ARCTIC

ENCYCLOPAEDIA

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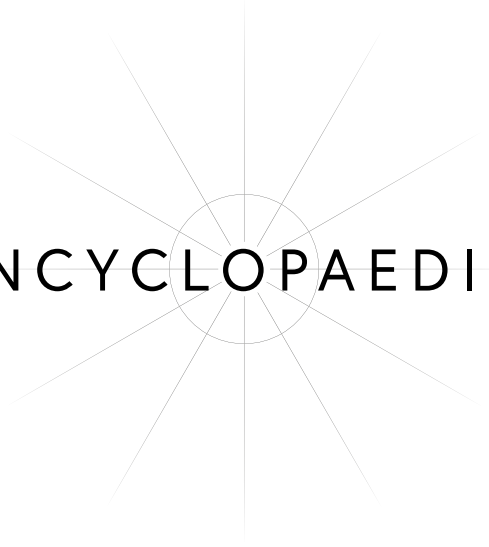
ARCTIC



ENCYCLOPAEDIA

AEC
ARCTIC ECONOMIC COUNCIL

UNFOLDING THE ARCTIC STORY

MADS QVIST FREDERIKSEN

The Arctic is a place that never quite leaves you. Once you've walked its frozen ground, met its people, breathed its air – sharp with sea and possibility – it stays with you. Not as a postcard or a headline, but as a living presence. A place both remote and deeply connected to the pulse of the wider world.

In 2005, I sailed from Iceland to Greenland and onward to Nunavut with the Canadian organization Students on Ice. Our classroom was the world outside our portholes – the polar bear that watched us from a distant ice floe as we drifted by in a rubber dinghy; the blue whale and its calf surfacing in rhythm beside our ship; the slow, deliberate movements of walruses as we observed them in respectful silence. It was an introduction to a new Arctic unlike any I had known before: immediate, humbling, unforgettable.

Too often, the Arctic is framed in myth and metaphor. As the end of the Earth. As a frozen Eden. As a geopolitical chessboard or a final frontier for adventurers. But beyond the clichés lies a living, breathing region – home to four million people, ten percent of whom are Indigenous. A region where climate change is not abstract but accelerates at three times the global average – at places even seven. Where wildfires and glacial tsunamis are not scenes from speculative fiction, but real and rising threats for the local communities that have the beautiful landscape as their home.

And yet, this is not just a story of loss or crisis. It is also a story of ambition – of people fighting not only for preservation but for progress. Too often, those who live far from the Arctic see it as a natural history museum or a protected national park. But those who live within it are asking for roads, for broadband, for infrastructure that levels the playing field with communities further south. They are not relics of the past; they are builders of the future.

This book, The Arctic Encyclopedia, does not pretend to resolve these tensions. It does not offer final answers. Instead, it captures the diversity of voices that make up the Arctic today. From A to Ø, over 200 contributors – some well known, others less so – share reflections on a single word of their choosing, defined through their experience in the region. They come from more than thirty countries and six continents. They are scientists, artists, Indigenous representatives, business executives, policy-makers, and students. What unites them is not a uniform worldview, but a shared sense of connection to this place – its complexity, its urgency, its promise.

This is not a book to be read only in order. You may start with "A" and work your way to "Ø," or dive into the entries that speak to your curiosity – adventure, biodiversity, commerce, diversity. There are no fixed definitions here. Every entry is subjective, shaped by context and voice. You may not agree with all of them. That, too, is the point. Dialogue begins with difference. This book invites disagreement as much as it invites discovery.

The Arctic cannot be summed up by a single voice, sector, or sentence. But through this collection – diverse, dynamic, and at times contradictory – we come closer to understanding a deeper truth: that the Arctic, in all its complexity, is far greater than the sum of its parts.

The Arctic Economic Council was founded in 2014 with a mission to highlight the central role of the region's people in building a sustainable economic future. In the Arctic, business moves at the speed of trust. And trust is built through dialogue, inclusion, and respect. That same spirit guides this book. I do not agree with every word within these pages, nor should I. But I believe every contributor deserves to be heard.

From prime ministers to schoolchildren, each contributor was given the same invitation: define one word in the context of the Arctic – no more than 350 words, or one illustration. Some offered both. Some wrote on behalf of institutions. Others spoke from a single, personal point of view. From the beginning, we embraced that diversity. We chose not to over-edit or standardize. The authenticity of each entry is its strength.

Let this book be a beginning. A map not of borders, but of meaning. And an open door – to learning, to building, and to becoming part of the Arctic's unfolding story.

A

Accelerate, Adaptation, Adventure, Advocacy, Alaska, Ambassador, Anchor, Antarctica, Aquaculture, Arctic, Attractive, Aurora, Away

B

Balloon, Banking, Barents, Barrow, Bathymetry, Bear, Belgium, Benthos, Bering, Biodiversity, Bipartisanship, Bíða, Blue, Borders, Business

C

Cabin, Char, Classroom, Climate, Co-existence, Coast, Colonialism, Commerce, Connecting, Cooperation, Costume, Critical, Cryosphere

D

Dark, Data, Declaration, Dependence, Design, Dialogue, Dinosaur, Diplomacy, Dirigible, Distance, Dog race, Domestic

E

Ecosystem, Ecotourism, Education, Embracement, Empowerment, Entrepreneurship, Equality, Estonia, Europe, Exchange, Expedite, Expedition, Exploration, Explorers, Extraction

F

Farm, Feminism, Fiber, Fiji, Filmmaking, Finance & Long-term loans, Fisherman, Fjord, Fjordside, Flour, Fog, Forage, Future

G

Garden, Gateway, Geopolitics, Glaciers, Gobmi, Gold, Green, Gula gula

H

Handshake, Heading, Health, Hexagon, Hjertesak, Hofsjökull, Home, Horizon, Hospital, Hunter, Hunting, Hydrogen, Hydrography, Hydropower

I

Ice, Ice-free, Icebreaker, Icescape, Identity, Iggiaq, Ilulissat, Imagination, Indonesia, Interaction, Interrelations, International, Iñupiat, Iserdor (Isortoq)

J

Job, Joik

K

Kabin, Kelp Forest, Knowledge

L

Landscape, Language, Lava, Leather, Limitless

M

Maps, Maybe, Melt, Mental, Miners, Monitoring, Myth

N

Nameless, Neighbours, Network, News, Nomad, Norrbotten, North, Northwest Passage, Nothingness, Nýtin

O

Ocean, Offshore, Opportunity, Orca, Origin, Oulu, Outsider

V

Venture, Vessel, Visit

P

Paleoclimatology, Pathways, Peace, Peak, Perestroika, Permafrost, Philantropy, Picea mariana (Black spruce), Pipeline, Polar, Policy, Port, Poudrerie glaciale, Preparedness, Preservation, Project, Prosperity, Pyramiden, Pyramids

W

Warshaw, Waste, Water, Waves, Wildfires, Wind turbine, Women, Workforce, Wool

Q

Qeqertarsuaq, Qivaareq, Qivittoq

X

X-ray

R

Radio, Rain, Randonee, Red, Reflection, Relationships, Relevance, Renewable, Representation, Rising, Ró, Rock, Ruin

Y

Yacht, Youth, Yukon

S

Salmiakki, Sámi, School, Sea Urchin, Seal, Seaweed, Security, Shareholder, Ship, Sila, Singapore, Size, Solitude, Space, Spain, Stars, Stars, Strait, Stripes, Summit, Supernatural, Sushi, Svalbard

Z

Zero, Zoo, Zoom

T

Taboo, Tari, Tenacious, Thaw, Tilak, Tipping, Traction, Trade, Transition, Trust

Ø

Ø (Hans)

U

Unangax̂, UNCLOS, Union, Unlimited, Up, Urban, Urchin

Æ

Ætt

A

ACCELERATE

PENNY GAGE

At Launch Alaska, the word *accelerate* goes beyond merely speeding up. As an 'accelerator,' it defines our organization and the strategic support we provide to entrepreneurs in climate technology to advance their businesses and projects in Alaska. With the negative impacts of climate change growing more acute by the day, the urgency to evaluate and implement these solutions – everything from long-duration energy storage and hydrogen powered aircraft to carbon removal technologies and geothermal power plants – is extreme.

In the context of Launch Alaska's mission to catalyze rapid innovation across energy, transportation, and industrial systems, accelerate has several components:

- We've built a network of advisors, policymakers and local communities that provide feedback and hard questions to founders that are necessary for getting to a 'yes' or 'no' sooner. That helps speed up adoption and scaling for new solutions grounded in equity.
- Facilitating real-world demonstration projects of innovative technologies. The connections we make for startups are entirely centered on the goal of moving forward deployments in our communities that are centered on trust.
- We are constantly measuring our progress and that of our portfolio companies. Acceleration has to lead to a meaningful impact on emissions reduction, energy efficiency, and economic development in our communities.

SEE STRIPES ⊖

ADAPTATION

RÓISÍN KENNELLY

The Arctic is perpetually overflowing with change.

Changes in temperature, from the crisp, cold depths of winter to the soft, warm breezes of summer. Changes in birds, animals, and marine life as they migrate, visit, and pass through at different times of the year. Changes in the flora, the sunlight, and even in the very ground beneath our feet. So now, as we face the unknowable expanse of climate change – possibly the greatest change ever facing the Arctic and the wider world – I find myself resisting the shadowy depths of despair, of fear, of drowning in a future that I cannot see… to instead herald in a sense of hope.

Hope because those who live, work, or love in the Arctic know change. Arctic peoples have spent time immemorial engaged in fluid relationships with these lands and environments, and this empowers their ability to adapt.

To adapt, or 'adaptation,' is a term used in climate science to refer to the changes made in response to or anticipation of impacts from climate change. It is a reaction to what we already know to be true: our planet is changing, and we must change with it. For me, adaptation means responding to the world around us, listening to the signals that our environments give us, being flexible in our approaches, anticipating where problems may arise, and enacting solutions early.

Arctic adaptation has many meanings. It can be learning to grow, hunt, and eat different foods or returning to traditional food systems. It can be improving the ways we build homes and infrastructure, strengthening self-sufficiency, food, water, and energy securities, or building extreme weather defenses. It could also mean reconnecting with tradition, building and strengthening relationships in our communities, and securing the inclusion of traditional, local, and indigenous knowledge into adaptation policy and decision-making.

If the Arctic is warming four times faster than the rest of the world, then its people must adapt four times faster. While significant challenges await us, I believe the people of the Arctic are capable of not just adapting, not just surviving, but thriving.

ADVENTURE

HSH PRINCE ALBERT II OF MONACO

Adventure always entails a physical challenge alongside a spiritual quest. The twofold dimension shapes the legends of the greatest adventurers. The Arctic adventure is no exception.

Throughout history, those who embarked on such journeys have taken on both a material and spiritual challenge – a challenge that has changed dramatically over the years… From the late 19th century – the period during which my great-great-grandfather, Prince Albert I, explored these lands – to the moment when I myself reached the North Pole in 2006, there have been spectacular advances in exploration conditions and survival equipment, making our journey significantly less uncertain than it was more than a century ago. However, these advances do not detract from the inner quest that discovering the Arctic still represents, the profound upheavals it evokes, and the meaning it holds – even though these too have changed in nature. For its earliest explorers, and for many centuries, the Arctic adventure was synonymous with conquest: human groups, whoever they were, sought to extend their living areas, their hunting grounds, or their safe zones. This was followed by my great-great-grandfather's era: the time of knowledge. Because of its unique conditions, its ability to elude observation and conceal its treasures, the Arctic had become a fascinating subject for the study of the Earth: its laws, its fauna, and its flora. The Arctic adventure has now entered its third phase. After conquest and knowledge, the time has come for conservation.

Through the dreams it evokes, the Arctic tangibly embodies a nature we are at risk of losing. And because of its direct importance to the Earth's equilibrium, it commands a significant share of the efforts we need to undertake. That is why the greatest adventure of our era is to save it from the damage we have caused and which, sadly, we continue to cause. It is an adventure of a new kind, one that we need to undertake together, by every possible means.

SEE RANDONEE ⊖

ADVOCACY

VERONICA SLAJER

Advocacy in the Arctic is more than a call to action – it bridges often overlooked communities and the global arena. It begins with knowledge: sharing stories and insights about a region many perceive as remote, yet which plays a crucial role in our planet's ecological balance. By amplifying Arctic voices, advocacy ensures that the people who know these lands best – their cultures, traditions, and challenges – are heard at the highest levels. As the saying goes, "If you're not at the table, you're on the menu," and nowhere is that more relevant than in shaping resource policies, trade routes, and environmental protections affecting Arctic peoples' livelihoods.

Effective advocacy embraces collaboration, transparency, and inclusion. It brings together Indigenous knowledge and scientific research, forging alliances among policymakers, business leaders, and local stakeholders. With the Arctic rapidly changing – opening new pathways for global transportation, generating environmental risks, and offering untapped economic opportunities – it is vital that those who call this region home have a decisive voice in planning its future.

Ultimately, advocacy protects both cultural heritage and fragile ecosystems by championing equitable resource management and sustainable development. It is not merely a campaign or a message, but a commitment to stand alongside Arctic communities, ensuring they flourish in an ever-evolving world.

ALASKA

LISA MURKOWSKI

"The ice is a mirror,
showing us ourselves,
cracked and refrozen,
breaking apart,
yet always returning,
the way life insists
on enduring."

(Excerpt from Rock Piles Along the Eddy)

Ishmael Angaluuk Hope (Tlingit, Iñupiaq) is a poet, storyteller, actor, playwright, and Indigenous scholar based in Dzantik'ihéeni (Juneau, Alaska). His Tlingit name is Khaagwáask', and he is the father of five children.

Hope's work explores the deep interconnection between land, language, and identity, drawing from his Tlingit and Iñupiaq heritage. His poetry collection, Rock Piles Along the Eddy (Ishmael Reed Publishing Company, 2017), reflects his reverence for Indigenous knowledge and the Arctic environment. His work continues to celebrate Indigenous resilience, creativity, and the enduring power of storytelling.

SEE BARROW ⊖

AMBASSADOR

PETTERI VUORIMÄKI

Many ways exist to define an 'Ambassador,' but an Ambassador operating in the circumpolar Arctic is not just 'an Ambassador.' He or she is an 'Arctic Ambassador,' and that is different in more ways than one.

The Arctic Ambassador for Finland represents Finland, one of the eight Arctic nations in the world, in the circumpolar Arctic and beyond. Considering the impact that the Arctic has on the rest of the world, along with the ever-increasing interest from actors outside the Arctic and the multitude of interests that an Arctic state has in the region, being an Arctic Ambassador is a significant responsibility.

An Arctic Ambassador needs to have an unwavering curiosity and a never-ending humility to admit the limits of his or her knowledge. However, an Arctic Ambassador differs from other Ambassadors, the 'normal types,' in that the role entails speaking for and representing not only one's own country but the whole region, its people, and its nature and environment.

An Arctic Ambassador must see the whole picture, beyond any particular sector or question, and then seek the right balance between different, or even contradictory, interests. He or she needs to be concerned about the people, the stability of the region, economic success, sustainable development, and the flora and fauna, and perhaps most urgently, about the climate and environment at large. Without this commitment and ability, an Arctic Ambassador is ineffective.

An Arctic Ambassador needs to feel, understand, respect, discuss, learn, and learn again. The circumpolar Arctic is a never-ending quest for more knowledge, greater understanding, and better awareness of the linkages, challenges, and opportunities that exist. I was asked to define "Ambassador," but I cannot do it any better than Julie Andrews did: "Be a part of all that is decent and be an Ambassador for the kind of world that you want to live in." To do that in the Arctic and for the Arctic has been the honor of my life.

ANCHOR

SANDRA SIEFERT STRØM

The sun is high, right at its zenith. I enter the church. I am the first one there.

An hour later, they arrive. They shake my hand – hands shaped by the North Atlantic Ocean, calloused, nearly a century old. Strong and warm, just as his were.

Their faces blur beneath the weight of tears pressing against my vision, like an overfull tide. I do not recall a single face, only the same quiet sympathy written across them. I do not know their names, but they all know mine. All is seen in the islands. Nothing is private. Not your name, not your grief.

The priest speaks of a man with a generous heart and an equally strong temper – an unmistakable trait of the people of Suðuroy, the southernmost island in the Faroes.

Ahead of the wake, I asked my mother how she preferred things to be done: which caterer to contact, what beverages to include. My questions were met with a vexed look, first reminding me that I had been overseas too long to ask, followed by a short, "They take care of all of that."

I knew I was pushing; still, the words slipped out, "Who are they?"

"The women of the village," she said, her tone overbearing but not annoyed. "That's what happens. I do the same when they lay their fathers to rest. So the family can mourn."

I was embarrassed not to know this, but my embarrassment gave way to a deep appreciation for the quiet, unspoken bonds of community that continue to rule here.

The gender roles feel undeniably archaic, but I let the thought pass. It does not matter. What matters is that my grandfather's fellow sailors came to meet my gaze with all that need not be said, while the women gathered like the rising swell to make space for our mourning.

Predictable. Inevitable.

This is how things are done. This is how they have always been.

ANTARCTICA

JANE FRANCIS

As a geologist, I have spent many field seasons in Antarctica hunting for clues in the rocks to reveal the continent's climate history. This huge landmass, twice the size of Australia, has sat over the South Pole for the past 100 million years, but the oldest evidence of ice that eroded and sculpted the landscape is found in rocks that are only 40 million years old. The rock record reveals a very different picture of Antarctica before ice covered the continent.

