

SULAMISVESISSÄ

("In the Meltwaters")

TRAM DRIVER

Radiogalleria presents the radio essay *Sulamisvesissä* ("In the Meltwaters"). Written and directed by Henna Laininen. Sound design by Eero Nieminen.

Scene 1.

GLACIER

(creaking of ice floes, hissing of air bubbles)

NARRATOR

When you look at the ice up close, you can see air bubbles inside the translucent sheet. The air released from the bubbles in the polar ice caps is hundreds of thousands of years old. The climate of different eras has been recorded in the gas concentrations in the bubbles: the warm and the cool periods, the shrinking and expansion of the ice caps.

Safety equipment is needed to survive on ice. I weave you a rope from my words. Will you trust me to guide you?

Utö. The southernmost Finnish island with permanent settlement. Looking out to the sea from here, you see only water. People of the island carry on with their tasks. Wood is chopped for heating the sauna, the pump at the well is being fixed. It is easy to forget that ice once flowed over this point. A freezing cold mass reaching up to the clouds grinded the stone, pressed a dent into the Earth's crust. Now the crust is popping back, like a balloon filled with gas. And we are rising on top of it.

The island has been revealed for a moment, has revealed all the possibilities. The year is 2018. Henna sits where the meltwaters receded after the latest ice age.

HENNA

Utö, 31 July

I came here, on the rock under the lighthouse, to eat ice cream. This is some certified save the rainforests kind of ice cream. This piece of trash wrapped around it says sharehappy dot com.

Feels like I can see really far from here, I can almost see you sitting in a tram, of maybe you pass me on the street and we've never met each other. It's been so warm here, exceptionally warm. I was chatting with the clerk at the store and she said it feels kinda weird that the nights are sort of Mediterranean, that the dark comes but you're still sweating, the wind is warm. Dang, this is dripping on my fingers now. Oh, this icing is totally crumbling.

Maybe I'm most frustrated by how people talk so much about the future, about their travel plans and what their children'll grow up to be, all sorts of dreams, which of course are really lovely to hear. But at the same time, I feel like I can't see the future. And I don't dare to say it aloud, 'cause then I'd feel like a horrible killjoy.

And then if I start to talk about the global warming with, like, the engineer on the Utö boat, there's really nothing comforting to say. And it turns to the kind of silence that it's easier to talk about something else.

But I can't really know it, maybe you're thinking about ice too, and you don't want to say it aloud either. We both think about

ice, we sit opposite each other on a tram. And we have this smile on our faces, like this is going to be a good day.

TRAM DRIVER

Dear passengers, this is going to be a good day.

Scene 2.

(sound of coffee pouring into cups)

SOLVEIG

One and half spoonfuls. Like so.

HENNA

Do you have some specific memory about ice or snow that you will never forget?

SOLVEIG

I was coming back from the winter holiday to the mainland with my friend. We fell through the ice and trod the water with our suitcases in our hands. There was air under the ice, that's why it broke. The postmaster's wife also fell through the ice. And the postmaster said, save the children first and you, my dear, you will come up the last.

NARRATOR

The residents of Utö know that the ice must be respected. During a high-pressure, the level of sea water drops, and air pockets form under ice. The ice can then break under one's step. In addition to the annual weather phenomena, something exceptional is also happening: the polar ice is melting faster than at any point in human history.

The polar regions differ from one another like they were dizygotic twins. The Arctic that surrounds the North Pole is a sea surrounded by continents. Winds and currents tear the floating pack ice apart. You think you're pulling your sled towards the north, but the ice underneath is drifting south. The Antarctica, on the other hand, is a continent. It is steadier under the feet. Its ice sheet that is thousands of meters thick inches unnoticeably towards the edges of the continent.

The slow movement of the ice tricks the human eye. Right now, everything seems peaceful, but a previously frozen strait in Svalbard now glimmers open in front of you. A sped-up animation of the shrinking of the sea ice by NASA makes the cycle of expansion and receding visible to human eye. The ice pulsates like a heart.

MIKAEL

What's also related to this, is the type of future that is foreseeable, so we quite quickly enter the world of predictive models. So we have a certain understanding of what has happened in the history, how we have got to this point. But the decisions that must be made and are made, what effect they have lies in the future.

NARRATOR

Mikael Hildén is a climate researcher. He knows that if all glaciers on our planet melt, the sea level will rise by 80 meters. But that is still a distant future. Maps have been drawn for the upcoming decades about the areas of flood risk, and runoff pipes and dams are being built in preparation for the meltwaters.

Henna travels to another island, the Lauttasaari island in Helsinki, to meet Mikael. Henna is a child of her time, she has an inkling but she doesn't see clearly yet. She is searching for a rescue rope.

