

He might have been drunk and tired because his life was falling apart.

He was receiving unacceptable low salary and was generally depressed.

He may have been sitting in his office on his own as everyone, as everyone was out celebrating the new year with their families. As a rule, the system and the people inside the entire system are running out of juice, resources and fuel. It was a time which continues to the present.

When everything was breaking down, people were over exhausted.

There was a deficit of all resources where all were running out of capacity.

Neither the driver nor I could know any of these things for sure, and the phone technology at our disposal did not give us the time or the connection to ensure mutual understanding.

That was total failure to perceive the emergency, right, to get the narrative right and on the basis of the narrative to generate a proper system response. In the first attempt, the reaction to the second call was radically different.

The urgency, the location, and the conditions were facts that those local drivers understood immediately. They succeeded. Where the system had failed, they had traveled this road many times.

They knew the location and they knew what people needed in order to survive such freezing conditions.

The expertise was accessible only through the relatedness network of which was part.

These are friends who have continually backed up each other and as a result had built the kind of connection and trust that worked effectively at the moment of crisis and this is the expertise that is not featured in the formal top-down emergency system, which means that it is not often destined, which actually means that it is often destined to fail.

The local population, on the other hand, precisely invests their time and energy in this type of emergency response and social network.

Despite much emphasis in the literature on the importance and on the importance of local knowledge, I want to stress that it is not just local knowledge, but the relational networks built upon through knowledge that are key here.

In our case, the driver's relational network meant he knew who to call, which of his network would be the most reliably prepared.

A to get there right away and be there together with the right stuff and see, know where we were located.

So it is a complex set of knowledges that are not just about environmental understanding, but also of the background which allow the driver to make an instant assessment of who to contact to contact in the first instance.

The questions to emerge outta this episode concern, expertise, or failure to know an action.

That is to say activation of rescue.

The event when we were saved by drivers from the regional hub impresses us with their ability to perform a co coordinated action. The immediate, well coordinated and well executed response was a result of an ex experience gained for the long-term grounded preparations.

This is not only an an ethnography of coordinated action, however, it is also about the kind of m which come out of the everyday re regular practice in which skills for such coordinated, coordinated action are honed.

The success of the rescue may have seemed like m to us, but it was not even seen by drivers. It's m due, it's everydayness here.

Day-to-day observations and experiences included a warning that the unexpected is always around the corner and requires flexible responses. The knowledge is every day, not routine, but learn through everyday practices and observations.

So the the heroism in my view, Eli, in being able to marshal that everyday knowledge in response to emergency that is decidedly not every day such expertise includes an assumption of the unexpected.

My discussion doesn't aim to devalue the techno solutions, including the communication technologies.

If the mobile application giving false information about wildfires and endangering people's lives was the case last summer.

The following winter GP s and helicopters were absolutely crucial for saving people's lives in other emergency situation across the region. Also, g p s were absolutely vital in, in saving people during late snow over lunches. Therefore, when it comes to techno solutions and techno risks, there is no black and white answer.

Standardization of strategies is not helpful in this type of high run, in this type of high run of pressure regime.

As we saw into AO graphic episodes presented today, there is always a nuance to each situation to come up with one type of strategy.

False situations might be dangerous and can potentially jeopardize lives.

Hey, I'm not trying to discard or exclude a particular form of knowledge.

I'm trying to explore how the complex information provided by the satellites, mobile applications and daily human observations, including readings of Reiner shoulder blades, needs to be processed with a critical eye for the limitations they offer.

I neither want to trump one form of knowledge against the other, nor demonize the digital technologies.

But there is a urgent need and better evaluations of what the digital or artificial intelligence are useful for and inwards situations.

The case with the satellites and ability to see shows that the too much reliance on technology, which excludes human as well as non-human centric factors, for example, res generated by a reindeer shoulder blade, cannot provide a proper emergency response for the emergency situations. There is no one purely technological response, no purely human on human one.

There should be a combination of several technologies or responses happening at at once.

Situation situations cannot bere through a one size fits all type of the response system.

The danger is that when such systems define the response, multiple other factors are not brought, are not brought into a larger picture and fatal emissions may occur.

The situation when 300 fires back in 2020 were blazing simultaneously is disturbing and appalling.

But in the summer of 2021, this number multiplied by six, the issues that I discussed in this paper had already intensified.