Today in Antarctica, in places clear of ice – mountain tops, sea cliffs, remote islands – the exposed rocks contain evidence of that ancient world. Imagine cracking open rocks to find the fossilized remains of leaves and flowers or discovering petrified tree stumps, which show that millions of years ago, Antarctica was once covered in lush green forests growing in warm climates. Dinosaurs roamed the forests, their bones now fossilized in the rocks. All this life thrived close to the South Pole in a past warm world created by natural CO2 from volcanoes.

Over millions of years, the climate cooled via natural geological cycles. Tectonic forces left the polar continent isolated within the cold, stormy seas of the Southern Ocean. Antarctica became the icy white world that we know today. Ice sheets up to 4 km thick now cover the land surface. Each winter, the sea freezes to form sea ice around the continent, which doubles its size. During the long dark night that lasts all winter, temperatures drop as low as -60°C. The ancient forests are just a memory stored in the rocks.

But now Antarctica is changing in response to the warming world that we have created – and faster than we expected. The shelves of ice that fringe the continent are melting from below as warmer ocean water is blown under the ice by strengthening winds. The winter sea ice is shrinking, decreasing the white blanket that keeps the ocean cool and is home to marine creatures vital for the ocean food chain. Water from melting glaciers in Antarctica is affecting global ocean circulation as far as the Arctic and is raising the sea level across the planet, making us realize that Antarctica has connections to us all.

As we warm our climate further, will forests once again return to Antarctica?

AQUACULTURE

CHRISTIAN CHRAMER

Finding fish – one of the most critical parts of making life in the Arctic possible – was not made easier by the introduction of aquaculture in the late '60s. The Arctic waters, where warm water from the south meets the icy, cold currents of the north, are already perfect for wild fish. The natural resources of the ocean and the abundance of free-swimming fish have always been key reasons for living in the north. Keeping fish in a net and growing them from juvenile to large fish has simply complicated matters.

But human will, technical innovation, research, infrastructure development, and the need to find new business opportunities for coastal communities have made aquaculture a cornerstone of Arctic life. In the last 60 years, the rise of modern aquaculture has made some of our most desired fish species, like Arctic salmon and, in later years, Arctic cod, available to consumers all around the world.

It is not easy – that's why it had to be tried and why innovative individuals and companies had to give it their best to make it happen. Just like any other quest, there have been and will be challenges, but the goal is as clear today as it was in the early days of fish farming: to contribute to putting food on the table, not only for those in your household, your village, or your region, but for the world.

SEE FISHERMAN, SEAWEED ⊖

ARCTIC

MADS QVIST FREDERIKSEN

The Arctic – or home, as I like to call it – is a commonly misunderstood word, both mythical and real. Mythical because it has long been seen as the final frontier, the great unknown, a place of exceptionalism for centuries. Real because it is home to more than four million people who go to work, dream, and aspire just like anyone else.

The Arctic is as breathtaking in the minds of those who imagine it as a mythical place as it is to those who know it intimately. Aurora Borealis, towering mountains, frozen waters. Vast expanses that open the mind, and long winter nights that forge deep bonds within communities. The myths draw tourists in increasing numbers, but it is the reality that makes people return.

The Arctic cannot be confined to a precise circle or a fixed number of degrees. No single definition has ever been universally agreed upon, despite the fact that people have roamed this region for centuries.

The name "Arctic" originates from the Greeks, derived from "Arktos" – bear – referring to the Great Bear constellation circling the northern sky. Yet, when the Greek sailor Pytheas claimed to have reached a frozen sea and witnessed the midnight sun – the mysterious Thule – his accounts were met with disbelief. The Arctic has always been a meeting ground. Indigenous peoples traveled and traded across the region long before recorded history. In the ninth century, the Vikings explored uncharted parts of the Arctic, pushing into lands where no one had ventured before. Some have suggested that when humanity first left Africa between 60,000 and 90,000 years ago, some traveled westward into Europe while others journeyed eastward into Asia. Thousands of years later, these distant cousins would reunite in Greenland, when Inuit peoples who had crossed from modern-day Siberia, through Alaska and Canada, met the Vikings who had sailed from present-day Norway, Iceland, and Denmark.

The Arctic is so vast and diverse that it cannot be confined to a snow globe, shaken to create a simple, picturesque scene. Its nicknames are many: the Earth's air conditioner, the canary in the coal mine, the land of exceptionalism, resource-rich yet ungoverned. But the whole is greater than the sum of its parts. The Arctic is home – to me, and to many others.

ATTRACTIVE

OLE KOLSTAD

AURORA

CHARLES JOS BIVIANO

AWAY

MEGAN BRIEF

B

BALLOON

HÅKAN JORIKSON

BANKING

HANNE KAROLINE KRÆMER

In the cold embrace of the north, where ice meets the shore,
The bank stands tall, a beacon in a land of yore.
Through storm and calm, in the night of endless dark,
The bank is there for the people, with hope and a spark.

With digital paths, it reaches far and wide,
To the fisherman's small boat and the reindeer's stride.
It binds together kin in a land so vast and grand,
With loans and investments, dreams are made by hand.

In the Arctic's wild realm, where nature reigns free,
The bank is a guardian for the environment's plea.
It supports green projects for a sustainable way,
Ensuring that our heritage can live on in you today.

From Tromsø to Alaska, in the icy cold trail,
The bank is a companion that always prevails.
With a heart for the Arctic and eyes set on the north,
The bank is more than money; it is hope and worth.

SEE FINANCE & LONG-TERM LOANS ⊖

BARENTS

KLAJDI DEDEJ

The Barents is not just a place; it's a promise.
A promise whispered across borders,
through forests swaying in the northern winds
and waves breaking upon Arctic shores.

It is where nations meet, not in conflict,
but in cooperation.
Where cultures intertwine like rivers merging,
creating something stronger, something whole.

The Barents is a tapestry of resilience,
woven with the threads of Sami traditions,
Nordic unity, and youthful ambition.
It is the land of endless nights and endless possibilities.

Here, young voices echo through valleys,
carrying dreams of a region that thrives.
Where the environment is cherished,
communities are nurtured, and differences are celebrated.

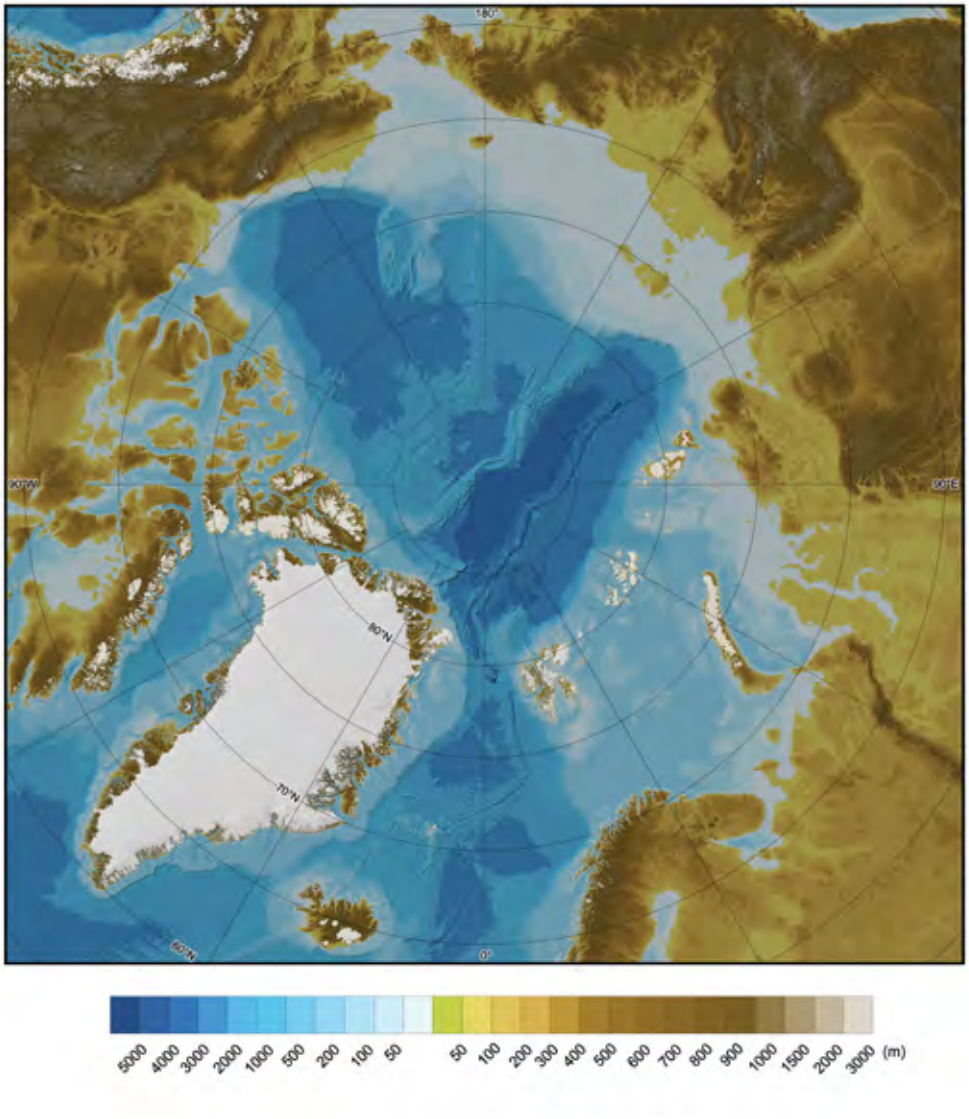
The Barents is not just a region on a map;
it is a symbol of hope,
a living testament that even in the coldest corners of the world,
warmth can be found in unity and vision.
This is the Barents I see.
A region shaped by its people, defined by its future.

BARROW

LLOYD PIKOK 'PIKOK' JR.

BATHYMETRY

MARTIN JAKOBSSON



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BEAR

KATIE HALE

The word Arctic comes from bear.
Via Latin and Greek: Arctic. Arcticus. Arktikos. Arktos. Near the bear. Towards the bear. North.

And not just any bear, but a bear whose fur ripples with stars, striding the ocean-dark. Great Bear, orbiting the Pole Star, stalking its borders. Bear as guide for wandering ships. Bear as navigator. Bear as cold light in the long dark.

Now, the word arctic is more likely to make us think of the white bear: ursus maritimus. Sea-bear, fur yellow-white against blue-white ice, fracturing. Bear hunting. Bear struggling to thrive. Bear caught mid-leap, twin cubs following, floe to floe in search of seals.

Bear whose true name must not be uttered, for fear of invoking bear-anger, bear-wrath, bear's hardened blubber-hooking claws.

On a recent trip to Svalbard – island of cold shores – I saw two white bears, so distant that the group I was with nicknamed them pixel bears, because they showed in photos only as yellowish pixels against the snow. Mostly, the land, ice, and water remain bearless. Bare of bears.

But this is still bear-land, bear-ice, bear-water; I am a southerner and out of place, un-belonging in bear country. Even in April – the start of the nightless summer, with the sun sparkling on the snow and blue sky pushing the limits of the horizon – the Arctic makes demands on my unaccustomed body. Thermals. Layers of wool. Fleece. Insulated jacket. Waterproof trousers. Mittens. Polarized glasses to dim the glare. Snowshoes so the frozen surface can bear my weight, allowing me to walk across the land without the land swallowing me whole.

When I breathe in, the air is sharp in my lungs. Water freezes in my nostrils, needles inside the bridge of my nose.

Arctic as another word for cold. Arctic as another word for skin-peeling, rime-bearded, chilled-to-the-marrow.

I carry the Arctic back with me as a feeling. As a sliver of ice in the veins. A compass needle in the blood, always pointing north.

Arctic as magnetic pull, as bear-claw beckoning.
Arctic as another word for urge.
Arctic saying, This way. Arctic saying, Follow your stars.

BELGIUM

MARIE-ANNE CONINSX

Belgium has a proud history of over 125 years of scientific excellence in polar research. The South Pole expedition led by Adrien de Gerlache (1897-1899) was the first international scientific expedition to Antarctica. This legacy continues to this day, with its full expertise expanding to the Arctic. In 2022, Belgium became a member of the International Arctic Science Committee (IASC). Moreover, Belgium boasts flagship initiatives in polar research, including the Princess Elisabeth Research Station in Antarctica – the only zero-emission station in the region – and the RV Belgica, a state-of-the-art research vessel capable of operating in the Arctic region.

By championing continued investment in Arctic research and laying the groundwork for technological innovations, Belgium positions itself as a leader in the development of sustainable technologies and contributes to the global effort to address the most pressing environmental challenges of our time.

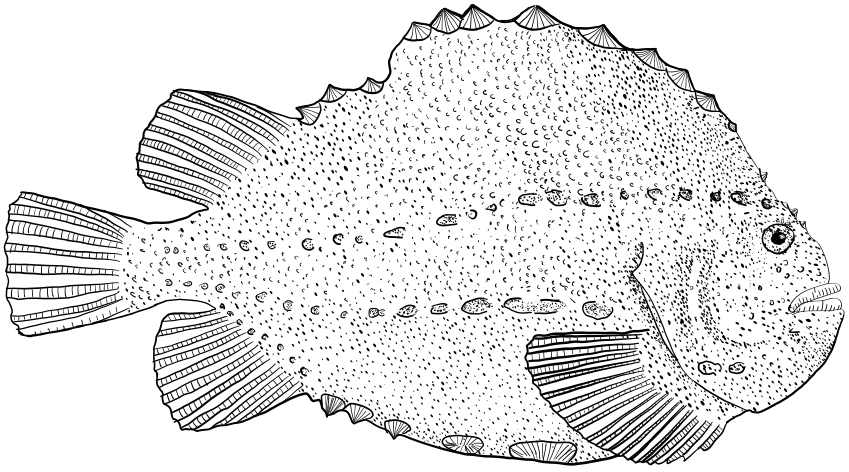
Belgium, with its commitment to the green transition and expertise in sustainable practices, is uniquely positioned to advocate for responsible economic activities in the region. It can demonstrate that economic growth and environmental preservation are not mutually exclusive. Belgian enterprises have impressive expertise in innovative technologies that enable sustainable development in the High North, such as in the fields of offshore wind energy, hydrogen, and cold climate technologies.

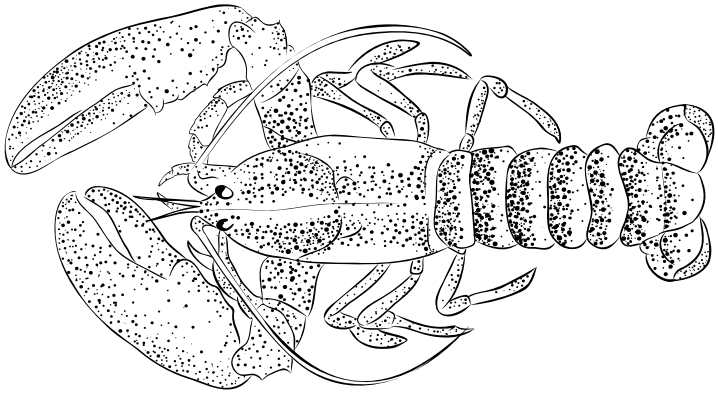
Belgium's long-standing tradition of multilateralism, combined with its unwavering support for international law, makes it an ideal partner in global efforts to promote peace and prosperity in the Arctic. By actively engaging in Arctic diplomacy and working with key international bodies, Belgium can help shape a future for the region that is both stable and sustainable.

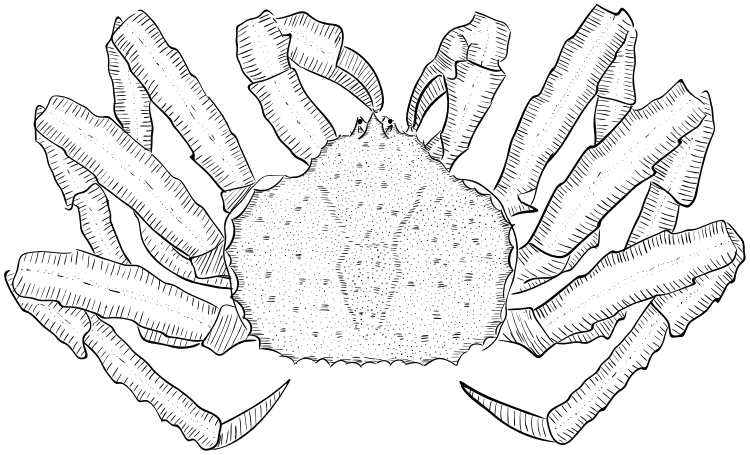
For all these reasons, the Egmont Institute – the Royal Institute for International Relations (Belgium – has been engaged in giving visibility to Belgium's commitment to the Arctic file and to the important role that non-Arctic states can play in safeguarding the future of the Arctic. We trust that 2025 will see the emergence of Belgium's first Arctic Policy.