Maybe Henna thinks that islands have boundaries, that islands are separate from one another. That on one island a researcher might know something we don't: how to get out of the water.

That a connection could be found between the islands.

HENNA

It's nice that we found Lauttasaari for the place, so we're on different islands. (MIKAEL Right, yes, yeah yeah, just so.) That I've been writing in Utö, and now were here on an island in Helsinki. I also found out that earlier Lauttasaari was even more like an island (MIKAEL Yeah, yes, right, exactly.) That there was no bridge, that there's a long history.

MIKAEL

There is, yes. The open sea is near, because the archipelago is so thin here in the Helsinki area, so a really large sea opens here, as large as there is in Finland, anyway.

HENNA

What interests me is, how can we understand these remote and large-scale phenomena, like the global warming or the melting of the Arctic, if we've never been there ourselves?

MIKAEL

That's exactly where the difficulty lies, in the way our body remembers the long term, because a long-term phenomenon is what the climate is. The momentary changes in weather, they are experienced in a very concrete way. But then, if we talk about remembering long-term experiences, we're talking about remembering the kinds of things like the winters not being like they were in one's childhood, then the memories that we have play such a big role when it comes to climate.

SOLVEIG

We had a large kicksled that my father had made as a young boy. He had attached a sail to it, and it was fun to just stand on the runners and let the wind push you. The sled ran far, far. And the ice was so strong that many kids could sit on the sled at the same time.

NARRATOR

When the children of Utö rode their sled in the wind, they felt the frost nipping their cheeks and their woollen jumpers were soaked with sweat. In 2018 ice is increasingly often seen from afar, in satellite photos or animations, framed by a smartphone or tv screen. Representation has replaced the reality.

When I am born, it is the year 2023, and the coming of snow is unpredictable. My first recollection: I reach my fingers towards a miracle that falls through a wet darkness.

HENNA

Utö, 1 August

I sit on a lichen-covered rock at the edge of a heath. The moon has risen a little while ago, it's past midnight already. One glacier researcher has said that the moon light is largely also glacial light. And then he said that when he looks at the moon, he thinks that he too has a connection with the glaciers. I look at that moon and think it's the light of the glaciers. It's your light, ice. I don't even really know, how to address you. I don't know whether you're one or many. Whether any personal forms even work. But as I only have this language to work with, I'll settle on addressing you as you.

You shimmer from all over. There is ice in Africa too, right? Maybe on the top of Kilimanjaro or something, there must be ice

and snow there. The nearest ice right now, however, is probably in that freezer here at the artist residence. We could not get by without you.

Do you have a center? Like animals and humans have some sort of center in their bodies, some say it's the heart, some say it's the brain. How does it feel to melt? Is it somehow similar to, say, sex? Merging, feeling like you're everywhere in that moment, swimming through the other? Is it diminishing? Will the moon become darker when you melt? You become water, you will carry on, circulate in us. Is there really any border between you and me?

I can only pose you these human-type questions. Is there any use in me talking to you, when the world is so full of human talk? It's so full we don't even have time to listen to anything else. Can I just be silent with you for a bit?

GLACIER

(gurgling of melting ice)

Scene 3.

NARRATOR

Besides the models created by scientists, we also understand ice through stories. Until the late 19th century, the polar ice caps were the last uncharted areas on the map, icy unpredictable regions that put the courage to a test. Who would be the first to raise their flag on the pole?

The history of the will to conquer is also the history of miscalculations. One of the best-known examples is probably the case of the Andrée expedition. In 1897 three men, office workers from Stockholm, decided to conquer the North Pole using a hydrogen

balloon. Already before the day of their departure, the balloon started to leak at the seams. But the men wanted to believe in their success. The youngest of them even threw the final love letter from the uncontrollably rising balloon. The letter was never recovered. Years later, on an arctic island, pieces of bone were discovered. A torn-apart camp.

Stories broaden our view of what is possible. In the short story "Sur" by Ursula Le Guin, nine South American women embark on an expedition for the South Pole. They don't want to leave any trace of themselves. They only want to see. The weather favours the women. They negotiate on the decisions to be made, they take care of one another, and become the first humans to reach the South Pole. One of them even gives birth on their way back. The expedition is kept a secret in order not to disappoint Roald Amundsen, who arrives at the pole later.

Glaciers are also the unknown regions of our minds. We dream of the glaciers, and the glacier dreams of itself through us.

EERO

As I came closer to the Steindalen Glacier, the air suddenly started to get cooler, which was nice. Otherwise, the days had been surprisingly warm considering how far north it was, you didn't need much more than a hoody. But then it started to rain there, I remember that too. That it was raining, and I was walking on that glacier.