Imagine unimaginably with 1600 fires that during the summer of 2021 we're burning at once.

The situation is exploding in its intensity.

Everything that I had described became impossibly worse a year after and is already getting out of control. This year.

Wildfire wildfires known as zombie fires smoldering on the surface of petrified soil throughout the winter are already reemerging in some parts of Siberia. In the current geopolitical situation, the disastrous connection between the war in Ukraine and global warming has high likelihood unfolding erratically in Siberia.

It looks like this year, Siberian wildfires will only increase in their power and rage becoming even more uncontrollable because of rapidly shrinking firefighting resources and the absence of military forces that in summer 2021 were deployed for fighting wildfires This year, the AI Ukraine currently mobilized in that Russia's genocidal war.

Here. At this point, I feel a bit like my Siberian firefighting brigades.

It is virtually impossible to keep up. Thus, I'm not drawing conclusions. Not only because it is a to be continued story, but hold onto your heads because it is spitting up exponentially where always already behind.

Given the accelerating nature of tipping point processes that behind us keeps increasing.

Dar Jamal a natural scientist and the author of the end of the ice feels that he is already too late and that all he can do is bear a witness. But others, such as local rescue experts and indigenous reindeer headers like our Siberian Avan reindeers feel differently. Recently, I was approached by both regional rescue experts and the vanner

reindeers to come up jointly with a potential rescue and risk mitigation land for a massive flash flood made likely by rapidly melting permafrost.

The Vena village was, its 2000 residents, is located in northwest of the Kenya mountain range.

Two large mountain lakes rapidly increasing, increasing in size and depth due to the intensified rate of permafrost.

Storm have lately triggered the collapse of the mountain that served as a protective fence between one lake and the village.

According to the village mayor, once both lakes merge, the village will be destroyed by a massive flash flood.

The community has been requesting thorough examination observations from experts to estimate risks, provide an analysis of potential disaster, as well as its impact at as well as its impact to generate the risk mitigation plan and rescue strategy in case the disaster strikes.

While speaking to the local rescue experts, I proposed the co-production of knowledge about potential climate related catastrophic that the Mayor Village says is receiving no public attention and urgently needs it.

All the processes currently unfolding highlight that we are facing positive feedback loops of increasing intensity and complexity at the same time in the midst of the capacity of global climate change.

I'm listening to specific people talk about confronting particular issues.

It is their urgency. I'm engaging with that to paraphrase once is what I do. Thank you for your attention.

Any questions, with Sherry? Um, I think, but maybe she's disappeared.

No, I'm here. I'm here. But Chris, if you can help because my connection is behaving badly, so, but are there any questions for, for aga? Um, Anne, Annie. Sorry, I've got the wrong sign up.

Oh, you weren't talking. No.

Anybody else? I was clapping.

Oh, please. Yeah. well, I Oh, oh, hand is gone.

yes, thank you Olga, very much for the talk. Very interesting. I work in the Andes, and I think there's a wider problem here about, coordinating human actions. I remember reading when we were working with midwives about studies of how midwives coordinate when there's a complex birth going on with various kinds of mass and so on and so on and the other study like that I remember, but there, back in the 1990s now, a study of air traffic controllers, if the radar systems go down, how they learn to communicate very fast in a, a very small group of humans and I just wondered whether you'd been looking at any of that kind of background reading, because it just seems like a great hole in, in where we are at the moment as a planet, and that those studies were very important in their time.

Thank you.

Yeah, thank you so much for these suggestions.

I would appreciate if you could send me the references and the names of the offers.

These are brilliant suggestions actually about midwives and air traffic controllers, because these are precisely the kind of people who are at the forefront of these emergency responses.

They are the ones who actually have to mobilize several types of expertise, including their social networks in order to come, come up with immediate solutions and rescue and save people's lives. So, so I'm here. So in these two episodes, as I was just discussing exactly, looking at that types of situations when people have to literally draw from several strategists at the same time.

So that simultaneous response that actually fascinated me and how actually, what actually it is, it has also shown, and I'm sure in the case of midwives and air traffic controllers, just one black and white response to a complex situation actually made, jeopardize people's lives. So it is in a sense, very much a human, human factor that is at the, hmm, and the types of expertise that the person has to juggle and quickly generate the right strategy at almost on the spot that actually matters here. You know, and I was here, and particularly in the rescue episode, you saw how this is, it is done by the driver how, how he's quickly assessing the, his own capacities, but also those strategies that he already have used in the past.