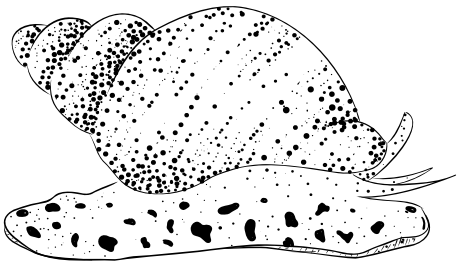
BENTHOS

EYÐBJØRG SIGURDSDÓTTIR ANDREASEN



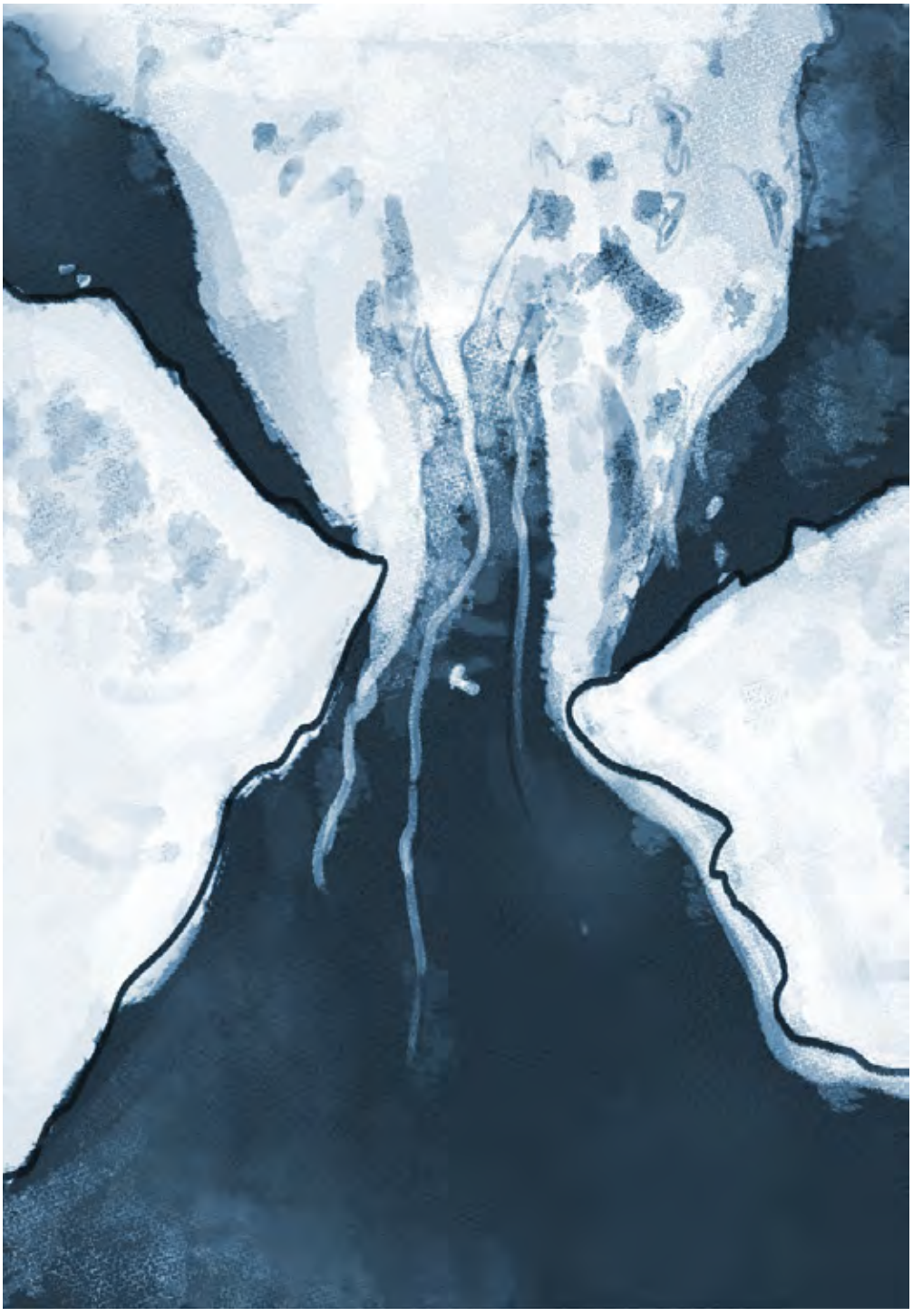






BERING

MIROSLAW FILIP MIKULSKI



BIODIVERSITY

JAKOB ASSMANN

Biodiversity – the variety of life in the Arctic in all its forms.

Giant whales, swift foxes, green shrubs, and tiny mosses. Despite the cold, the Arctic is full of life.

To the scientist in me, the variety of Arctic life is a source of curiosity. I want to learn about the roles these organisms play in the fabric of the landscapes and the seas, as well as in the global system beyond. I'm fascinated by the myriad ways that life has adapted to the cold. The adaptations that give these organisms such a special place on our planet, whether by becoming frost-hardy, hiding under the snow, or only visiting for part of the year, raise endless questions to explore.

When I put my professional hat aside, though, I see beauty. I see the boiling of the sea before the whales emerge to catch the fish. I see the caribou running gracefully across the tussocks that are so difficult for us humans to traverse. I see the glittering Arctic char being pulled out of the ocean by a friend, whose skillful hands have learned to gut and prepare the fish without even looking, using knowledge passed down through generations of people before them.

Arctic biodiversity is life, and life is diversity.

BIPARTISANSHIP

CHRIS COONS

In the past three years, I've been to the Arctic twice, traveling with colleagues from both the Democratic and Republican parties. The growing geostrategic importance of the Arctic is undeniable. As ice melts, permafrost thaws, and coastlines erode, the Arctic will never be the same. These changes offer opportunities in shipping, fisheries, and natural resources that also bring heightened global economic competition and new security challenges. They also threaten long-held ways of life for millions while impacting weather patterns and sea levels far to the south.

That's why I've traveled to the Arctic with Republican partners like Senator Lisa Murkowski of Alaska and Congressman Jake Ellzey of Texas. We may disagree on a lot of issues, but we all recognize that the United States must deepen its commitment to the region and work closely with the Arctic neighbors who share our values. As my dear friend, the late Republican Senator Johnny Isakson, told me, "You don't have to agree with someone on everything, just one thing."

That's the spirit in which I operate in the Senate. It's why I've worked with Senator Murkowski to increase climate resiliency efforts for coastal Alaska and low-lying Delaware and to advocate for patients with ALS. I was glad Congressman Ellzey joined me on a submarine embark in the Arctic Ocean to find common ground on not just the High North, but issues affecting everyday Americans. Initiatives like the ICE Pact are a great example of how bipartisan support to strengthen U.S. icebreaking capabilities and counter our adversaries in the Arctic makes the world safer for our allies, partners, and everyday Americans.

That kind of openness to collaboration is what the writers of our Constitution wanted. It's how you get things done in Congress to this day. As the Arctic becomes ever more prominent in global affairs, I'll continue to seek out colleagues from both parties who understand the promise that the region holds – and that neglecting it is not an option.

BÍÐA

SANDRA SIEFERT STRØM

It is no wonder that Visit Faroe Islands, the official tourist board of the Faroe Islands, chose "where nature rules" as their tag line.

Last winter, an avalanche blocked the little mountain tunnel that connects our part of the island to the main road leading into the capital. My mother and my aunt called each other to plan egg, sugar and milk swapping. Calmly. No panic. Just quiet, practical logistics passed between them.

I, however, slowly began to panic about the airport shuttle I had booked from Tórshavn, which was supposed to take me to Vágar and back to mainland Europe a few days later. My mother looked at me the way only someone who has experienced sixty Faroese winters can: "But you know not to book a flight from up here with plans on the other end." She was right of course. And I was annoyed by my naïveté and ambitious planning.

The impressive infrastructure linking the islands, including the ever-growing network of tunnels threading beneath the sea (featuring the world's first subsea roundabout), tells its own story of ingenuity and defiance. Of the ways in which the Faroese circumvent the terrain's refusal and the weather's indifference to your plans.

You brace yourself to enter this corner of the North Atlantic. It can be incredibly irritating. Plans dissolve. Flights and ferries are cancelled. Wind clutches and pulls at your front door. Confinement ensues.

But if you can find it in yourself to give into it, there's an extraordinary force here that humbles you. Makes you stop. Makes you breathe. Reminds you that here, there are greater things at play than your itinerary.

And it teaches you to wait. To bíða. Not passively, but with a kind of reverence. The kind of waiting that can sharpen your senses. You will notice things: the shift in wind, the faint sun behind the fog and your own smallness in the scheme of it all.

And maybe that's the real gift of our remote islands. Not what they let you do and see. But the potential they hold to make you feel.

BLUE

KIRSTY BANKS

BORDERS

JUHO SNICKER

Walls that divide us, often invisible yet sometimes tangible – fences, walls, or even houses. Borders shape how we perceive the world, limiting our view of what lies beyond. They obscure the full picture, leaving us to wonder about the unseen. Just as people can appear one way outwardly but be entirely different within, borders remind us that what's hidden can be just as significant as what's revealed. Borders divide us, shaping views and hiding truths – what lies beyond may differ from what we see.

BUSINESS

MADS QVIST FREDERIKSEN

Business – a word commonly misunderstood by many who are still in the business of business. Business is almost everything we do, at least to make a living and to keep society functioning. Without business, there is no welfare state. Without business, there are no holiday trips. Without business, there is no funny business.

Business in the Arctic happens at the speed of trust. In small communities, most people are involved in several businesses. The hunter who sells seal skin is also the local electrician. Start-ups are formed with friends you have known since childhood in the small community, and word of mouth spreads about who is good at business and can be trusted.

Arctic business is about innovation. Harsh conditions and limited resources have taught the Inuit to make lightweight rain jackets from what others call waste. In modern times, companies are turning fish skin into pharmaceutical products.

Arctic business is about opportunities. The region has abundant resources in the ocean and on land – resources that indigenous people have utilized to the fullest for thousands of years. Whether it is seafood or seaweed, rocks or wood, wind or water, business opportunities arise when natural resources are combined with technology, and someone adds an idea and execution. Then the magic happens.

Like anywhere else, business in the Arctic is about balance. It involves harnessing opportunities while ensuring that future generations will also have business to pursue. If you overfish, you obviously harm the fragile ecosystem, but you also cut off the branch you sit on. Therefore, business is also about responsibility.

Outsiders are also doing business in the Arctic, and it makes sense, as business means trading with others – exchanging ideas and products that are otherwise unavailable. Business does not happen in isolation. From reindeer herders to large companies, it is about getting products to market. Business in the Arctic is therefore also about business outside the Arctic, because we are all connected.

C

CABIN

KIRSTY BANKS

CHAR

PER THEODOR TØRRISSEN

Deep red in color, yet opposites of each other. The word brings contradictions to mind – one that is surrounded by flames, heat, and radiant warmth. Chaos, noise from burning and crackling wood. A charred landscape. It evokes associations with climate change and forest fires.

Salvelinus alpinus, the Arctic char. The one that seeks the cold.

A quiet frozen lake. All white, with no sound whatsoever.
The deep red flesh contrasts with the white snow.

A pan and a fire. Sizzling butter. The opposites meet.
A blackened, crispy, charred skin. Crackling as your teeth break through the skin.

CLASSROOM

GEOFF GREEN

CLIMATE

LARRY D. HINZMAN

Climate is generally considered to be the average weather conditions in an area over a long period, but one may also consider climate from the perspective of the impacts of environmental changes over a large area in a shorter time period. Recognition of the consequences of the changing Arctic on global climate dynamics has led to a more complete understanding of the connections and interdependence of terrestrial, marine, and atmospheric systems. The warming global climate has initiated a cascade of environmental impacts that have reverberated through the tightly coupled Arctic system. Responses to the warming climate include the melting of sea ice, reduction of seasonal snow cover, warming and thawing of permafrost, disappearing glaciers and ice sheets, increasing shrubiness and advancing treelines, and dozens of other consequences for marine and terrestrial ecosystems and civil infrastructure. As the components of the Arctic environment evolve to a new equilibrium, they also exert changes in the surface energy balance, leading to further feedbacks in the regional climate. Perhaps the most widely known environmental response to the warming climate is the loss of sea ice, which results in greater absorption of solar radiation due to lower albedo and an increased flux of moisture and cloud-condensing nuclei to the atmosphere, all of which yield positive feedbacks to the climate.

Climate also includes the ranges as well as the averages of weather variables. In this respect, a change in climate can lead to extreme events that take weather variables outside of their historical ranges. Unprecedented extremes of temperature, precipitation, and wind, for example, can exceed the tolerances of terrestrial and marine species, as well as humans and infrastructure. The impacts of these types of extreme events can exceed slower changes in climatic averages.

The critical lesson we must derive from examining these environmental impacts, responses, and feedbacks is that the Arctic evolves as a coupled system, where a change in one component of the system can initiate a cascade of cause-and-effect changes. Climate is much more than the average temperature or rainfall and their corresponding ranges. Changes in climatic averages and extremes drive environmental changes, which consequently feedback to influence global climate dynamics affecting weather and societies in more temperate regions.

SEE STRIPES, ECOSYSTEM ⊖

CO-EXISTENCE

JAN-GUNNAR WINTHER

The word co-existence is relatively new
in our daily vocabulary.

Co-existence is an emphatic word
but has become politically correct –
just like the word sustainable.

To me, co-existence has many facets
– in essence – an existential character.

Humans are not meant for isolation.
How can our ideas, values, and achievements
give added value if not in co-existence
with other human beings?

There are two sides to the art of conversation:
sharing and listening. To talk is easier than
true and respectful listening.

When trust is gone, progress stops.
Trust can disappear in the blink of an eye.
Trust must be protected as a treasure.
Every single day.

Ecosystem services are the basis
for all life. There is no wealthy
livable planet without
a healthy environment.

A nature and climate in balance
is key to human lives. Striving to co-exist
with nature sounds like a no-brainer.
You may ask why we repeatedly act
against our better judgment?

We look up to Nelson Mandela,
Mahatma Gandhi, and Mother Teresa.
Forgiveness instead of weapons.
Respect instead of ambush.

Humanity's dichotomy
between greed and peace
is part of our troublesome DNA.

Co-existence in all facets of its meaning
is our best medicine to achieve sustainable
lives on a sustainable planet.

It is hard to argue against the value of
co-existence, and equally hard to practice it.

We need more of it than less.

The Arctic is a good place to start.

COAST

HALLA NOLSØE POULSEN

COLONIALISM

JENS HEINRICH

The ancestors of present-day Greenlanders arrived in Greenland around 1200 AD, bringing innovative survival strategies and spreading across the island.

Colonization began in 1721, marking a complex chapter in Greenland's history. This colonial period introduced notions of inferiority towards the colonizers but also fostered a sense of self-awareness, as Greenlanders' deep understanding of their environment became the backbone of the colonial economy – seal blubber being the primary resource. Thriving in such harsh conditions is a testament to their resilience and ingenuity.

In 1953, Greenland transitioned into an equal part of the Danish Kingdom with representation in the Danish Parliament. The following decades saw efforts to modernize Greenlandic society, leading to a near-total transformation that continues to impact society today. This modernization, however, came with an agenda to alter traditional Greenlandic culture and language, which were often regarded as inadequate or inferior.

By 1979, the establishment of Home Rule granted Greenland its own Parliament and Government, paving the way for greater self-determination. This was further expanded in 2009 with the introduction of Self-Government, granting the right to pursue independence. Yet, Greenland continues to grapple with its colonial legacy, recognizing the importance of addressing its past to define its future.

Efforts to reclaim cultural identity have been central to this process. Early initiatives under Home Rule focused on cultural preservation, emphasizing the need for Greenlanders to rediscover their core values and identity. Even before the formal establishment of Home Rule, dissatisfaction with the developmental trajectory was evident. The founding of a national museum in 1981 and a university in 1987 underscored the importance of fostering academic and cultural discourse. Artistic expressions have also been pivotal in confronting historical and social challenges, remaining a crucial voice in navigating Greenland's evolution.

Through decades of political progress, Greenlanders have steadily assumed control over their own affairs. The journey of reform and self-determination highlights a persistent trajectory toward autonomy, often driven by Greenlandic initiatives, with independence as the ultimate goal.

COMMERCE

MADS QVIST FREDERIKSEN

Arctic commerce is the exchange of goods, resources, and services across the polar region and beyond, historically rooted in Indigenous trade and resource harvesting, and now expanding to include shipping, fisheries, energy development, and sustainable industries shaped by environmental conditions and global trade routes.

Business in the Arctic has been driving commerce for centuries. Trade networks were created where hunters would exchange furs, and Vikings would sell walrus ivory to royals in Europe.

Commerce is evident in archaeology. Fish bones originating from the Arctic part of Norway have been found in Germany, dating back to the 8th century. In "Historia ecclesiastica gentis Anglorum," this commerce between Viking chief Ottar and King Alfred the Great of Wessex is described in detail – it is also the first mention of Norway in history.

Distances are long in the Arctic, so commerce often involves several intermediaries.

Exploration has also driven commerce in the Arctic. The Greenlandic-Danish explorer Knud Rasmussen and his friend Peter Freuchen set up a trading station on the northwest coast of Greenland to finance their famous scientific explorations across the Arctic.

The fur trade initiated a significant amount of commerce, followed by whaling and fishing that connected the Arctic to the global market. In the 20th century, resource extraction – including oil, gas, and minerals – further anchored the region in global commerce.

Governance is strict for Arctic commerce. Locally and nationally, there are regulations like those found elsewhere in the world, and globally, the World Trade Organization has rules in place. In recent years, we have seen sanctions limiting commerce in the region.

Harsh conditions can be both an obstacle and an opportunity for commerce. They pose obstacles by making it more difficult to transport both people and goods; however, they also create opportunities by driving technological advancements and innovation.

In the future, the Arctic will change in many ways due to climate change and various other issues. What is certain, though, is that commerce will continue. It is an ancient story of resilience, opportunity, and global connections.

CONNECTING

GEOFF GREEN

COOPERATION

ORAN YOUNG

All societies must find ways to address situations in which behavior that seems rational from a purely individualistic perspective produces outcomes that are undesirable for all members of the group. Exemplars that are familiar to people in many walks of life have acquired names like the tragedy of the commons, the prisoner's dilemma, and the free-rider problem. Taken together, situations of this type are known as collective-action problems. Coming to terms with such situations requires cooperation. However, achieving and sustaining the cooperation needed to solve such problems is often elusive. While some efforts succeed, many fall short. We should never take success for granted.