HENNA

What kind of shoes were you wearing, walking on the ice?

EERO

Just regular hiking boots. They held steady there, I wasn't slipping or anything. I somehow felt that brisk joy of a hiker.

But then, as we got closer and closer, there were these signs, always with a year, like the edge of the glacier had been where the sign was. And there was this sign, "1991", that's the year I was born, and that sign was about hundred meters from the current edge of the ice. That really gave me a pause, a sort of experience of one's smallness there. Between those crazy big mountains, in a valley carved by the ice. How something so enormous can just disappear in a blink of an eye.

NARRATOR

Stories broaden our sense of what is possible. Henna has never been on a glacier. She is forced to ask, to proceed guided by someone else's words. You, my listener, only have my words. Will you trust me to guide you?

EERO

Then I was standing there, on the ice, and I had all my microphones set up, to the ice, 'cause I was listening to it. And from under the ice, the intense rumble and hum of rapids. All that meltwater came from somewhere quite far away. I realised that where I was standing was actually hollow underneath. That a water channel had formed in the ice. That if one ended up in those rapids, there'd be no way out.

GLACIER

(roar of the meltwaters)

HENNA

Utö, 2 August

Hi love! I'm here in the grass and think of you. Now it reaches up to my armpits, the grass. Ah, I must raise my arms up.

It's been really hot here. I've been reading in the news about the forest fires. Twenty-six people in a tourist resort in Greece had gotten surrounded by the fire a couple of hundred meters from the sea shore. And they'd instinctively huddled together, embracing each other. I feel like I can survive anything, if I just have someone to embrace.

I was somehow so lovely, when with you I felt like I was a girl behind the ice cream stand being held by strong hands. With the ice cream running down my thighs. But still, maybe, what I'd never felt before, that I felt with you, was that there could be something permanent in this world. Almost, just almost, the future could be seen.

I had a dream where you were naked in a train carriage. I'd just given birth to our child. And I lifted the baby to your chest, and we were anxious about whether the baby was alive or not. And I leaned over. And saw one living eye. A blue, bright eye.

Then after we'd had sex for the last time, I told you about that dream. And I said that I'd so much want to share the miracle of life with someone. And you just said that we are already witnessing the miracle of life.

Scene 4.

(tolling of funeral bells)

NARRATOR

"No man is an island", John Donne, an English poet and priest, wrote in 1623, exactly 400 years before my birth. That father of twelve laid on his bed, weakened by a fever, and heard through an open window the funeral bells of an unknown person. "Any man's

death diminishes me, because I am involved in mankind", Donne thought. As the sixth wave of extinction accelerates, we awaken to the reality that even an island is not an island. We are all interconnected. Our cells use the same oxygen to breathe, the meltwaters circulate in us. When species critical to our survival disappear from the world, extinction threatens the humans as well.

MIKAEL

Never before had the spring at our summerplace been so dry, that really all the plants in the meadow just withered before they even got to the flowering. And in a way you could sense in it your body, even though obviously I did not personally wither. But, but, seeing these withering plants, it is a sort of bodily experience, that you're able, in a way, to perceive that misery.

HENNA

My friend teaches Finnish to immigrants and she told that one of her pupils had been really upset after feeling a dry wind blow through the window. He'd said that a dry wind means a drought is coming.

MIKAEL

We can obviously think that in our circumstances here in Finland it's so safe. You can go inside and open the tap for water. But in countries where that is not an option and you see the plants withering, there the global warming is an extreme physical experience.

HENNA

I was shocked myself when I watched a documentary about red kangaroos in Australia and understood how differently the bodies of various creature experience the global warming. The red kangaroos suffer from the heat and drought, and how the red kangaroos cool themselves by licking their arms, and that can only

help up to a certain point. That is the bodily experience of that kangaroo. It's different from my experience.

NARRATOR

No one is an island. When a red kangaroo dies, something of me dies too.

According to certain evolutionary scientists, life originated not in the sea, but on islands. At the time, the world was covered by ocean with only islands peeking up. On the islands, the molecules could get wet, dry, and rearrange infinitely.

HENNA

Utö, 3 August

I lay here at the water's edge, my stomach against the rock. I had to wade here almost on all fours, use my hands for support from the sea bottom. There's soft green seaweed attached to the side of a rock here. Like someone's hair being washed. I can push my fingers into it.

You are in me, as a potential. I have seen my ovaries once in an ultrasound. They looked like an island. We all have been more than just one, right from the beginning. The cells have started to divide.

I heard that cells can store epigenetic information too. That means, the attributes picked up by a creature during its lifespan could be inherited by its offspring. And then I started to think, what would I like to store for you? If I learn to germinate peas, can you inherit that skill? If I learn to be persistent, will you too become persistent? Or if I don't lose empathy.