So one hasn't worked so every, and you saw how technologists own, like literally failed. So, and he's, the second assessment that he actually, it wasn't his assessment, but actually his friend's assessment that came up, almost like devised their rescue response on the spot and come, came up in three hours time or four hours time, I can't remember.

Yeah. Fi five hours time or so. It was pretty, it's quite a long time of waiting and I do remember how my, my extremities, my hands and legs and feet start literally like, like fall, like literally getting so cold. I was afraid that I'm just about to get some form of inflammation or, being, and everyone else was in this type of position. So, and, so that rescue operation really stroke, stroke very much because by the immediate solution that have provided and they knew what to do, that assessment, this is what fascinated me because they actually, it has shown that that repair the scenarios of risk is already out there.

They're prepared they already ho ho were honing, their skills to come up with this solution. And, and as you saw, the solution was pretty basic. You know, it wasn't based on some sort of state of, state of the art or some sort of like techno techno advances that have been used in the past. They, they knew that, that they, that they, what matters is actually the speed or response, ? So, and to some extent, I mean, again, if we look at the first episode when I was speaking about satellites, the failure of satellite, data that has wa that was transmitted to the mobile application, it also show on how any form of the standardization actually in providing emergency response in that, in that, and, and in this case was a firefighting strategy. never works because there is always some form of the nuances that doesn't, are not taken into account and quite often people on the ground observations become much more accurate. It doesn't mean

that the, the same, response will work in other types of situation. It has to be always, it has to be always a combination in convergence of several type of expert systems that require, an effective emergency response. have I answered your question? Janika, did you wanna have a question? Yes. Thank you. [unknown] thank you so much for such a, a great, talk.

I wanted wondered whether you could comment a little bit more on the role of the state here, and in particular, I'm sort of thinking on one hand if we talk about, responses, then what is the response to, so are there like different values, by, for the community versus the state what, what is actually valued and what is being saved? And perhaps also is there sort of a backdrop of reliance on non reliance on others, and particularly the state? Is there some sort of a suspicion there, perhaps? Um, so yeah, just, a little bit about, the state as the provider of the alternative.

As you have seen, the state fails here, right? So state comes up with the, this top down solution as I, as, as you have heard solution that actually is based on the vision of the satellite. You know, so the satellite vision is ultimate vision of the state so it kind of tells you how you have what you have to see and how you have to engage with the emergency, with environmental disaster.

So it orders you how you have to behave. And then, and what we saw that contradiction that community members actually firefighters, local firefighters, actually see that this is completely wrong perception of the disaster. So it's not only wrong, it's dangerously it's dangerous and cr it cr it creates further serious cascading kind of effect of, of danger and environmental, um insecurity in, in, in a very profound sense. So whatever role the state, plays is actually is a multiplier of the risk situations and multiplier of, of fir of emergencies. So, so, and it has a no effect as you see.

So because the, the number of, if the number fire multiplies, then nothing is done and it still relies on this faulty system, then of course the system fails. So in a sense, it is a failed, let's say, false pretense of the expertise that is performed by the state.

I'm here more focusing on the type of knowledge and expertise that is, deployed in devising specific emergency response to the, to the environmental calamity that is in, that is ongoing right here. And this is what interests me here, rather than the role of the state, the role of the state's pretty clear it cannot deal with the, situation.

And, and what actually it, my discussion suggest is this multiple perspective and multiple types of expertise have to be combined, combined properly, including the state. One, state mechanisms are there, but it seems like the state is, is destined to fail because of the, inability to respond properly to the climate change dynamic and because it is always late as so it is always late, that lateness and behind inness that is actually state performs is absolutely staggering and is mortal for a local population.