The Arctic has its fair share of collective-action problems. The members of Indigenous whaling crews must work together, often under difficult conditions, to maximize the likelihood of success in harvesting marine mammals. Participants in large-scale fisheries (e.g., the cod fisheries of the Barents Sea) need to comply with quotas set through international negotiations to ensure sustainability, even in politically turbulent times like the present. Owners and operators of commercial ships need to abide by the terms of the Polar Code to protect the marine environment and minimize interference with the activities of other users of marine resources.

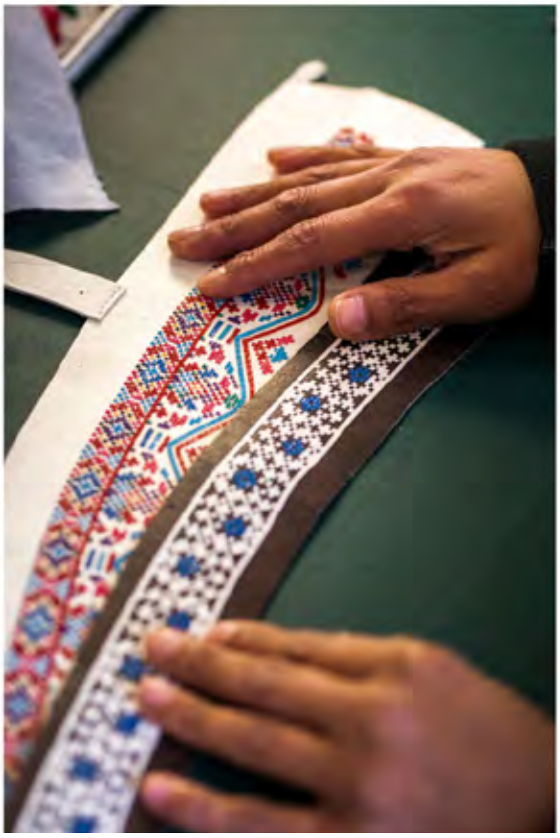
There are many ways to initiate and sustain cooperation in such situations, ranging from the development of social norms in Indigenous communities to the establishment of legally binding agreements between or among nation-states. More often than not, however, lasting success in solving collective-action problems occurs when actors internalize the norms, making cooperation a matter of second nature, or the measures required to sustain cooperation are absorbed into standard operating procedures not subject to reconsideration on a case-by-case basis. In the Arctic today, we are testing the effectiveness of measures developed to solve a variety of collective-action problems, despite the impacts of the shockwaves triggered by the Ukraine war and the growing influence of narratives emphasizing the centrality of power politics in contrast to the importance of sustaining cooperation.

SEE BIPARTISANSHIP →

COSTUME

ANNE NIVÍKA GRØDEM

Aningaaq Rosing Carlsen – Visit Greenland



CRITICAL

PETER HANDLEY

In relation to the Arctic region, the word CRITICAL has many meanings. It highlights the pivotal role the Arctic plays in global climate regulation, the delicate balance of its environment, and its abundance of minerals needed for the modern world.

The Arctic is a sentinel of climate change, where rising temperatures and melting ice have far-reaching impacts on weather patterns, sea levels, and ecosystems worldwide. Protecting this fragile region is critical for the health of the planet and the well-being of future generations.

The Arctic has unique biodiversity, which is endangered by the effects of climate change on vulnerable habitats. It is home to hardy human communities who are no strangers to surviving in harsh environments, and whose deep cultural heritage has transmitted wisdom from generation to generation on how to live in harmony with nature.

The Arctic is abundant in the minerals essential for the modern world. Producing minerals responsibly means treading lightly on this fragile land, ensuring that every step taken respects the ancient traditions of those who have called it home for millennia.

The Arctic's critical role is to be a place where progress and preservation are in harmony, where the pursuit of mineral wealth is guided by a deep respect for nature and humanity.

SEE MINERS, WORKFORCE ⊖

CRYOSPHERE

HIROYUKI ENOMOTO

A cryosphere is a place where the temperature is below zero. Snow and ice are not necessary for low temperatures, but their presence makes it easier to identify a place as a cryosphere.

While some parts of the Arctic have remained frozen for thousands of years, snow can completely transform the landscape in a short period, spreading across continents in an instant. Snow changes the color and shape of the Earth's surface.

Although glaciers and ice sheets may not change shape quickly, these frozen bodies are moving slowly. Arctic sea ice is rapidly disappearing. When the snow and ice vanish, the exposed ground and water will warm the area.

The cryosphere is not only a cold world but also a realm of beauty and enjoyment, where snow-covered cityscapes, forests, and mountains are enviable. There is a scientific approach to this beautiful world, as science seeks to unravel the miracles of nature. When standing in a place of snow and ice, one needs eyes to see the scenery and characteristics of the snow, ears to hear the wind, and cheeks that sense changes in temperature – sensors necessary for survival. In the cryosphere, anyone can become a scientist who tries to understand their surroundings. They can become a scientist who sharpens their senses and mobilizes all their knowledge to analyze and predict, a poet, and an engineer.

The cryosphere represents the natural world of low-temperature conditions, a world that is subject to science, but at the same time, it is a world in which people live, create culture, and welcome visitors.

D

DARK

JENNIFER FERGESEN

Dark is the color of seal adobo, eaten at the nadir of Svalbard's nearly three-month polar night. At 78 degrees latitude, the sun sets for the last time in late October and stays below the horizon until March. By December, there isn't a trace of twilight on the horizon; the black sky creeps into minds like a mold.

Ringed seals, unlike me, are evolved for this world. They can dive nearly 50 meters in the Arctic waters to hunt fish and shrimp, maintaining breathing holes in the ice above. Under a blanket of blubber, their flesh is bodybuilder-lean, the muscle fibers woven tight as silk jacquard. A staple of Arctic diets for tens of thousands of years, they appear on half a dozen restaurant menus around Longyearbyen.

Jonathan Oracion, a Filipino chef at the Longyearbyen restaurant Mary-Ann's, calibrated his adobo to match the animal's potency. Its dark secretions tinted the sauce ink-black, like a condensation of the sky outside, but the flavor scintillated with light. Vinegar and soy sauce beamed through the faint whiff of kerosene that clung to the fat; ginger and garlic sparkled in the depths. The recipe was his own invention, created when I asked if he could make something both Filipino and inextricably of Svalbard.

Oracion is one of the dozens of Filipinos who live and work in Longyearbyen, the main settlement on Svalbard, where they make up the largest immigrant population. My first winter in Svalbard was Oracion's second; he was already inured to the polar night that weighed so heavily on me that December. His seal adobo seemed to incorporate the dark as a flavor, like the acerbic dose of goat bile in pinapaitan, the pucker of unripe fruit in sinigang. Much of Filipino cuisine involves coaxing deliciousness from the gleanings, finding pleasure in the bitter and the sour.

"If it's winter, you need to prepare mentally, because you can get really stressed," Oracion said of the dark. "But if you have some friends, and you take time to meet them, share some food; that's basically all you need."

DATA

VOLKER RACHOLD

Data acts as a vital compass in navigating the Arctic's extreme landscapes, defined by freezing temperatures, sparse populations, and fragile ecosystems. From Indigenous knowledge passed down over generations to advanced satellite imagery, data forms the backbone of understanding and decision-making in this rapidly changing region.

The Arctic is warming at four times the global rate, a trend thoroughly documented by the scientific community over decades. Satellites track shrinking sea ice, sensors measure permafrost thaw and methane emissions, and Indigenous communities share generations of observational expertise. Together, these diverse data sources create a comprehensive picture critical to tackling global climate challenges and supporting the well-being of the Arctic's 4 million inhabitants.

Economic and geopolitical interests also heighten the demand for Arctic data. Melting sea ice is opening new shipping routes and exposing untapped resources, drawing international focus. Monitoring and understanding the functioning of Arctic terrestrial and marine ecosystems are essential for balancing economic development with environmental protection. Industries such as fisheries, shipping, resource extraction, and tourism depend on precise, real-time data to operate sustainably in this fragile environment.

Yet, gathering and using Arctic data comes with unique challenges. The remote, harsh environment requires innovative tools like autonomous drones and resilient data loggers. Additionally, international cooperation is essential, as the Arctic spans multiple nations. Organizations like the Arctic Council and the International Arctic Science Committee foster collaboration, ensuring inclusive and shared research efforts.

Data is more than numbers; it's a bridge between disciplines, cultures, and nations. As the Arctic evolves, data equips humanity to respond thoughtfully, safeguarding this vital region for future generations. From ice cores to artificial intelligence, the Arctic's story is told through data, offering both warnings and solutions for an uncertain future.

DECLARATION

THOMAS WINKLER

Late in the night on 28 May 2008, I was sitting in the Hotel Arctic in Ilulissat, Greenland, enjoying the view of the icebergs floating by while waiting for the somewhat slow internet to distribute the Ilulissat Declaration to the rest of the world. To me, this was the culmination of months of hard work, as the Danish Minister of Foreign Affairs, Mr. Per Stig Møller, and his Greenlandic colleague, Premier Hans Enoksen, took the initiative in late 2007 for the five coastal states of the Arctic Ocean to meet and discuss future cooperation in the Arctic.

Months before, Mr. Peter Taksøe-Jensen, legal adviser to the Danish foreign minister, and I, as part of the negotiation process, were invited to lunch in the cantina of the Russian foreign ministry in Moscow – a place where foreign guests were a rare sight. To us, this was one example of the cooperative spirit that characterized the Arctic back then.

The Ilulissat Declaration marked the beginning of an even stronger cooperation between the Arctic States, which lasted until Russia invaded Ukraine in 2022. The main purpose of the declaration was to send a very clear political message to the rest of the world that the Arctic States would manage the Arctic responsibly in cooperation with the indigenous peoples of the region and all others who supported a peaceful development of the Arctic.

It was no coincidence that a declaration was chosen. In international cooperation, a declaration is a political statement, not a legal one. There was and is no need for new general legal regulations of the Arctic, as the Law of the Sea Convention is sufficient. Specific legal instruments may be relevant, such as the Arctic Council's 2011 agreement on search and rescue cooperation. But back in 2008, we all agreed that a political declaration was what was needed for a region opening up. We already had a strong cooperation based on other declarations, like the 1996 Ottawa Declaration establishing the Arctic Council.

The Ilulissat Declaration is clearly one of the highlights of my diplomatic career. We did make a difference with that declaration!

DESIGN

GUÐRUN LUDVIG

DIALOGUE

ÁSDÍS ÓLAFSDÓTTIR

Have you ever experienced having a problem stuck in your mind, and the longer you sit with it, think about it, and ruminate on it, the bigger and more complicated it becomes, seemingly without an obvious solution? Then you decide to speak to someone about it. You describe the issue and bounce back ideas, and suddenly the problem isn't so big anymore. There are some available solutions and ways forward.

That's the magic of dialogue. Although humans are thinking beings, and the ability to think in abstract ways has often been cited as what differentiates us from other animals, we're also an action-oriented species. Our thoughts and ideas gain power when we voice them and converse with others. We gain knowledge and insights, create plans, listen, and change our minds.

Dialogue is, therefore, the intentional and dynamic exchange of ideas, stories, and perspectives, serving as a bridge to understanding and collaboration. It opens doors by fostering mutual respect and curiosity, diminishes boundaries by transcending cultural, social, and linguistic divides, and creates opportunities for innovation and shared growth.

For Arctic peoples, dialogue is deeply rooted in the oral traditions that preserve our cultural identities and convey wisdom through storytelling. These narratives – shared around fires, in community gatherings, or even through song – are not merely tales; they are a means of passing on survival knowledge, ethical frameworks, and an instinctual connection to the land. Dialogue, in this sense, is both an art and a lifeline, weaving cultural preservation with a shared humanity.

In our interconnected world, dialogue extends beyond words to embrace empathy and active listening. It challenges us to approach one another with openness, breaking down barriers and fostering relationships that honor both individuality and collective strength. By understanding dialogue as a transformative process, we can harness its power to build bridges across communities, nurture creativity, and respect the wisdom of cultures, like those of ours that call the Arctic home, reminding us that storytelling is not just a heritage but a way to shape a sustainable future.

DINOSAUR

STEFÁN ERLINGSSON

DIPLOMACY

KYRIAKOS MITSOTAKIS

SEE AMBASSADOR, DECLARATION, HANDSHAKE ⊖

DIRIGIBLE

AGOSTINO PINNA

Also called an airship (aeronave), like hot air balloons, the dirigible was the first aircraft capable of flying and maneuvering in the air. Its history began in the mid-19th century when the first prototype was built in France in 1852. It consists of large fabric envelopes filled with a light gas that allows it to lift off the ground.

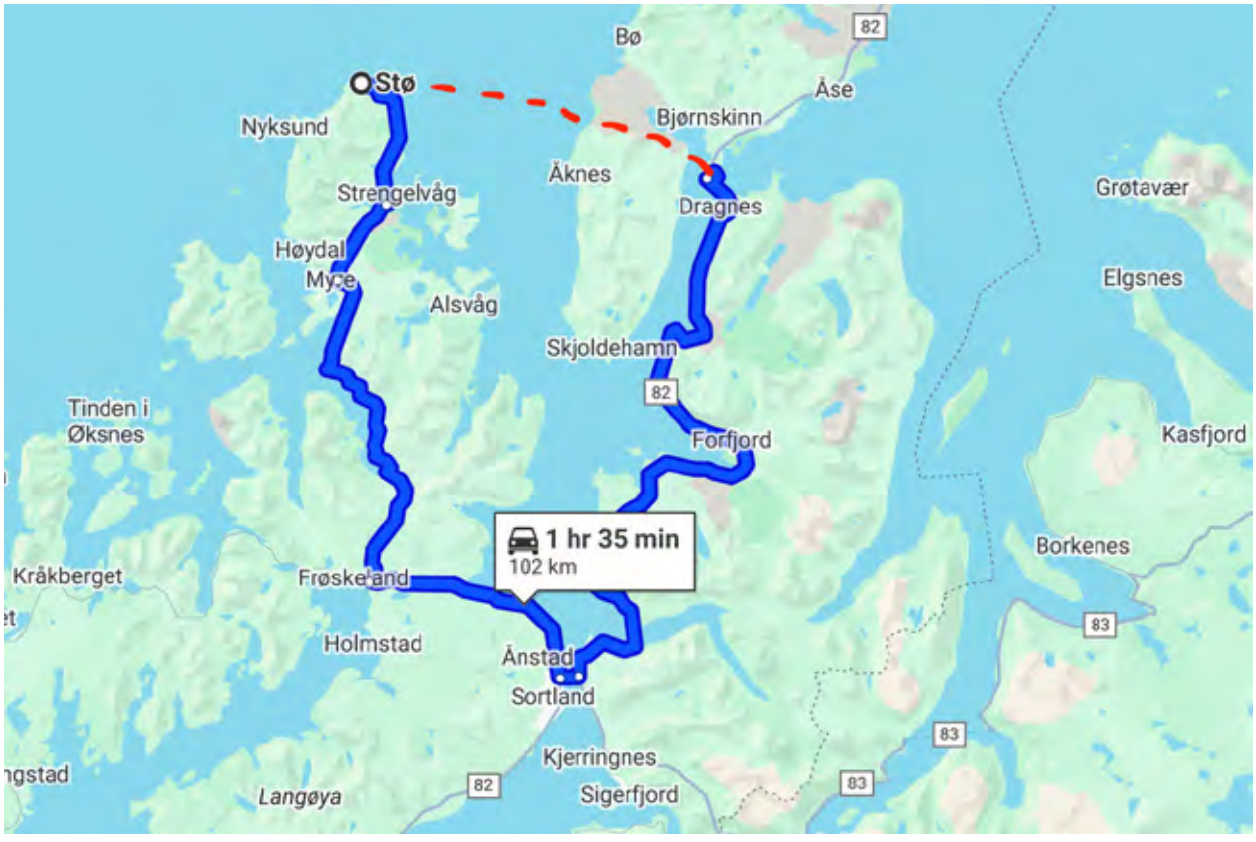
Its productive application was celebrated in 1926 when the dirigible 'Norge' made the first documented overflight of the North Pole. The expedition was made possible through the successful collaboration of three men from three countries: General Umberto Nobile, supported by the Italian government; the Norwegian explorer Roald Amundsen; and the American entrepreneur Lincoln Ellsworth. The airship departed from Ciampino Airport on 10 April 1926 and arrived in Svalbard, at King's Bay (Ny-Ålesund), on 7 May. On 11 May, the 'Norge' left for the North Pole, flew over it the next day, and continued to Alaska, where it made an emergency landing due to bad weather conditions.

Back in Italy, Nobile resumed his activities and built a new airship model for a second Arctic expedition, aimed at scientific reconnaissance and mapping of unexplored polar territories. Within two years, the dirigible 'Italia' was ready, and a new mission departed from Milan on 15 April 1928. On 24 May, it reached the North Pole but, surprised by a strong storm, it turned back towards Svalbard instead of continuing its route to Alaska. The story of their survival in the ice inspired the famous film 'Red Tent' featuring Sean Connery and Claudia Cardinale.

Despite Nobile's misfortune, the dirigible represents the first air vehicle capable of covering long distances in bad weather conditions, paving the way for polar exploration and discovery. In Ny-Ålesund, Svalbard, the National Research Council of Italy has its Arctic research base, aptly named "Dirigibile Italia." In the Italian collective imagination, the words Arctic and dirigible are intertwined, and Umberto Nobile figures prominently in the gallery of great Italian travelers and explorers.