There's a small fish swimming just there. *It* came to swim here, among the green seaweed. There are other small fish there too, even smaller.

I'm afraid that I won't get a chance to see you. Can you mourn for someone who does not exist yet?

(whispering) How deep do you swim?

GLACIER

(sounds of whales and dolphins, creaks of ice floes)

Scene 5.

SOLVEIG

In the year 1965 the winter was harsh, and almost the entire Baltic Sea was frozen over. Seventy ships gathered in the channel passing Utö. They got stuck in the ice for a long time, because the icebreakers happened to be on strike. And when the evening came, we saw through the kitchen window a city of seventy ships with all lights shining. It was a metropolis. And then the food ran out. The strike lasted so long. One night a man came from the ship to our home and asked: "Haben Sie Kartoffel?", Do you have potatoes?

NARRATOR

We have used fossil energy to light up almost the entire planet. At the same time, somewhere in the dark, ice is melting. In 2018, scheduled flights pass over the polar areas, and you can have sushi in Svalbard.

We saw a city with all lights shining, and then the food ran out.

The polar ice caps have become the symbol of the ecological catastrophe. As the glaciers melt, many things trapped in the ice are revealed: microplastics, prehistoric viruses, flowering algae ripened by the sun. The ancient hunting skills of the inuits become obsolete on the thawed ice routes. The gas companies compete with the natural spirits for a position in the rituals of the Nenets people.

Other things are revealed by the melting, as well: new trade routes, oil and gas reserves. Polar expeditions continue in the form of contest for the control over the opening marine areas.

In a meltwater map depicting a distant future, the European shoreline has been redrawn. Many coastal cities have become submerged as the sea level has risen by 80 meters, Helsinki among them. The Western Europe has become an archipelago.

MIKAEL

The existence of the phenomenon can be in a way denied until we have watertight evidence. But then, at the point where the evidence is watertight, it is definitely too late. The worst thing to do is to paralyze and just like wait, that now the catastrophe is at hand and.. One panic response is to rush headlong into some solution, the other is this kind of apathy and paralysis.

HENNA

Environmental philosopher Joanna Macy likened the small action by one person to a pebble thrown into water that causes (Mikael: Right.) wide ripples (Mikael: Yeah, yeah.) that expand who knows where, maybe even where we can't see ourselves.

MIKAEL

Right, just so. And that's the thing, to have many people throwing many pebbles, so that it can create that metaphorical tidal wave that is needed to actually make things change more.

HENNA

Utö, 4 August

I stand at the southern tip of the island, at the cape of the shipwrecked, and look to the horizon. Many cargo ships pass here. I'm wondering what they're carrying. Robot dogs or pink musical cereal?

You have the power to decide about our cargo. You are a president of a large company. What kind of person are you? What kind of breakfast do you like? And what will you have to give up, if we give up fossil fuels? It's like a leap into unknown. But maybe we imagine that we will not fall. That we have safety ropes, more so than the others.

I hope there is some small, beautiful gesture that you want to preserve. Maybe it's the way your love sweeps their hair behind their ear. Or maybe your love doesn't have hair anymore. How would I know?

Use your power. For hundreds of years now we have taken everything we can, minerals, gas, oil, from this huge, living body. Maybe there's something we can give back?

GLACIER

(rain dripping on the ice)

NARRATOR

Thus ends Henna's last audio letter from Utö from 2018. At that time, some still believed that there are islands.

I sit at a research station, on a floating shell broken off Antarctica. I look at the rainwater falling on the ice. Ships sometimes stray here, and we take care of those who come.

I exist if you have the strength to care, the strength to love. Weave me a rope from your words. I only have your words.

End credits

EERO

Radiogalleria presented the radio essay *Sulamisvesissä* ("In the Meltwaters") by Henna Laininen and Eero Nieminen. The essay includes interviews with climate researcher Mikael Hildén and a native resident of the Utö island, Solveig Kovanen, and Eero Nieminen, who has hiked on a glacier. The voice of the narrator was performed by actor Jonnakaisa Risto, and the translated excerpts from Solveig's interviews were performed by actor Seela Sella. The essay includes a quotation from John Donne's *Devotions upon Emergent Occasions* from 1624. Ideas expressed by psychologist Robert Romanyshyn in his article "The Melting Polar Ice" from 2011, by Ursula Le Guin in her collection of short stories *The Compass Rose* from 1982 and by Hanna Meretoja in her book *The Ethics of Storytelling: Narrative Hermeneutics, History, and the Possible* from 2018 were also used in the essay.

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