So, so Olga, just, I'm so sorry. I missed, the bit where you were talking about the reindeer shoulder blades, which was so interesting, but you are, you seem to be suggesting, well, that, that the local people have been finding their ways, their their, their ways of creating relationships, of, of mobilizing knowledge, of knowing who to ask when to ask.

has this been going on for a long time that that's the standard position as far as Siberian any concern in relation to the state? Or is this now Becoming more acute? Yeah, thank you for Great question. I'm glad you, you like my reindeer shoulder blade bits so reindeer, actually, as I wanted to show that how in the absence of any sort of state support, reindeer is still are making trying to, I mean, it doesn't mean that the state support is not needed. It's absolutely needed it doesn't mean that they're not vulnerable, they're absolutely vulnerable. But what they do actually, they respond the situation as agents, as actors, they come up with this specific device. And I'm here, I think, more interested, I think while I'll be, I was discussing Reish the blade and the way it is, the readings that generate the ritual of, of, divination when you use the readings the science of the ranger shoulder brake to come up with some solution or mm-hmm. Come up with the, let's say, so range, your shoulder predicts, right, a specific situation.

They see that there is a calamity on the way. So, and it looks like ranger, I mean, obviously they discuss it they say, oh, okay, I saw this in the morning.

This is probably what will happen. Let's see how we can respond, see what is possible or is not. So they engage in this, reading the future, but also generating knowledge on the go, literally so I've just lately read the, the discussion of, I've been engaged looking at several, I think point, walks of climate scientists and particularly models of climate, the way models are being read but also the metals, the models that are being used to provide predictions for the future dynamic of the climate and it seems like no, everyone understand that the models are never perfect and just like ranger headers, they look at the ranger shop blade, science and lions that it generates just like climate scientists, they understand it is, it provides a specific template for the action, but it's broad enough it's so that you engage with it, with the, question am I going to be safe tomorrow? You know, what should I do? So, but unlike climate scientists, I guess the model, the model, is always like, there is singularity about the, the form of the model climate, sorry, butrin her herd us.

I actually engaged with the multiple readings.

It's not like one. And, and they look at, they take that temps of reading, shoulder blade, every single, for example, mourning so they're dealing with several climate mo like literally models several readings, that is generated out of just like Ypi Musk the reindeer shoulder blade is the window into the, is the connection with the ancestor spirit world, with the animal spirit and the earth, particularly the land the lands tells them through the, this piece of the hunted wild ranger, which is like embodiment of the earth the embodiment of the land, it tells, tells them in how they have to interact with the, potential disaster so, and, and how they have to, avoid, the, not really avoid avert the disaster, how they can minimize the risk.

And, and of course, as you saw, they draw on the mobility patterns, the straightaway. It's the, they straightaway packed and change the location of their pastures, change the location of their reiner heading camp.

So this is what I thought is fascinating when I'm been looking at this, climate scientists so, the way they engage with the question of prediction and the model and the climate science models, I'm, I'm just like, I gave very sort of Approximate answer, I guess, hopefully. Yeah, No, thank you. That's very interesting. But it, yeah, I mean, presumably for any culture, these, these very high risks and the need for these, strong social relationships to, to, counteract those that great unpredictability is very, is built in to the culture for it, it it's long past.

So, so in, in many ways, this is just a, a modern version of, of kind of nomadic people's, ways of life ways.

It's going to be, I I, I, Yes, absolutely Pose that's, Yeah, it is more animist response to emergency, ? Mm-hmm.

So they are actually drawing on their relations with the hunted, with the, spirit of the animal, sorry, the world of animal spirits and the world of ancestors, all of that are communicating their concerns, I guess, or their over safety of their descendants, through the reindeer shoulder plate.

Yeah, there are several things that are happening there.

I just like didn't have chance to, I properly unpack it, but I'll do that soon. Yeah. Great. Wait to hear that.

So I'll, I'll go. You, you said that your reading climate scientists work and that one of the, one of the scientists who have been following was, fearing and perhaps, perhaps kind of getting close to certain that a terrible tipping point had already been reached when you see this, exponential increase each year since, 2020 of the number of fires and the amount of permafrost melting and the amount of methane going into the air and so on. And then you, and then you said, that your driver and his local indigenous friends had a different view and they, and they weren't. So, sort of despairing, I suppose is the, is the right word. I was wondering, cause I mean, I need some, I need some help because I'm, I'm in danger of despairing of course, as so many of us are.

What exactly were, what was the grounds for the, I wouldn't say optimism, but for the feeling that something can still be done that you, you found among your own friends and, and in particular your driver and I just wanted to say that, and the critical thing is that it's not just about information, is it, it's like you were saying that the, information provided by the satellite, by the, by the app and the, on the, and the satellite and so on, was, was just useless. but of course, what your driver knew was who would benefit from the information he, he wanted to find, to, to give the information about where you were and what the situation was to people who, who, who would know what to do about it.