DISTANCE

JASON RICHARD BALL



DOG RACE

MERETE JØRSTAD

DOMESTIC

WHITNEY LACKENBAUER

E

ECOSYSTEM

MARIA VUORENSOLA

An ecosystem is born from small and large pieces. It emerges from the substance between the pieces, from the links, bonds, attraction, and counterparts. It is born from complementary wholes and actors who share the same vision. An ecosystem creates something special in the world. However, it can gradually decay into nonexistence if an integral part of it or the linkage between parts suddenly ceases to exist.

I perceive the ecosystem through my own work. The ecosystem close to me is the research, development, innovation, and expertise ecosystem of my hometown, Oulu, in Northern Finland. As a city, we support the region's RDI activities by coordinating cooperation between local universities, research institutions, and other partners.

To ensure continuity in ecosystem cooperation and commitment – even during challenging times – the region's RDI partners have agreed on an alliance agreement. In the agreement, we outline a joint vision and a few target areas for the next seven years. The Oulu Innovation Alliance's vision is to build the best ecosystem in Europe to create global added value through digitalization.

To build an ecosystem that is more than the sum of its parts, a lot of trust is needed between the key actors. In addition to trust, a shared vision of the region's goals is required. Last but certainly not least, resources are an important lubricant for successful cooperation.

ECOTOURISM

YATI YATI

EDUCATION

DIANE HIRSHBERG

Education in the Arctic includes a broad set of knowledge-sharing activities that occur in many spaces and times. Education happens within families, especially with elders passing down knowledge to youth; it occurs on the land when youth or newcomers go out with community members and participate in subsistence activities. Additionally, it takes place in institutions, including primary and secondary schools, colleges and universities, and career and technical training institutes. However, too often, the education offered in institutions in the Arctic conflicts with the cultures, values, and practices of the people in the communities where it was introduced or, historically, imposed.

Colonization disrupted many place-based knowledge-sharing processes and practices. In much of the Arctic, young people were forcibly removed from their families and compelled to attend residential schools that were often far from their homes and the lands on which they were born. The intent of these schools was to interrupt the transmission of Indigenous knowledge, language, and the spiritual underpinnings of these systems, as well as to disrupt subsistence activities and traditional economies.

There are now efforts to revitalize Indigenous educational practices across the Arctic, whether through Sámi postsecondary education institutes in Sápmi or tribal schools and language immersion programs in Alaska. There is growing recognition that different knowledge systems provide distinct and complementary learning opportunities and that non-Indigenous students can benefit from the teaching, learning, and knowing developed in Arctic Indigenous contexts.

EMBRACEMENT

NATALIIA HAMMARBERG

The world is uncharted and not always as we imagine it. One day, the unknown will become familiar. Curiosity, the desire to learn and discover, and the courage to change are needed. The Arctic has become a part of me. The unknown turned out to be incredible.

My Arctic experience began in Luleå. Luleå's winters are white, magical, and real. The northern lights dance across the sky in vivid colors, taking my breath away. The frozen archipelago in winter, with its ice tracks, offers a feeling of being one with nature.

Luleå's sunny summers and the midnight sun, when daylight stretches endlessly, have given me a new appreciation for the unique rhythm of life here, with its sunrises, sunsets, and pristine waters.

The people who have embraced this incredible environment contribute to the warmth of the community and the shared experience of living in such a unique place. The pulse of the city contrasts with the silence of nature. Luleå's dreams of a better future are matched by the actions taken to achieve it. Luleå's hands are extended to the Arctic – hands of cooperation and dialogue.

One day, the unknown, distant, unseen will become your place. My place. Luleå embraced me, and I embraced it in return. The Arctic has captured my heart, and I am grateful to call it home.

EMPOWERMENT

SIF VIK

Empowering young people in the Arctic is essential for unlocking the potential of a modern, inclusive, sustainable, and creative North. As Arctic cities grow and develop into dynamic hubs of culture, innovation, and economic activity, the role of young people becomes pivotal in shaping a sustainable and thriving future for the region.

Tromsø has a 50-year legacy of youth empowerment and participation – from youth riots in the city in the 1970s and '80s to the current situation where methods and initiatives from the region have influenced policies on a national and European level.

Modern Arctic communities, such as Tromsø, are increasingly urbanized and connected, serving as gateways to innovation and global collaboration. Empowering young people in the Arctic will equip them with the skills and opportunities to excel in creative industries, technology, and entrepreneurship.

With access to education, technology, collaborative networks, creative spaces, and funding opportunities, young people can drive urban development that is both innovative and deeply rooted in Arctic realities.

Empowerment is a powerful tool for building Arctic resilience. Empowered young creators can tell the stories of their communities, challenge stereotypes, and connect the Arctic to a global audience. From start-ups in green technology to arts collectives that showcase the region's identity, young Arctic residents are already redefining what it means to live and create in the far North. By empowering young voices in film, design, music, and other arts, the Arctic becomes a region not only known for its natural beauty but also for its cultural vibrancy.

In the future Arctic, young people are key stakeholders in shaping innovative solutions to reconstruct society to make it sustainable and resilient while adapting to the rapid changes around us and addressing these challenges with fresh perspectives. By investing in the empowerment of young people, we create a region that thrives on innovation, diversity, and resilience – a young, empowered Arctic that inspires the world.

ENTREPRENEURSHIP

PETER VESTERBACKA

The Arctic teaches lessons that resonate deeply with entrepreneurship: resilience, focus, and the courage to challenge the status quo. These qualities are essential for innovators in the far North and beyond.

Entrepreneurship in the Arctic, like surviving its winters, is about turning constraints into advantages. The scarcity of resources sharpens creativity. This philosophy emphasizes that limitations are not barriers but opportunities to rethink, reimagine, and rebuild. The quiet of the Arctic mirrors the focused determination needed to bring an idea to life, even when others doubt its feasibility.

One core belief in entrepreneurship is the power of thinking globally from day one. In the Arctic, where communities are small but interconnected, there's an inherent understanding that success isn't local – it must transcend borders. Similarly, entrepreneurs must design products, services, and strategies that can thrive in a global ecosystem. An Arctic entrepreneur's mantra should be that "the Arctic is the best place in the world to create global companies." Even from the edges of the world, visionaries can impact the center.

Moreover, collaboration – a survival skill in the Arctic – is crucial for entrepreneurial success. The importance of community and partnerships is vital, likening them to ecosystems where every member contributes to collective strength. Entrepreneurs, much like Arctic explorers, cannot succeed in isolation. They must build networks of trust and shared ambition.

Finally, the Arctic's profound stillness offers an allegory for patience. Success doesn't come overnight; it requires perseverance, adaptability, and an ability to embrace failure as part of the journey. Don't fear failure – fear not trying. It's a mindset as essential for navigating uncertain markets as it is for traversing icy tundras.

In the Arctic and in entrepreneurship alike, the bold who dare to dream big and act with purpose light the path for others to follow. The lesson is clear: innovation knows no boundaries, and neither should we.

SEE HOSPITAL ⊖

EQUALITY

MALGORZATA (GOSIA) SMIESZEK-RICE

There is no need for equality where no difference exists – the idea(l) of equality, in fact, presumes a difference between two or more.

The Arctic is home to a great diversity of cultures, communities, and ecosystems that vary between seasons, like the winter's polar night differs from the summertime's midnight sun. As this home undergoes profound and rapid changes, their impacts are often experienced by people very differently depending on their gender, age, ethnicity, education, and wealth.

Equality means equal rights, responsibilities, and opportunities for all – women, men, and those beyond the gender binary; girls and boys; Indigenous and non-Indigenous; children, youth, seniors, and older persons alike.

As the Arctic is changing, we must ensure that everyone has the capacities and resources to respond to and adapt to these changes.

Equality is not about transferring opportunities from one group to another. It is about creating an environment where each person has the right, ability, and conditions to realize their full human potential, to shape their own lives, to thrive, and to contribute to society in all spheres, especially those they feel most called to.

In this vast, amazing, and sparsely populated region, in the face of the challenges ahead of us, we cannot afford to squander anyone's energy, efforts, creativity, and contributions.

Equality means equal opportunities to be well and do well.

To make it happen, first, we need to pay closer attention to the differences between and among people and societal groups. We should ask more specific questions and move past one-size-fits-all solutions.

Second, we need to make equality, including advancing and achieving gender equality, a part of every single Arctic conversation and a central consideration in addressing both the challenges and opportunities ahead.

The journey toward equality in the Arctic is a shared one, and everyone has a role to play in it. It is not an easy one, but I also like to think that, paraphrasing one of the Arctic adages, once we make it happen in the Arctic, it will not stay in the Arctic.

ESTONIA

URMAS PAET

Estonia is the northernmost non-Arctic state. Even though Estonians are not in the Arctic, then historically and culturally, we are extremely close with the Arctic countries and people.

Speaking of history, the first nation to recognize the restored independent Estonia in August 22, 1991, was an Arctic nation. It was Iceland! We are thankful for that and to commemorate this, we've named the square in front of our Foreign Ministry „Iceland Square".

Estonians and Arctic nations also share similar humour, the love of nature and ofcourse a deep affection for the sauna. We all have a common sense. That is crucial in the current turbulent times we are living in.

Furthermore, the present-day turmoil in world politics must bring us even closer together.

For the past 10 years in the European Parliament, I've worked on stregthening relations between the EU and the Arctic. As the European Parliament's Standing Rapporteur for the Arctic Region I wish to see the future of Norway, Greenland and Iceland in the EU.

As an Estonian, I am grateful that we joined the EU over 20 years ago and so I would definitely recommend it to my northern friends.

EUROPE

COSTAS KADIS

Europe and the Arctic belong together. The northern regions of Finland and Sweden are as much within the EU as Brussels. The Arctic's natural wonders, from the northern lights to the boreal forests, enrich Europe just as the Mediterranean or the Alps do. Cultural expressions like the Saami joik are as vital to Europe's heritage as Beethoven's symphonies. The very name 'Arctic' has its roots in ancient Greek, underscoring this deep connection.

Europe's bond with the Arctic is forged with those who call it home. Hundreds of thousands of Arctic residents are EU citizens, enjoying the rights and freedoms that come with it. Their voices contribute to the vibrant tapestry of 450 million people within the EU, adding strength through our union in diversity.

For Europe, the Arctic is a canvas of opportunity and responsibility. The Arctic harbors resources that Europe needs. Yet Europe also promotes caution and respect for those living in the Arctic, as well as for its ecosystems, driving a vision for sustainable development. Europe also brings to the Arctic resources, stability, and strong cooperation. We benefit from each other, like true partners do.

Climate change, marked by melting ice, poses significant challenges to the Arctic and the world. Europe approaches these challenges with foresight, balancing economic interests with environmental responsibility, while considering the well-being of Arctic inhabitants and future generations. By spearheading climate initiatives, Europe seeks to benefit all, investing in knowledge, promoting the wisdom of Arctic residents, particularly Indigenous Peoples, and fostering border-transcending collaboration.

At this crossroads of opportunity and responsibility, Europe sees a reflection of its own identity in a resilient Arctic. As the EU Ocean Commissioner, I also serve as the Commissioner for the Arctic. I look at the Arctic with a fresh understanding of what is Europe's northern neighborhood, where challenges and opportunities abound, people work with nature to thrive, and loyal cooperation and respect for norms are the keys to success.

I am committed to bringing the EU and the Arctic closer together because I believe that a peaceful and thriving Arctic illuminates a path to a brighter future in Europe.

EXCHANGE

JERE JÄMSÄ

Exchange represents an opportunity – a chance to create and experience something new. For individuals, it can be an enriching, surprising, and, most importantly, enjoyable adventure. It offers a unique way to learn, grow, and embrace the vibrant energy of youth.

For schools, exchange programs are a mark of distinction. When a school actively participates in exchange opportunities, it enhances its appeal to prospective students who value global connections and diverse learning environments. Students are naturally drawn to schools that open doors to such transformative experiences.

In the business world, exchange is a pathway to innovation and collaboration. It provides companies with the chance to welcome employees from different countries, bringing fresh perspectives and specialized skills. Moreover, it can be a vital solution to labor shortages, enabling businesses to bridge gaps in expertise and workforce needs.

For young people, exchange is a journey of self-discovery. It's a chance to explore what they are passionate about and what they might want to pursue in the future. It's also a safe yet challenging space to test their independence, resilience, and adaptability – a perfect environment to spread their wings and see how far they can soar.

EXPEDITE

THOMAS HJORT

EXPEDITION

JESKA CLARK

EXPLORATION

ANNA BIDGOOD

For a long time, humans have been exploring new areas in the Arctic that offer 'life support' resources and opportunities. Many of these examples are geographical in nature, such as the circumpolar migration of eastward-moving Asiatic peoples (Inuit) who met westward-moving Europeans (Vikings) in West Greenland during the early medieval period. Later explorations focused on the search for new lands, new sea routes, and geographical objectives – the Magnetic and North Poles. While the motivations and justifications behind such exploration are varied, they all involve searching for or investigating the unknown. Today, our perceptions of "exploration" are influenced by our cultural environment and history. The discovery and exploration of "new" and "uninhabited" regions have often been characterized, in the Western world, as heroic, quite distinct from other cultures.

Exploration is also used to describe the search for specific resources, such as the raw materials that we use in our everyday lives, many of which can be found in the Arctic, as exemplified by the voyages of Pytheas in 325 BCE and Martin Frobisher in the 16th century. Modern-day exploration looks very different from the past, particularly in the use of remote data such as satellite imagery, which allows for 'low impact' exploration over large areas. Following this, an explorer typically needs to secure access and permissions to visit the land from Indigenous peoples, landowners, regulators, and other stakeholders prior to collecting surveys or samples for analysis.

Today, our exploration takes us to the Arctic in search of the metals required for renewable energy, transportation, and digital technologies that will underpin decarbonization efforts. While we seek to address climate change challenges, we cannot create new problems. Thus, exploration must be conducted in an environmentally and socially responsible manner, considering the potential short- and long-term impacts on people and the environment, and hence minimizing our "exploration footprint." With this firmly in mind, in some regions of the Arctic, Indigenous peoples are promoting responsible exploration and mining, such as the 100% Indigenous Greenlandic Government and the Northwest Alaska Native Association. As we introduce new advanced technologies and approaches, we have a responsibility to build collaborations and braided knowledge systems that help us understand this precious and ever-changing landscape, especially as new areas for exploration are opened up.

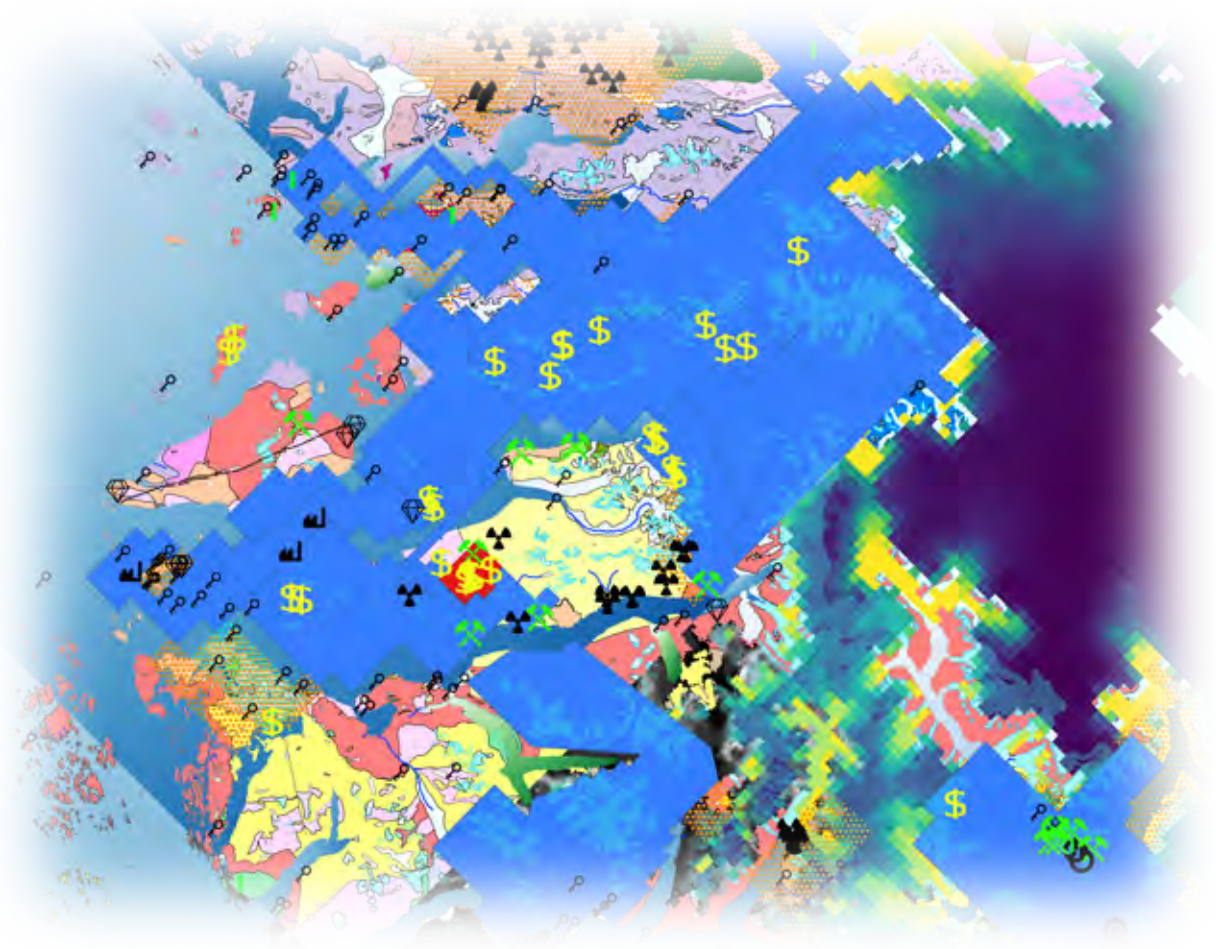
SEE CRITICAL, EXTRACTION ⊖

EXPLORERS

SARAH BARNARD

EXTRACTION

GUDRUN HAVSTEEN-MIKKELSEN



F

FARM

PARSA MASSAHI

There once was grass, so lush, so rash
there growin' on the mount.
But trees and bushes, shrubs and weeds
where also to be found.
Then man came round, he messed it up,
disheveled by his hand,
the land cried out, but still was hope
and fairness for the ground.

And justice, peace, yeah harmony,
it still was in the grain.
And not too late for us was it,
and not was it in vain,
to take the soil, and share it even,
even to an inch.
To seek and guide, not cheat or hide
uncentered spinning's pain.

But daffodils will help and so will oats
and wheat and rye.
And all shall sprout
and thrive and bloom
and after that shall die.
And we shall die along with them, but now is not
our time
to rhyme, elate the crowd
we'll say farewell and not goodbye.

And since the Arctic's heatin' up,
let us choose to see,
a celebration and invert that which put us in need.
Let's make a garden
lush and full
with life up to the brim,
and ditch the past, now first, not last
and heavy, bloody meat

SEE GARDEN, FORAGE →

FEMINISM

JULIE EDEL HARDENBERG

Feminism in the Arctic

You talk about equality.
All I hear is the language of white privilege.
You talk about equality.
All I hear is the language of white feminism.
You talk about equality.
All I hear is the language of white innocence.
You talk about equality.
All I hear is the language of white fragility.

FIBER

IK ICARD

Slender glass fibers are poised to thread new pathways through the Arctic and northern oceans. Fiber optic cables will traverse this remote region of ice and isolation, forging literal and metaphorical connections and facilitating the flow of information in a digital age. These fibers carry tremendous amounts of data at the speed of light, linking distant communities and continents.

The benefits of this connectivity in the Arctic are manifold. For Indigenous communities and First Nations, fiber optics can bridge the digital divide, providing access to education, health services, and civic and cultural resources.

Students can gain access to online resources, virtual classrooms, and digital libraries, breaking down barriers that once isolated children and young adults in these remote regions. They can learn from the same materials and instructors as their peers in more connected parts of the world, leveling the educational playing field. And they can share their Arctic experiences with those peers.

Telemedicine becomes a reality, allowing patients in remote areas to consult with specialists thousands of miles away. This capability is crucial in the Arctic, where harsh weather can make travel dangerous and time-consuming. High-speed data transmission ensures that medical records, diagnostic images, and real-time consultations are seamlessly exchanged, improving the quality and accessibility of healthcare.

Fiber will enable real-time monitoring of oceanographic and seismic data, making remarkable new tools available for scientists to study the most rapidly changing ocean on Earth. For businesses, it opens new opportunities in trade and commerce, fostering economic growth and development.

Fiber transmission substantially accelerates emergency response and enhances security as well. Reliable and rapid communication networks improve the ability to monitor and respond to emergencies, whether they are natural disasters or other crises. This means a greater degree of safety and preparedness for Indigenous peoples, reinforcing their resilience against the challenges posed by their environment.

Fiber optic connectivity through the Arctic will not only bring robust and reliable diversity to the global fiber network, but it will also integrate that network and its benefits into the Arctic.

FIJI

ADI ALANI TUIVUCILEVU

In the twinkling lights of the city that never sleeps, a Fijian sums up what – to her – relates Fiji to the Arctic.

Rich cultural heritage, Indigenous cultures, and oneness with the ocean and land are what spring to mind at the mention of Fiji or the Arctic.

As we wade into the 21st century, where ideas and the parameters of principles and beliefs are continuously redefined and reshaped, the stalwart nature of humankind's oneness with our natural environment is what binds Fiji with the Arctic. Our ingrained resilience is brought to the fore through our values of stewardship that ensure our survival through Fijian tropical temperatures and the beautiful, lush cold of the Arctic.

Resilience toward the onslaught of the changing climate is especially strengthened through our Indigenous cultures, which preserve ways of knowing and doing that ensure our adaptability to Arctic sea ice loss, increases in ocean acidification, and rising sea levels impacting Fijian local communities.

Though fundamentally different in climate, what also maintains the beating heart of the Arctic and the Fijian people are their links to the ocean and all that it holds. Not only does the ocean – an ancient force – provide our people with sustenance, but it is also a physical embodiment of rich cultural heritage that joins our people and our lands in perpetual communion.

Though there may be a wide geographical divide, our oceanic connection has remained unbroken and will remain so for generations to come.

FILMMAKING

PRINCESS DAAZHRAII JOHNSON

Like the animals gift themselves to us, so do images.
You can only plan, strategize, and produce so much;
we all need a little luck.
This is how we've been taught.
Nothing comes without reverence and humility.

We use the camera as an extension of spirit, an instrument of change, relaying back to the world the way in which we are connected by a single vibrant magenta tundra flower resolutely blowing in an Arctic wind.

We stand in this beauty, an old sunburnt set of caribou antlers surrounded by lichen.

All of us – a part of the same cycle.
A greenhouse in Anaktuvuk Pass, a kelp farm in Prince William Sound, the cry of a loon holds, too, a message.
Oh, how we dream to these animals:
A lynx, her tufted ears so suited for the cold, reminds us that she once had a long tail.
A child picking her first salmon berry strikes her mother with hope.

We draw you in, opening your eyes also to a rapidly changing world: erosion, flooding, fires, and also, something more: The Human Spirit.

We remain firmly rooted to the land of our Ancestors.
We recognize that film can be medicine.

As we tell our own stories, we show you we are more than a trauma-filled story.

We call upon the great oral storytellers to whom we owe our existence.

We use modern tools fueled by ancient wisdom that beckons us to create, to rise to the moment, hope and a wild desire to imagine a better future for our children and all those yet to come.

So sit with us before this dark screen and join us as we dream together.

The soundtrack to our future is a collective vision, each of us an instrument of change.

FINANCE & LONG-TERM LOANS

ANDRÉ KÜÜSVEK

Accessible and long-term finance serves a crucial role in shaping the future of the Arctic region and its people. The Arctic holds immense promise – from abundant renewable energy resources to opportunities for improved infrastructure. However, selecting which projects to finance and which to forgo requires a thoughtful approach that balances economic development with environmental sustainability.

The region is warming faster than any other place on Earth, leading to melting sea ice and affecting the livelihoods of local communities and wildlife. This environmental fragility makes it imperative that investments respect our planet and support both ecological sustainability and viable human habitats.

Enhancing the quality of life through better connectivity is essential. Infrastructure developments such as ports, airports, and electricity grids are vital for economic growth. They provide access to essential services like healthcare and education, attract trade, boost tourism, and foster cultural exchange. When implemented appropriately, these initiatives can benefit local populations while protecting the natural surroundings that sustain them.

The Nordic Investment Bank (NIB) exemplifies this balanced and long-term approach to financing. As one of the largest financiers in the Arctic region through its Nordic and Baltic member countries, NIB's mission is to fund projects that improve productivity while benefiting the environment. In Greenland, Iceland, the Faroe Islands, and the northern parts of Norway, Sweden, and Finland, the bank is financing small and medium-sized enterprises, airports and seaports, renewable energy production, and reliable electricity grids.

When used wisely, finance becomes more than just capital – it becomes a catalyst for progress. By leveraging opportunities and addressing challenges with care, responsible financing can enable a prosperous and sustainable future for the Arctic region.

SEE BANKING ⊖

FISHERMAN

HÅKAN JONSSON

FJORD

SIMON JUNGBLUT

Fjords are inlets of the ocean that reach deeply into the land. They developed through ice-age glaciers flowing towards the ocean through river valleys. The forward-moving glacier shaped the valley through erosion. When the glaciers and the ice cap retreated at the end of the ice age, the coastline elevated as it was released from the weight of the ice. Many fjords feature an embankment at their opening to the ocean. These embankments, called "sills," were formed by the glacier pushing rock material in front of it, reducing the water exchange between the fjord and the open ocean. With only a small connection to the open ocean waters, fjords exhibit much more pronounced gradients of parameters and processes, such as temperature and productivity, compared to open coastlines.

To this day, Arctic fjord ecosystems are characterized by glaciers in one way or another. A sea-terminating glacier creates a biological hotspot in the fjord right at the glacier front. Freshwater from melting ice is released below the glacier tongue and rises to the fjord surface. Small invertebrates, like shrimp, are osmotically shocked by the freshwater and, being paralyzed, become easy prey for seabirds and marine mammals.

In the course of climate change, many tidal glaciers are transforming into land-terminating glaciers. The glacier meltwater enters the fjord at the surface without paralyzing many invertebrates, resulting in much less prey available to birds and mammals. Now running off over land into the fjord, the meltwater carries so many particles that it darkens the fjord water below, impacting light-dependent organisms like kelps and seaweeds.

Many Arctic fjord ecosystems are in transition. Ultimately, the glacier-impacted fjords of today, such as those in Svalbard, may resemble the ones in the Faroe or Shetland Islands in the future – still beautiful but very different. Throughout the Arctic, communities live along and depend on the fjords, creating complex socio-ecological systems. These communities will face tremendous changes, and it is the duty of humanity to support the Arctic communities in adapting to these changes.

FJORDSIDE

RAJAT BUSHAN GUPTA

FLOUR

MINIK THORLEIF ROSING

The finest, most beautiful of anything has always been known as flour. The fairest part of a plant is its flower. The sweetest salt in a Camargue saltpan is the "fleur du sel," and the finest fraction of milled wheat grain is wheat flour.

Wheat does not grow in the Arctic, but we still have the most fabulous flour! Let's call the finest fraction of the rocks milled by the immense Ice Sheet of Greenland "glacial rock flour." But why would we need to call it anything?

Billions of tonnes of glacial rock flour are flushed from under the melting Inland Ice every year. Meltwater rivers carry it to the fjords, where it forms vast deltas of the softest, sootiest mud anyone can imagine. This is pure crushed rock, the finest form of rock – it is rock flour.

It still holds all the minerals of the mountains, only broken into unbelievably fine particles. The milling has exposed the interiors of whole mountains to the atmosphere and the ocean.

Rain is carbonic acid, which eats rocks for breakfast. As it digests the minerals, nutrients are released into the soil and the ocean. All life on Earth is dependent on mineral nutrients released from weathering. The yield of crops from our fields and the stocks of fish in the sea are sustained by these nutrients, and the amounts we can harvest to sustain ourselves scale with how fast the rocks can release their bounty. The finest of rocks, the rock flour, has an enormous surface area and readily reacts with the rain, and it can increase the productivity of soils if spread on fields across the globe.

Having identified the billions of tonnes of wonderful flour in the fjords of Greenland and understood its potential, we must ignore the Danish proverb "Don't knead a bigger bread than you can bake" and activate the finest flour of crushed rocks to release its true potential to feed the growing world population.

FOG

ALINA KOVALENKO

FORAGE

SASU LAUKKONEN

To forage means to search widely for bounty in nature. What grows in our northern region is available only during the short growing season, and it needs to be preserved for our long winters.

Mushrooms, berries, wild herbs, and trees – all sorts of locality-defining edible wonders that don't exist everywhere. Our foraged items are abundant, with some varieties available for only a couple of days and others for weeks in a year. Not to forget, many varieties have different growth stages from which a skillful forager can preserve very different flavors from one plant.

FUTURE

OLE MARTIN NYGÅRD

The future is an ever-unfolding mystery – a realm of possibilities shaped by the choices we make today. It's a place where technology, society, and human potential intertwine in ways one can only imagine.

While the future may seem uncertain, it offers endless opportunities for growth, innovation, and transformation. Every discovery, every development in society, and every small thing in your life builds the foundation for what comes next.

Though the path ahead is uncharted, it is defined by the hopes, dreams, and actions of those who dare to shape it. Abraham Lincoln said it so well: "The most reliable way to predict the future is to create it."

As we move forward, the future invites us to both reflect on our past and imagine a world that is more sustainable, fair, and happy. The unknown is vast, but the potential within it is even greater.

G

GARDEN

STEPHEN BARSTOW

From the Viking onion garden at Lofotr Vikingmuseum to the old rectory garden at Steigen, the amazing Tromsø Arctic-Alpine Botanical Garden, the gardens of DNT cabins, where huge rhubarb plants can be found, and the wild vegetable gardens of the Sámi, there's a rich diversity of gardens in Arctic Norway.

The much-loved sorrel (juopmu) grew particularly well in nutrient-rich soils associated with reingjerder! Good stands of fatnu (Angelica archangelica, kvann) were sustainably harvested, providing the original candy of the north. KVANN is also our national plant conservation organization, working to conserve old varieties of useful plants and diversify plants adapted to Norway's climates, ensuring food security against climate change. KVANN's flagship project is the conservation of Voss Angelica, a milder-tasting variety traditionally grown in kvanngard on mountain farms.

We do not know which onions the Vikings cultivated, but in the reconstructed løkgard at Lofotr, there are wild Siberian chives, moved from onion meadows in Finnmark to home gardens, and victory (viking) onion, which has naturalized around settlements on Vestvågøy.

The botanical gardens in Tromsø have a great collection of old northern perennials collected from home gardens.

We have much to thank Frederik Schubeler (1815-1892), leader of the University Botanical Garden in Oslo, who tested the northern limits of "economic" plants and wrote extensively, enlisting priests across the country to evaluate plants. In recognition of the great man's work, KVANN has resurrected "Schubeler's Hager" around rectory gardens and other inspirational sites to inspire and educate locally. There are currently 10 such gardens in the Arctic.

Throughout the Arctic, it's actually the perennial plants that dominate. It makes much more sense to grow perennial vegetables, as they come quickly into growth in spring from an established root system and utilize the available solar energy optimally over the season. One of those perennial vegetables, patience dock (Rumex patientia), was well known to Schubeler as a cultivated vegetable in the north, but it is hardly grown today. There is huge potential for sustainable vegetable production in the Arctic.

GATEWAY

HANNA HONKAMÄKILÄ

The government of Finland decided in November 2024 to withdraw from the Barents Euro-Arctic Council. The motivation for this decision was that changes in the European security order and the international environment have affected regional cooperation in the north.

It is very regrettable that this decision was made without a clear way forward for cooperation between the states and the regions. We need a cooperation structure that includes the existing youth cooperation, the BRYC. Young people are our future, and who would want to lose their future?

The government of Finland has prepared a new policy line called the Program for Northern Finland. The program includes a proposal to draw up a joint strategic agenda for the northern regions of Finland, Norway, and Sweden.

This proposal ties together most of the proposed measures in the Program for Northern Finland and anchors them in cross-border cooperation. It connects joint Nordic labor markets, industries, energy, defense, and research and development projects.

We in the Oulu region are the gateway to this cooperation.

The existing railway connection and plans to study the European gauge from Raahe/Oulu to Haparanda, Kiruna, and Narvik connect us physically to the Atlantic. The European Capitals of Culture in Bodø 2024, in Oulu 2026, and in Kiruna 2029 connect us mentally to a common Nordic societal structure, democracy, and prosperity. The historical emotional bond between our countries is a source of solidarity strengthened by people whenever they meet.

We sometimes feel that the value of our region is seen primarily as a source of energy and raw materials, and that we are raising our youth to be human resources for others in the absence of prospects in the north. This feeling can be addressed through active participation in decisions that concern us. We need to participate to be able to contribute to value chains and value creation.

The future of the region is built on jobs and growth, but without cultural values and integrity, we build on quantity rather than quality. Without culture, there is nothing to defend. Without history and traditions, there is nothing to continue with. Without people, there is no gateway.

GEOPOLITICS

KLAUS DODDS

Geopolitics is a term that was coined in an Arctic state. Rudolf Kjellén (1864-1922) is widely acknowledged to have first popularized this portmanteau word, which highlights how geographical factors such as land, population, and resources influence and even determine political realities. As an object of study, it swiftly traveled across European and intercontinental borders as pioneering work in German, Swedish, English, and French was subsequently translated into Spanish, Italian, and Portuguese. Much of that work was conservative in nature, focusing on how to consolidate the power of the state and the need to ensure that national populations were kept well-resourced and secure. It has had a controversial intellectual history, with the nadir being an alleged association with Nazism and practices such as spatial expansionism and the domination of place. Much later, that original European work was translated into Chinese and Russian.

In 1951, Joseph Roucek, a Slovak émigré working in the United States, published one of the earliest pieces on the "geopolitics of the Arctic," focusing explicitly on the world's largest island. As he noted, "Greenland is an enormous hunk of ice, three times as big as Texas, with a narrow fringe along the southern shore where a few Eskimos and fewer Caucasians scratch out an existence." The quote has not aged well, and interestingly, many post-1945 professional geographers in the United States did not want to use the term "geopolitics" because they were worried about its intellectual contamination. When there was discussion of Arctic geopolitics, it was predominantly focused on Cold War rivalries.

As a way of thinking about the world, geopolitics remains valuable. In today's Arctic, a geopolitical perspective can alert us to how countries engage with their own territories and peoples; how resources are understood as integral to national economic and political strategies; when and where the Arctic might yet get further terraformed; and the consequences that might yet follow. Being geopolitical does not mean one has to be in lockstep with a presidential worldview. But what it can do is alert you to appreciating what is at stake when one part of the Arctic is coveted by another.