The trouble with the moment is we have plenty of information about the cata looming catastrophe of climate, climate change, and our politicians over in this part of the world in Britain, they're kind of they've constantly been given this information, and it doesn't help because they're, they're just the wrong people to get the information. They're, they're interested in other things completely and interest, interested in amounts of sort of cash they can put in their back pocket from various corrupt deals

and stuff. So I just, I, I suppose I need some hope, and I dunno whether you, I mean, obviously we've all gotta find hope. We're gonna be the hope, obviously, as well as just trying to find it. But, what, what, what's your, where, where does your driver and his and his friends, where do they get any hope from is I suppose the question? Yeah. Very, very difficult question so, but what I want to say is, of course, there is, the, the discussion of, of the doom and gloom and everything is, um it's it's not, it's not giving any hope and, DJA Jamal is also saying, well, the only thing what we can do is by a witness, but the only thing remain to do is bear witness.

Let's be witness to the end of the world. But I'm, I'm a bit concerned about this because, just like those drivers and reindeer hurdles, I see them doing something I see them doing things in cto, they engage with the concrete disasters and climate, and what also, it is also a model for our thinking because, they're not engaged in denial of climate change. You know, they're not engaged in politics surrounding climate change, and they're not engaged in precisely in sort of corrupt distribution of funds that have been given to deal with or tackle climate change. You know, so all this financial political stuff that is actually on the way to the concrete action, this is what I see in this type of, in both episodes where that the, that the, that the disaster is there. Nobody's questioning it so nobody's engaged in the denying that or firefighting is, is not there. It's just as if, as if it's just a, a matter or a product of left wing intellectuals and discussion, and then, and their concerns, not like, do what I mean? Like, this is what actually what we see is actually that complete absence of that and how people could have been dealt with if, and, without all this concerns over, power, knowledge, power imbalances, but also, inequalities and all that stuff that is being generated by the, um by the, enlightenment driven world, ? Okay. Yeah. It's obviously, yeah. Thank you. Thank you very much. I mean, it's, quite, quite clear that indigenous people around the planet have got, by far the most, likely not just ideas, but, connections and, insights that, that are needed. but obviously somehow they've gotta, we've gotta ma make sure that those also get to, in a way, states. I mean, we, in, in many of us of course, over here are involved in things like extinction rebellion, and the sort of irony is that extinction rebellion, still, and I can't see any way around this still place demands on the state to do various things to to mitigate the problems and where possible get sort of targets to cut down on on emissions.

So somehow the state, I mean, it's, it's kind of, there, there was, there was a time in the nineties when, when, when we had these massive, massive movements, which culminated in Seattle in, in 1999 when we, we didn't put demands on people because we thought they are the wrong people to I mean, what, what support of putting demands on these various states around the world.

I mean, any, any solution will have to come from below, from all of us.

I'm not quite sure we're still in that position, and, but even though we, we would need to kind of get back to that, but I, I know it's not really fair to sort of ask you to, or anyone really in, in individual to come up with solutions, which we can all kind of think, okay, that's, that's that. Then we've, we've got a, we've got a solution. So

it's more challenging than that, But I'm not, I mean, what I'm saying as well is that, what extinction rebellion these type of moments, alongside Black Lives, lives Matter, standing Rock, I mean, all these are critical for challenging the, um the system that is driving environmental destruction.

So that is, that is a different layer of concern.

What I'm looking at actually at the, at the critical kind of points, very concrete points and where people made, made it safely to the other end so in a sense, like how do you actually survive the disaster and what resources are required? You know what I'm saying? That there is no standard one size fits all solution to all things and every single, and trying to look critically at such solutions that come up with, techno techno vision, obsessed, it kind of, the vision that is obsessed with technical solution or artificial intelligence.

So these are just, if we kind of separate that concern over safety and complexity of the disasters and what sort of knowledges it require, that's one thing and another thing is precisely these political movements that are absolutely essential, and I, and they are working within this paradigm that is doing everything to ensure not really that everything that the, pushes the humanity and the earth into ab so that is the absolutely essential, I mean, these are just different facets of the same question of how, how does one deal with the climate change? I can see James, Jamie.

Jamie, yeah.

Introduce yourself a bit, Jamie, everyone where you, where You coming from? Jamie? Yeah. Hi, Olga, I'm sorry I missed your, the half your presentation, but I'm your, I'm your neighbor from Alaska, so we, I share with you, much of the same, I think, same concerns and issues in the circumpolar north.

I'm, there's so much I could talk to you about, I think, but I, I'll just say a few things and then, and then you can respond to whatever you'd like. first of all, I'm not sure if you've seen Tobi Schwarz's work, in Tru Carta. pretty interesting because, what he's pursued is a, a sort of the collapse of inf Soviet infrastructure anthropology, where he, he's analyzing how, people in Chukar can use a collapsed industrial infrastructure, to, re reutilize it for developing more locally self-reliant subsistence hunting culture infrastructure. So, I can maybe get you those references. in terms of rescue, there's such an interesting history that I know of, in fact, a relationship. I could, two incidents of relationship in terms of rescue in the Arctic between Russia and, and Alaska and the United States.

One is a very interesting event that happened in the 1950s on, St. Lawrence Island, where a US Navy spy plane supposedly was shot down by a Russian mig, and it landed on St. Lawrence Island. And, the entire crew was rescued by Siberian Yik people. And, they, they wouldn't have survived if it wasn't for those people.

So I've been to that site, I've been taken there on, on St. Lawrence Island by, by, people from the community of gamble to, to see the, the, the crashed, the, the spy plane that was shot down by a Russian mig. pretty interesting. then moving fast forwarding I'll talk about, what I've seen, what I've decided is the more, more larger, and this

we have to qualify this, but the larger vulnerability in the circumpolar North, in my opinion, for, for indigenous communities, is the reliance on industrial infrastructure and fossil fuel for survival at this point. Now, climate change is also an extremely important vulnerability, but I will argue in the, in regards to the, question of hope that, that the CPO North actually has more hope for indigenous communities in the face of climate change than do many of o other places on the planet.

but the problem that's arisen, at least in Alaska, is that the, the resilience of the communities has declined because of the extreme reliance on fossil energy and industrial infrastructure. and in respect to all aspects of survival, including, including subsistence activities. we don't have people, driving reindeer sleds in Alaska.

So every single amount of mobility is all fossil energy based.

and one example I'll give is that, and this, this will go full circle back to Russia, and then I'll stop.

About six years ago, one of our communities, was not able to get, its, its diesel heating fuel, that it depend all of our communities, remote communities depend on now depend on diesel heating fuel for, winter heating, and electricity generation generally. And, the only way that, that, that, fuel arrives, is either by a barge, in the water or a airplane that shift, a tanker airplane that ships the fossil energy, ships the diesel fuel to the communities. Now, because the, all of the housing is modern, modern industrial type of housing that relies on this fossil energy infrastructure, if they don't receive their fuel, heating fuel for the winter, then, then they're in a complete survival situation. In fact, it's a hu humanitarian catastrophe. a few years, about six years ago, one of our communities couldn't, did not receive their fuel, and the air longer shipped the fuel.

Did we lose Jeremy? Did we lose Jeremy? Maybe he will get back in a second. We in a minute.

Let's wait. Lost.

Lost his, yeah, lost his volume.

Oh, he's come back, I think, I'm not sure if you can me, but I can Stop now.

Thank you, James. unfortunately, I couldn't hear your final bit, but I can imagine like what you're talking about the, reliance and dependence, heavy dependence on industrial infrastructures, actually, this is what makes indigenous Alaska indigenous communities more, vulnerable. And, indeed, it, it actually indeed borders with the humanitarian Castro because of the, yeah, because of the, there are so much invested into, in, in industrial infrastructure in Alaska. And something that what makes, Alaska stand out from Siberia is exactly this kind of amazing, because I've been to Alaska several times, this amazing air connection, this amazing, quite elaborate, transportation system that is geared and designed to rely heavily on fuel on, extractive industry, that is also driving environmental destruction.

So all of that is kind of very, well then feeds in, into climate change because climate change, if we look at it from the point of the anthrop scene, w what we see is a result of all these several factors that playing out towards making human communities, indige- nous communities more vulnerable. and again, in Siberia, I'm not completely saying

that all they're so resilient, they can do on their own. Not at all. They are vulnerable equally. You know, they also need fuel. They also need all sorts of resources that are maintained for the connection, connections, sustained by the state infrastructure. You know, all of that is budgeted and financed and supported by state budget. So all of that is completely intertwined. and, what I wanted to show is that a, apart from all this complexity all this vulnerabilities, there is always a moment where people show their resilience and their expert system that is out there that can be used.