I look forward to hearing about the first published work written in Greenlandic on "Arctic geopolitics."

GLACIERS

JULIA WELLNER

GOBMI

HANNA MOEN REINSNES

GOLD

ELDUR OLAFSSON

GREEN

ANNE H. STEFFENSEN

Green is a color.

It is the color of grass and the leaves on trees and bushes in bloom, as well as the color of sparkling emeralds.

Green is synonymous with nature in all its splendor and glory.

And green is a movement – a movement to protect our environment and our climate.

We need a green transition to protect and preserve life on our planet.

To achieve this, we must change how we live, travel, produce, and consume.

We must move from black to green.

We must do things differently because we still need to travel, produce, and consume – to live – but in a more sustainable manner.

This is true for shipping as well. Goods and people still need to go from A to B.

Danish ships sail everywhere: in Greenland, the Arctic waters, and beyond. We are green shipping leaders.

As climate change and rising temperatures affect the Arctic and ice retreats, new shipping lanes will open.

These lanes can bring progress and prosperity, but they can also lead to increased pollution in the Arctic.

Therefore, we must choose the path forward wisely.

We must choose to be green.

In numerous ways, both big and small.

All ships must sail on greener fuels.

There is a cost to going green, but the cost of continuing to do what we've been doing is much higher.

It's about choices – about business and politics – and about doing the right thing now. We must find a way to make green business more profitable.

We must figure out how to balance the need for enhanced activity in the Arctic with the needs of Arctic communities and wildlife.

Our common future must be green.

GULA GULA

MARI BOINE

Hear the voices of the foremothers

Gula, brother
Gula, sister
Hear the voices of our foremothers
Why have you defiled the earth
Poisoned
Depleted

Listen, brother
Listen, sister
Hear the song of our ancestors
Eatnan, our mother, is Earth
If we kill her
We also die

Did you get snared in the fiction
That symbiosis is competition
Hear our forefathers' question
Do you know where you are from

You have brothers
You have sisters
In the Amazonian rainforests
On the windswept cliffs of Greenland
Do you remember where you come from

Translated by Julie Whitehorn

It has been with me for decades now. It has become like a dear old friend. It has, together with my other songs, accompanied me worldwide – to cities, towns, festivals, small, intimate stages, and concert halls.

And everywhere I go, I meet people who tell me: your songs bring back forgotten dreams. People tell me this music opens doors that have been closed for a long time. Some tell me the songs take them on a journey to nature, mountains, rivers, valleys, and lakes.

Big city people ask me: How is it possible that I feel your songs talk to me, touch something profound inside me, even if I don't understand your words? I don't always have an answer. I have the same questions in me! And they have led me to dive deeper into my ancestral heritage.

In our culture, we believe that our ancestors can advise us through dreams. It was customary when a child was born that the mother was asked: Did you dream the baby's name yet? The parents were then advised to name the child according to the name that came to her in her dream.

The lyrics to "Gula gula" woke me up one night, and I paired them with a new melody I had made inspired by a joik, a traditional song. This is how my most famous song was born. When I looked closer at the lyrics, it felt like the ancestors wanted to remind me of a wisdom that has been with Indigenous people worldwide since time immemorial.

My songs are born in the conflict between Indigenous philosophy of life and a culture of greed that has eternal growth as its mantra. In my songs, I have shared stories about what it is like to be a human being, a woman in the middle of this conflict.

All over the world, this is our ultimate challenge:
To restore the ancient wisdom and survival strategies that were sacrificed in the name of progress. The UN climate report that came out some years ago states that it is highly urgent to change course.

Around the world, many of us have started to remember and take back the wisdom and knowledge of our ancestors. Many of us are trying to communicate this wisdom and knowledge because we see that it is now urgent to save Mother Earth. Every day, I look for minor signs of hope, and I am ever so happy when I find such. We feel the grief of Mother Earth when politicians and governments too often choose to poison and deplete her.

I am an artist, one who carries the old songs, the old wisdom, and one who carries the torch given by the ancestors with the flame that should never go out!

H

HANDSHAKE

FRODE MELLEMVIK

HEADING

HIROYUKI ENOMOTO

Story of "Arctic Heading"

There is almost no snowfall in the town where I was born in southern Japan. The snowy northern regions represent a beautiful and dynamic natural world. The villages of the north and the exciting sports they offer fascinate young people from the south.

What lies further north? Dreams of heading north spread. People who visit the northern regions meet those who have lived there for many years. They learn the skills and joys of life in these areas. They find emotion, happiness, and fulfillment amid the harshness and tension. People in the northern regions share common experiences, knowledge, hardship, and joy.

However, the nature of the north is quite formidable. The dangers and the difficulty of predicting changes and their dynamism often overwhelm human preparation and ability. Yet, people still head north.

Sea ice also appears in the Sea of Okhotsk, even at 44°N. The frozen sea connects our imagination to the Arctic. Directly north is a village in Siberia known as the Cold Pole of the Northern Hemisphere, located 2,000 km away. Looking at the North Star, we think of the people living in the village below it. Another 1,000 km north lies the Arctic Ocean. Shifting our gaze another 2,000 km, we find Greenland on the other side of the North Pole. Surprisingly, there are many similarities in the scenery of boats sailing out onto the sea among floating ice. The lives and interests of people in both regions show that thoughts can be shared.

Heading northwest from us, a vast Eurasian continent spreads out before us, eventually leading to Scandinavia. There are dreams and efforts of people trying to connect across the sky, continents, and seas. This may be the history of humanity heading north, driven by a fundamental curiosity about the unknown and a desire to explore new areas of life.

HEALTH

PETER SKÖLD

The canary perched on a wooden stick inside the cage, full of life and joy, unaware of the deadly carbon monoxide lurking in the mine. Invisible and odorless, this gas was lighter than air and highly flammable. Humans relied on the bird to detect whether the air in the mine posed a danger.

The World Health Organization (WHO) defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." Achieving this state is challenging. On the positive side, the Arctic has made significant strides over time, especially if we equate health with longer life. In contrast to past centuries marked by devastating infant mortality, maternal deaths, and widespread epidemics such as smallpox, cholera, and the Spanish flu, life expectancy has risen dramatically. This is undoubtedly an improvement.

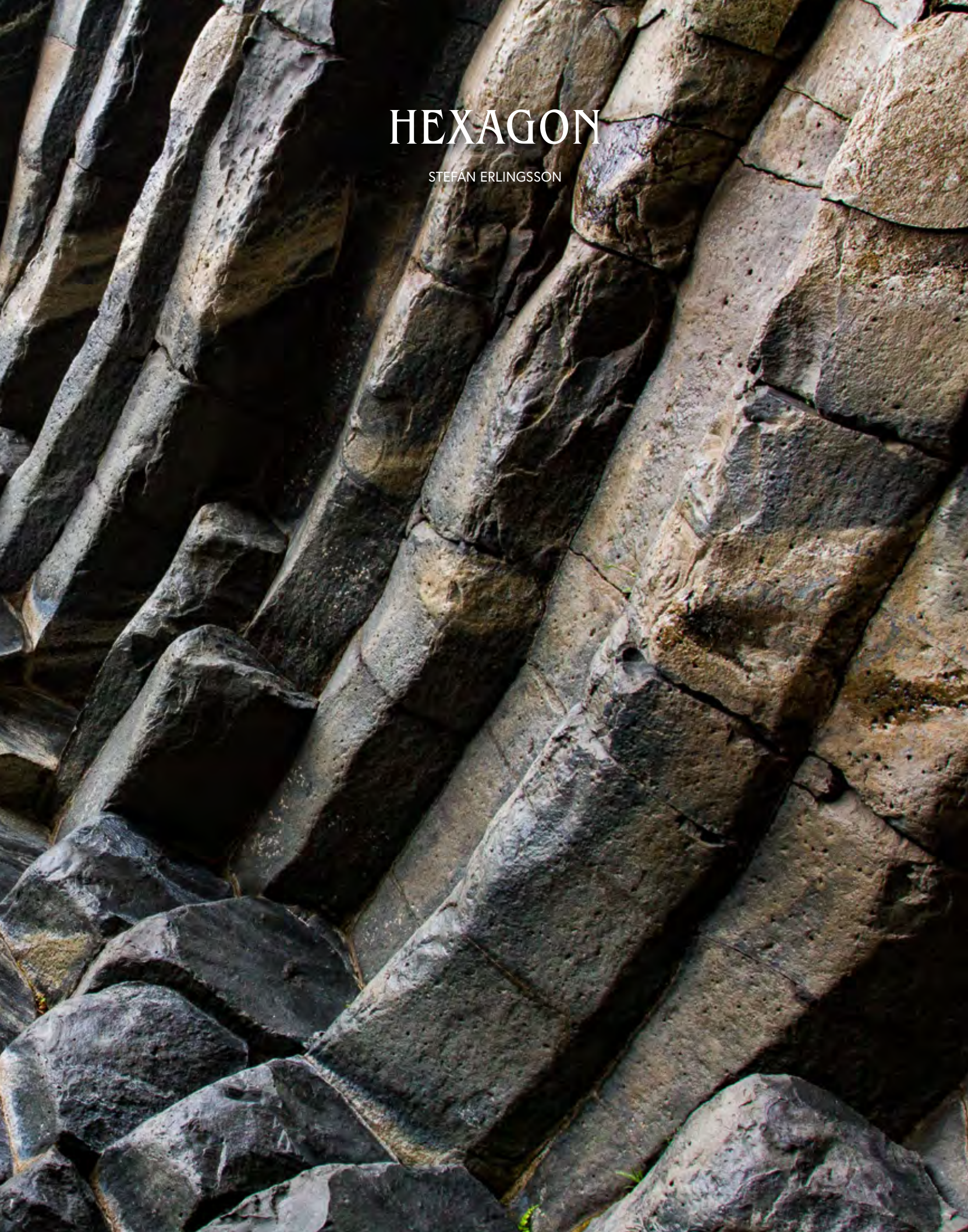
The canary gazed at the river in the distance, watching the people harvest the land. Everything seemed interconnected, the bird mused.

However, health in the Arctic is far from universally good, with conditions varying across regions. In some areas, high rates of infant and young child mortality persist, and life expectancy is still lower due to issues like alcohol and drug use, smoking, accidents, and violence. This is concerning. Moreover, the region faces environmental degradation and challenging living conditions, which further contribute to poor health. Health is not solely about mortality rates; it encompasses overall well-being, which is shaped by social, economic, and educational factors. For the indigenous peoples of the Arctic, cultural survival is also an integral part of well-being. And for those who lack control over their fate, worry often prevails. This is troubling.

The canary felt the cage begin to sway.

We have relentlessly exploited non-renewable fossil fuels and natural resources to meet the growing demand for consumption. This comes with significant consequences – consequences that should be visible and detectable. If we fail to see or sense them, we should at least recognize the signs of the Arctic melting and suffering.

Now, the canary finds herself in the mine. Almost immediately, she begins to feel lightheaded. Time is short.



HEXAGON

STEFÁN ERLINGSSON

HJERTESAK

KRISTIANE MAUNO KRYSTAD

Hjertesak is something that you hold near and dear. Something that really matters.

It`s in the words; "Hjerte" means heart, and "sak" means a theme, an issue or a case.

Hjertesak is something that someone is very passionate about and have strong feelings towards.

It's a burning flame, a torch, a speech, a poem, a book. It could be this book.

It`s roses in your cheeks, eyes that shine bright, and voices that rise.

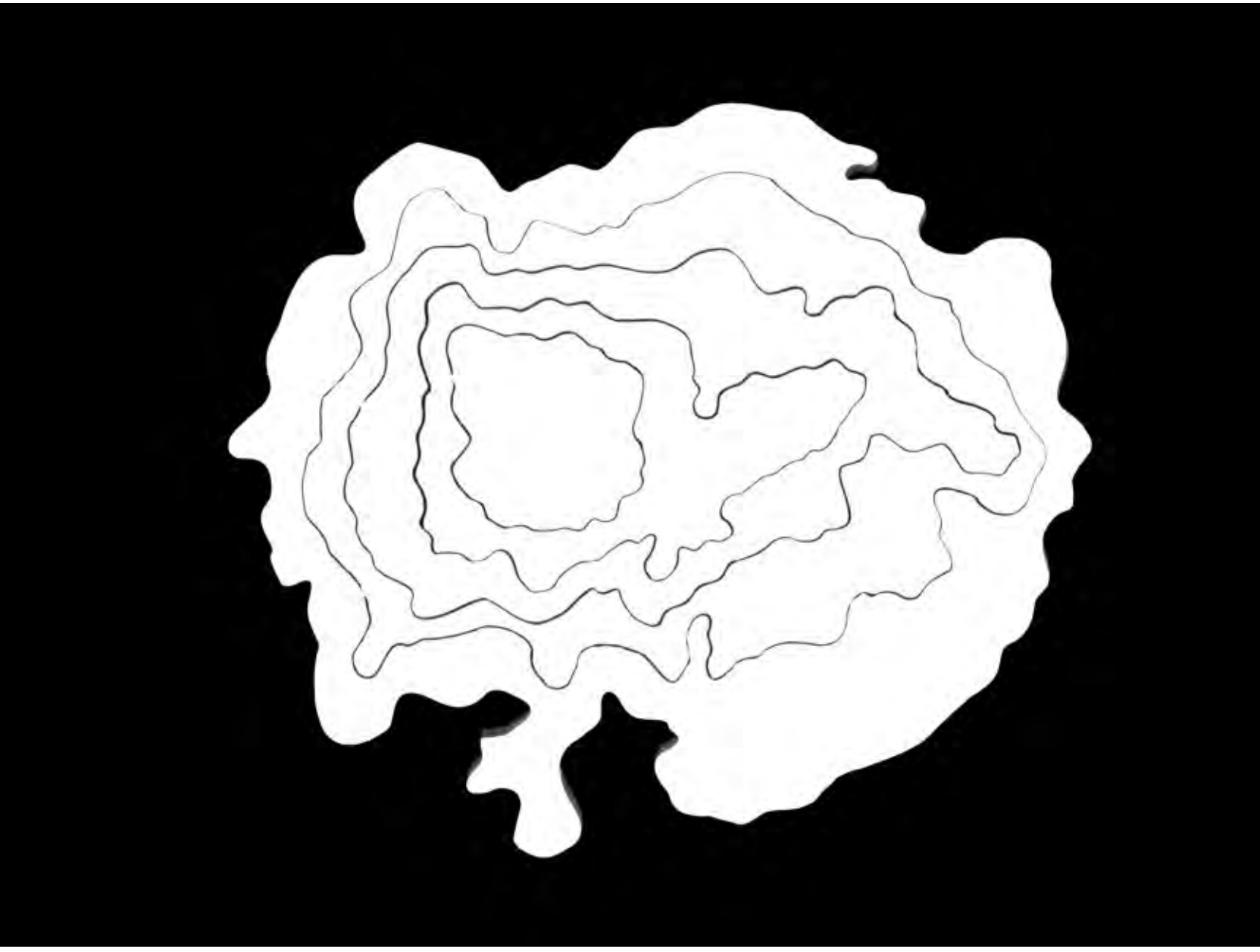
It's the writing on the wall, it's a law in parliament hall. It's what we fight for.

Sustainable living and preserving history, traditions and culture are near and dear to Arctic people. Surviving alongside rough weather in the long and cold darkness of the polar nights are embodied in us. This way of life makes people resilient. We fight for this way of living.

It matters to us that we can continue living here. A sustainable Arctic is our Hjertesak.

HOFSJÖKULL

ANNA DILJÁ SIGURDARDÓTTIR



HOME

VILHJAMI RAUHALA

Home is more than a place; it is a sanctuary where love and connection flourish. It is where one finds solace in the company of cherished loved ones, creating memories that anchor the heart.

Whether nestled within the embrace of beautiful and peaceful nature or amidst the vibrancy of a bustling city, home is wherever we choose to make it. It is the warmth of shared laughter and the quiet comfort of simply being together. Home is a refuge, a space where the weight of the world melts away, and one can simply be themselves.

Whether it's the glow of a cozy fire, the stillness of a snow-covered forest, or a shared meal around a table, home transcends physical boundaries, becoming the space where the soul finds its truest expression of peace, belonging, and love.

HORIZON

MADS NIPPER

As I look to the north over the sea, I imagine a place I have not yet had the privilege to see in real life. But yet a place the vividly lives in my imagination. A place of endless white ice plains as far as the horizon allows to see, with its inherent roughness and beauty ever present.

But on the horizon is also a dark shadow. An existential threat to not only the Arctic, but to the planet we call home. As we see temperatures rise, and natural disasters becoming worse and more frequent, we also fear that the wonderful Arctic will not only cease to exist, but also unwillingly become the source of disastrous rises in sea levels.

But on the horizon there is also hope. Not because of greater confidence in world decision makers to solve the existential threat growing day by day. But by human ingenuity, and the careful interplay with ecosystems that offer such rich opportunities for solutions. Imagine the Arctic becoming a source energy for great parts of the world. Not by drilling for hydrocarbons and continue to destroy nature and its ecosystems, but by lovingly utilizing its powers such as wind and water flows…

This will be challenging and take strong determination. But as long as humankind and individuals such as Christopher Columbus, HC Ørsted and others have looked towards the horizon and imagined a brighter future, solutions have prevailed, and challenges overcome. And they will again

HOSPITAL

KUSTAA VALTONEN

In the heart of the Arctic, where the icy winds of the Barents Sea carve through the stark white landscape, two unexpected symbols converge: Slush and Hospital.