The resource is the resource and strategy in dealing with the, particular climates and I think I'm here dealing with kind of with the convergence or different type of expert systems that can combine both science climate science, indigenous knowledge and techno techno responses, including artificial intelligence.

So this is what I'm looking at and what you've just described, also pertinent to understanding Siberian communities. I mean, there is no any indigenous communities that are not anymore impacted by extractive industries or industrial infrastructures. So, but be, and of course, I mean, it is a fact no one denies that. It just, I more look at the edges of knowledge or trajectories of knowledge that could be productively used in devising specific strategies or showing how indigenous storage and what are those facets of knowledge that can, that are so essential for understanding the climate change dynamic in, in the Arctic. I hope I answered your question.

Yeah, I would, I would, I have assessed in the, it's my opinion, based on my understanding of, of the, Siberian side that Siberian communities are in fact, probably more resilient in the face of, of these changes than our Alaska communities because of the, the, the Americanized, infrastructural development that occurred in Alaska.

So that's one of my analysis. And, and, lastly, one of the other things I would say is, is that, in terms of those knowledges, those ways of dealing with, some of these, potential crises, one thing I've not noticed is that rather than an immediate return subsistence economy, what people in the North have is an they, they have immediate return, like type psychology of dealing with all of these things. And, that actually creates a ton of resilience.

It creates vulnerability in terms of thinking about long range consequences of their own actions, but it actually creates a really strong capacity to cope with, with crises when they hit. And I think that is an, that is one component of hope. Another component of hope, that at least we have going on, is that, well, we have, a large stale decline really in a, in viable caribou habitat, reindeer habitat, because of the growing shrubification, the, the northwards movement of, of shrubs, on the landscape.

we, we have, we have northward migrations of these different, subsistence species, which is presenting all kinds of interesting new opportunities for, for a, for a different, subsistence adaptation potentially. but then again, mobility becomes the issue because, especially all winter survival and winter mobility becomes the, the, the crux of how to develop, localized resilient communities because the winter conditions are, the, the change in winter conditions are making it so that people can't rely on snow tra snow and ice travel anymore. Anyways, I'll, I'll stop. Thanks.

Yes, thank you, James. I absolutely agree.

I once brought Alaskan pic to, Siberia, and what they told me is that, that their first impression is that they have returned to their grandparents pasts, because this is exactly our, they said, this is how, how our grandparents lived, and they were so stronger they could stay without electricity, right, in the great outdoors, taking care of themselves through subsistence activities, just only subsistence. That's it and they were like so astonished to see how a vRAN had used, used reindeer. That was their main mainstay and their main resource and both transportation means too. They kind of took trips on the by, reindeer caravan, and they were absolutely astonished, but they also admitted how hard it, what, what a hard life lifestyle it is and they have forgotten how to take care of themselves just through subsistence activities. And one thing, this one thing, but then I've been to Alaska and I saw how still they are resilient.

I mean, the way they, they read where the conditions, the way the kind of knowledge they're using to, move through the land and still stay kind of strong despite the words, is absolutely fascinating.

One thing that, of course what makes absolutely vulnerable is the stationary lifestyle that they have been, in four, have been basically cursively forced on, and they're staying there and this is what makes them especially vulnerable in the face of climate change.

Climate events such as, for example, Miba Miba, h not hurricane or, Typhon. So last year, and that, stationary settlements actually were hit heavily and this is something that, um hunting economies like Hupy and NPI have never they've always been mobile. And when the state prescribe you and tells you what, how you have to leave and stay on one spot, despite, eons and noons of traditions of moving el around this vast arctic, tundra is violence this is what makes, communities most vulnerable now. So, and I guess all the infrastructure that revolved around their, mobility patterns in the past now are looking, looking as, as a possible solution to infrastructure needs of the communities.

Now they need more mobile, buildings. Mobile, yeah, mobile dwellings, mobile architecture, mobile transportation means that a more ecological, just like dog sleds or ranger sleds were in the past, but unfortunately I disappeared. They were actively dismantled by the state, by the education, by infrastructure.

All that has been so heavily imposed by Euro-American, paradigm. And they were Euro-American economic system. Now, even now, I'm looking at the, I'm speaking to have been speaking to several initial scientists who actually looked at it as, as the promise, as a hope.

This is exactly what we need.

We need more mobile dwellings in order to ensure our mobility, sorry, our communities are more safe in the face of particular floods, for example, even here in London or such huge hubs like London, New York or Paris are much more vulnerable than small mobile, no magic communities somewhere in the Arctic coast because they can actually quickly pack and leave and change the location.

Now, it is impossible, this huge gigantic hubs of populations that are, about to face huge floods with the permafrost sewing, with the disappearance of the Arctic ocean ice, then it is getting quite likely.

So we have to think now, out of box, but also including try to think respectively, but also draw from this type of expertise.

Indigenous communities in the Arctic have always had. Yeah.

Thank you. Have we got any more questions or shall we, bring this to a thank, thank Olga very much? Irene can, do you wanna put a question or put it in the chat? Ii Yeah. Hi Olga. Thank you so much. my question is about the resources that the people in TZ had, ready to use after just one call. So they, in your narrative, you showed very clearly that they were prepared for an emergency, and it was not only the knowledge how to do it, but also they had the resources, they had the vehicles, they had the blankets, they had the food, everything was ready in the middle of the night.

So can you tell us more about that? About the preparations of communities for emergencies and the resource, especially on the side of the resources they have to, to anticipate for such events? I'm sure what they knew, as soon as they, the driver identified the location, right? As soon as they heard the location, this is river mink, they said they straightaway understood the distance.

They still straightaway understood the landscape that is in between this and this mountains.

So it means they hardly have any connection with outside world.

So it means the straightway realize it is the coldest point in the high passage, mountains, the straightway understood they, when they arrive, they are the passenger's all about to face all these kind of tiny knowledges, right? Tiny details. and the knowledge of the, root has actually helped to devise the resource, to devise and mobilize resources, resources straightaway. So the resources, precisely the, rapid response, they were asleep almost like, so it means like they, since they know how great the situation is, they woke up connected very quickly.

their vocals were exactly, ready to, start the trip to, to jump into that and, half hot food straight away and I remember even they brought bottle of vodka because they know bottles of vodka, because they knew they people are going to be so cold dangerously cold, so warm up. Anything that could warm them up a little bit, would also help. You know, so warm blankets, they knew everything should be prepared for distribution among passengers because they heard the number of people that are stuck, what type of vehicles they were there, they straight to assess, okay, they probably have a fu fuel for another hour or 30 minutes, ? So they understood that at that point, when they arrive, they need a quickly, let's say re provide this instant help on the sport, ? And I think all the knowledge about, temperatures as well how fast they're going to be frozen and what sort of vanities, whether it is Toyota ice, high ice, or, Russian van called, just a second, I've forgotten the title. Anyway, so they knew the Russian post Soviet van would stay warmer a little bit than Toyota high eyes, because the other high freeze immediately almost so they straightaway understood that, and how long

it'll take. All that type of mobilization is extremely important in assessing the dangers and the risks and how, I mean, how likely they're going to freeze.

So all that preparedness is actually, I realize is, is extremely essential and the fact that it is their friend that they have been helping each other for decades they knew how he's dressed, probably they knew how he would behave at certain point during that situation. They knew that so, and they, the way they came, they were absolutely calm. They were ready to, like, they were there for us instantly and that was actually struck me, literally impressed me by their efficiency, by their empathy, all this kind of human response, very human and humane response.

This is what made me, made, us survive humanity humanness, kindness, generosity, not that kind of me, me, me culture that actually it's all about me.

You know? It's my like, free time it's not, yes, they've done it for free and this is what makes the response work, ? Thank You.

Marvelous. Thank you. Yeah, that, that, that's a lovely way to, sum it up.

I think, I think we should really thank Aga for such a beautiful concrete discussion of this, this facing risk and, and the challenges of risk through this very flexible, resilient type of mindset that, as she says, is, is humanity, is, is what is in humanity's heritage without a doubt and the importance that Jamie was bringing out of mobility and, and, and nomadic strategies as ways to mitigate these risks, so important as well. so that's been a really great, learning experience for, for some of us. I think that's really helpful.

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Olga Ulturgasheva
Engaging with environmental uncertainty in Northeast Siberia (Seminar)
Reading reindeer shoulder blade
May 16, 2023

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