Kirkenes, perched on the edge of the world, is a city defined by resilience and reinvention. Each November in Helsinki, the Slush startup conference captures the innovative spirit that thrives even in the harshest conditions and attracts trillions of dollars of international capital. Here in the Arctic, that same drive is embodied by a remarkable space – the Hospital, nestled within the Nothing Hill building. Once a beacon of medical care in this remote wilderness, the structure now stands as a metaphor for transformation, echoing the ethos of startups redefining the impossible.

Imagine the scene: the streets glisten with snow and slush under the fleeting light of the Arctic day. Entrepreneurs and visionaries, bundled against the cold, gather to brainstorm new possibilities. Much like Slush in Helsinki, the Nothing Hill building becomes a hub where creativity battles the freeze, where the challenges of isolation and extremity are not barriers but sparks for invention and tackling the world's big problems.

The Old Hospital, in its current guise, invites reflection on the intersection of past and future. It whispers stories of lives saved and communities held together while now representing the pulse of progress in an ever-changing Arctic. Creating new life from within the ice and snow.

Here, the Arctic itself is the pitch – a canvas for clean energy solutions, climate adaptation technologies, and rethinking how humanity thrives in extreme environments. Slush teaches us that innovation often arises from constraints, and in Kirkenes, the Arctic's challenges are embraced as opportunities.

As the northern lights dance above, the spirit of Slush finds its Arctic expression in the Hospital – a space that embodies the power of resilience and the promise of transformation. Together, they reflect the boundless potential that emerges when the cold bites hardest.

SEE ENTREPRENERUSHIP ⊖

HUNTER

HÅKAN JONSSON

I am descended from the Klomma family. Klomma is a Sámi word that means "bear hunter" and has its origins in the early 19th century. For generations, our family has been entirely reliant on what hunting and fishing provide.

In October, the mountain lakes begin to freeze over with their first layer of ice. Ice has always been important for the Sámi people, both as a means of travel and for fishing. Fishing has always held great significance for the Sámi. Fish can be caught year-round, is easy to store and prepare, and is highly nutritious. During winter, one can set nets beneath the ice or go ice fishing. In the mountain lakes, there are both Arctic char and trout, and both species are easily caught with hook fishing.

In Sweden, we unfortunately have a law, the Reindeer Husbandry Act, which stipulates that only Sámi engaged in reindeer herding have the right to hunt and fish within the traditional Sámi settlement areas. Those Sámi who are not involved in reindeer herding but have lived off hunting and fishing have, due to this law, been prohibited from continuing to hunt and fish in the areas where their ancestors once did so.

My hope is that in the future, all Sámi will have the opportunity to reconnect with their traditions, regardless of their background. This is essential for the Sámi people to preserve their livelihoods and culture in the years to come.

HUNTING

VIKTORIA STOKES

HYDROGEN

KJELL RICHARDSEN

For me, hydrogen represents a groundbreaking opportunity for green energy production and economic renewal in the Arctic, exemplified through our ambitious projects in Berlevåg.

Hydrogen in the Arctic, with Berlevåg as the spearhead, represents not just an energy source but a vision of a sustainable future where renewable energy drives economic growth and environmentally friendly development in some of the world's most challenging climatic areas.

Berlevåg's unique position, with extreme wind conditions in the mountain area where the Raggovidda wind farm is located, where wind turbines operate at full capacity 50% of the time, presents a great opportunity. Our challenge of limited powerline capacity to Eastern Finnmark and Berlevåg will become our greatest advantage, opening doors for large-scale hydrogen and ammonia production.

Berlevåg Industrial Park is now being established. We want to use all the electric power produced at the Raggovidda wind farm to develop a "green industrial park in the Arctic." We envision the industrial park becoming a center for green hydrogen and ammonia production, focusing on sustainable symbiotic effects through the utilization of hot water and oxygen from production processes.

Green Ammonia Berlevåg AS, established by Varanger Kraft AS and Aker Horizon AS, is planning large-scale hydrogen and ammonia production in the industrial park. Barents Salmon AS is now applying for a license for land-based salmon farming of up to 20,000 tons annually.

I believe this will elevate our small town to a significant player in the green energy transition. This represents more than energy production; it's about creating a sustainable future for Arctic communities.

We may witness new job opportunities and economic growth in a region constantly challenged by depopulation.

Hydrogen is not just a chemical element but a catalyst for sustainable development and industrial innovation.

HYDROGRAPHY

LARRY MAYER

Formally, hydrography is the measurement and description of the physical features of water bodies (oceans, seas, rivers, and lakes). To some, the term is used to describe the water mass properties, but for many, hydrographic science is focused on the collection of information about the depth of bodies of water (bathymetry), which is critical for safe navigation and many other purposes.

For thousands of years, the only way to measure water depth was with a hunk of lead at the end of a wire or rope (lead-line), and it was this technique that Fridtjof Nansen used during his remarkable drift of the FRAM (1893-1897) across the Arctic to make the first measurements of depth in the deep Arctic Basin. In 1907, Nansen published the "Bathymetrical Chart of the North Polar Seas," which, based on only a handful of lead-line "soundings," showed that beyond the shallow coastal shelves of the Arctic lies a deep ocean basin. It was not until after the Second World War, with the development of the "echo-sounder" (a device that uses sound waves to measure depth), that the nature of the seafloor in the Arctic began to emerge.

Echo-sounders were deployed by aircraft, sleds, icebreakers, submarines, and from ice islands, collecting thousands of sparse individual depth echo soundings over an area of 14,000,000 sq km. In 1999, the first international compilation of this data – the International Bathymetric Chart of the Arctic Ocean (IBCAO) – was published. Since that time, supplemented by new "multibeam" echosounder technology (which collects a wide swath of depth measurements all at once) and the efforts of the five Arctic coastal states to map their "extended continental shelves" under the Convention on the Law of the Sea, updates to the IBCAO chart have been published, the most recent being IBCAO Version 5. This latest version of Arctic bathymetry presents a much more detailed depiction of the bathymetry of the Arctic Ocean; however, at this point, only 25% of the Arctic Ocean has actually been mapped. There is so much more to learn and discover!

SEE BATHYMETRY ⊖

HYDROPOWER

AVIAAJA KNUDSEN

While temperate and tropical forests are the lungs of the Earth, the Arctic is its beating heart. Each second, glaciers – and especially the Greenlandic ice sheet – pump immense amounts of life-giving freshwater into the sea, regulate salinity, and fuel the great ocean conveyor belt that shapes our climate. Furthermore, this majestic yet fragile heartbeat could secure a greener and more sustainable future for humanity and our planet.

The answer lies in hydropower. This proven, reliable, and sustainable energy source offers the Arctic a unique opportunity to lead the global transition away from fossil fuels.

Abundant water resources and significant elevation differences make the Arctic perfectly positioned to unleash this potential. Already, Greenland is approximately 70% self-sufficient in green electricity, and – most of the time – our capital, Nuuk, draws all its electricity from hydropower. Yet the untapped potential is far greater.

We Prepare for a Greener Future

Greenland's vast, sparsely populated expanses provide ample space to build hydropower facilities with minimal impact on the pristine landscapes. Hydropower plants in Greenland are designed and positioned to direct and harness water flow without disturbing ecosystems or communities.

Soon, Greenland will initiate large-scale projects that channel meltwater from the ice sheet through state-of-the-art turbines, turning the challenges of climate change into tangible solutions.

Each year, increasing global R&D investments are directed toward technologies like Power-to-X, which convert green electricity into viable fuel for export, shipping, aviation, and industry. The expansion of Arctic hydropower integrates seamlessly with these innovations.

Our Answer to a Global Challenge

The primary obstacles lie in cost and scale. While the political and economic stability of the Arctic provides a strong foundation for green energy production, the region's limited population necessitates global collaboration to unlock the true potential of hydropower.

Fortunately, access to competencies across the globe, combined with cooperation between governmental and private partners, makes this vision much more than a dream.

With hydropower, the Greenlandic ice sheet is essentially the world's largest green battery, symbolizing the Arctic's promise: vast quantities of clean, sustainable energy that will help combat climate change and secure a greener future for all.

I

ICE

LARS H. SMEDSRUD

ICE-FREE

LAWSON W. BRIGHAM

The word ice-free has been used in recent years in ways that mischaracterize the current and future Arctic sea ice cover. The mainstream media, political leaders, and even several research papers have used the term 'ice-free Arctic Ocean' to unintentionally overstate what is happening at the top of the world. Clearly, the Arctic Ocean's sea ice cover has undergone profound changes over the past five decades, including the loss of extent and thickness, as well as a significant reduction in the area of multi-year sea ice – the ice that survives the summer melt season. Anthropogenic climate change is the driver of these losses, and these changes harbor a host of implications for the planet's warming and for Arctic Ocean ship access. Notably, however, the Arctic Ocean remains ice-covered for most of the year in the early 21st century and beyond 2050.

Sometime between the Septembers of 2030 and 2050, during the annual period of minimum Arctic sea ice cover, there will come a day, several days, or perhaps a week when the Arctic Ocean will be almost entirely ice-free. Climate modeling efforts (that produce future sea ice simulations) to determine what year this will occur are ongoing and being debated. When this seminal event happens, all of the Arctic Ocean's multi-year sea ice will have vanished, and as the ocean cools in autumn, only seasonal or first-year sea ice will form. A major physical transformation will have taken place. During subsequent years, the ice-free period in late summer will increase to the point where there will likely be no sea ice – open water – throughout the Arctic Ocean for plausibly three to four months, as indicated in several climate model projections.

Precision of language is essential when discussing the extraordinary environmental changes taking place in the Arctic. The term ice-free, when applied to the Arctic Ocean, holds special meaning and requires careful use.

ICEBREAKER

LAWSON W. BRIGHAM

The word icebreaker evokes an image of a powerful, large ship moving through a white ice cover, with other ships following in its broken track. This is a traditional, historic image of icebreakers operating in the Baltic Sea, North American Great Lakes, along Russia's Northern Sea Route, and in the Canadian Arctic. A powerful icebreaker, usually government-owned, plowing along and creating an ice channel to facilitate commercial ship navigation is what the maritime world understands as an icebreaker's primary role.

However, in the early 21st century, an icebreaker has taken on a new meaning. Advanced marine technologies and ship design have allowed shipbuilders to create new classes of icebreakers that include polar research ships, commercial carriers of Arctic natural resources (such as natural gas, oil, nickel, and zinc), naval ships, and polar tourist expedition vessels. All these ships are authentic icebreakers with inherent capabilities to sail independently in most ice conditions. One key driver of the need for new polar ships is increasing Arctic marine access, with sea ice retreat due to anthropogenic climate change; longer ice navigation seasons are available for a host of new uses.

Modern polar research icebreakers are operated today in both polar regions by nations such as Australia, China, Japan, Norway, South Korea, Germany, Russia, Finland, the United Kingdom, Sweden, and more. Coast guard and navy icebreakers are operated by Canada, Denmark, Norway, Russia, and the United States. In fact, the U.S. Coast Guard has designated its icebreakers as 'polar security cutters' to emphasize their roles as the U.S. presence in polar waters, serving as naval and law enforcement ships. An extraordinary French-flagged commercial icebreaker, the *Le Commandant Charcot*, operates as a luxury expedition ship to the North Pole and in all polar waters. Large icebreaking liquefied natural gas (LNG) carriers, built in South Korea using Finnish technology, operate out of the Russian Arctic, taking LNG to global markets. A new class of nuclear-powered Russian icebreakers, the *Arktika* class, continues the tradition of ice escort.

A new era of highly advanced icebreakers has emerged.

ICESCAPE

JENNIFER ARTHUR

Arctic icescapes are ever-changing.

Their diverse, raw beauty is imprinted onto the mind
of all who pass through them.

Icebergs washing up with the tide
create a beach of jewels
catching the sunlight.

Out in the bay, giant scalloped towers
and cathedral arches
are born from a booming, roaring glacier
Impermanence is etched into its face.

Sheer, ancient rock walls
give way to vast flatness below
and scoured sastrugi
meet a chaotic mash-up of sea ice.

Total stillness
or howling, shrieking wind.

Time stands still.

Peace.

IDENTITY

CARTER AYASSE

Whoever would have guessed that upon the northern frontier – expectedly unidimensional in its qualities – you would find lives so unique? Inevitably inspired by our environment, the Arctic identity is likewise extreme, characterized dually by transience and resilience.

It is the tool we have developed to facilitate our adaptability; to embolden our ways of life and protect the corner of the world we call home. And so, we take pride in being a home to particular people. Not particular out of innate specialness, but because of the particularity of our opinions, which we understand to be the fruits of our hard-fought cultivation of diversity and inclusion.

We are a people taught to – and bound by – care for others, a people of the land, a people of innovation, enabled by a skillful exercise of the balance between benign optimism and healthy skepticism. Within our works of hand and mind, we seed these qualities of our identity not only to overcome the challenges of the Arctic but to thrive in brilliant celebration of our achievements.

Across fjords, deserts, plateaus, glaciers, borders, and cultures, the Arctic community is intimately connected out of a desire to collaborate, understand, and excel. So, to her awe-inspiring vastness, her spectacle, the vibrant life she hosts, thank you for teaching us to love what is difficult and appreciate that which is given.

IGGIAQ

INUKSUK MACKAY

"Iggiaq." "Throat." Warm breath passes over the throat, leaving the lungs in plumes of frosted mist that dissipate against a backdrop of pale Arctic blues.

"Katajjaq." "Throatsinging." Voices echo through a vast, frozen expanse, transforming the throat into more than just a physical space; it becomes a conduit for ancestral voices, a vital passage connecting us to a way of life that pulses in tempo with the spirits of the land.

The throat houses both the power of the wind and the quiet whisper of softly falling snow. Breaths in. Breaths out. We embrace this power and transform it into music that travels from the past to paint pictures of the future.

Katajjaq is a conversation with the elements, a dialogue that transcends language and spills into rich, visceral sounds that are as ancient as the rocks across the tundra.

The throat is alive, a sacred space where tradition is given voice. Each note produced is a tribute to those who walked these lands before us, those who learned to read the stars and navigate the frigidity with tenacity and skill. Through singing, we carry forward the stories of our ancestors, threading a tapestry of history and culture that dances between breaths and beats.

Our art form commands partnership and balance between singers as we push and pull in a mutually negotiated rhythm. Here, the throat becomes a mirror, reflecting trust and unity.

Guttural melodies unlock a portal to the beyond, ushering in revelations shaped by swirling emotion and shared experience. It is here that we explore and express our individual machinations within a collective cultural framework. Each sound produced bears witness to a history of resilience and adaptability.

Defiance. A refusal to fade from brown to white. A desire to be bonded to our culture as it adapts and grows within us. An interaction that transforms the throat into an epicenter of unbridled expression, vibrating with the energy and wisdom of the natural world.

Iggiaq, throat, is not merely a path for sound but a bridge to our heritage, our communities, and the endless, echoing spirit of Inuit culture.

ILULISSAT

ZORICA MARKOVICH

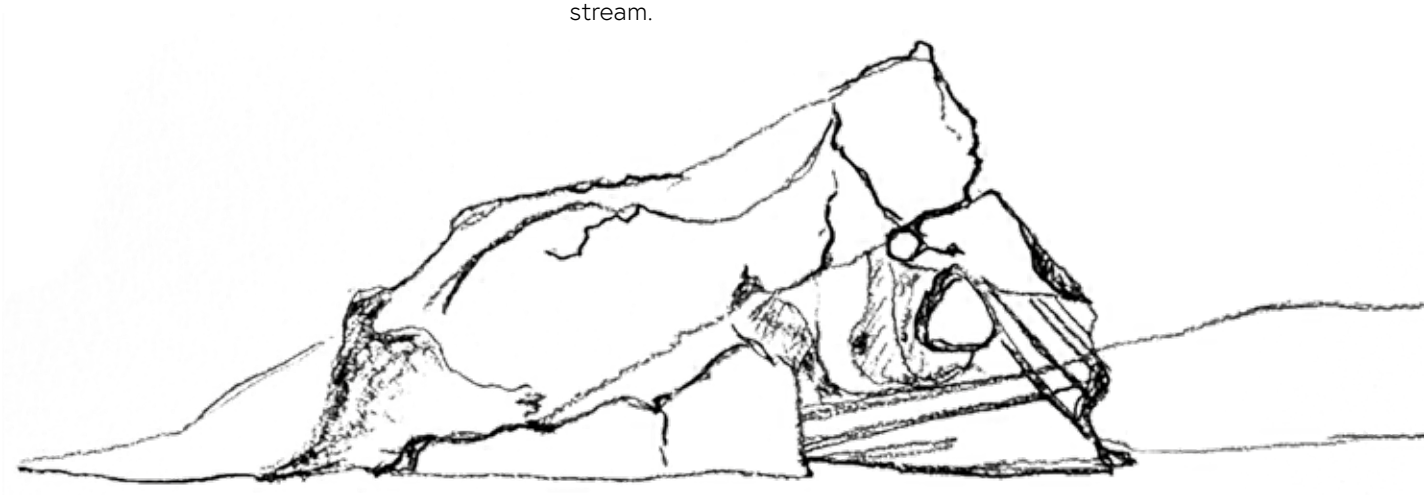
A
lone
it drifts.

Above
the sun's light reflected
like shards of glass; it melts yet cannot warm.

Beneath, the surface cut from a thousand years, its true form
stretches deeper than light can reach.

Untouched, the frozen mass
is a silent, enduring observer.

Floating, untethered, it holds
the weight of centuries,
silent beneath the sky
where distance is a gulf,
and time melts away
toward the
stream.



IMAGINATION

ZAZA KABAYADONDO

It's a lazy California winter morning; the temperature outside is steadily climbing to 21 degrees Celsius, and warm streaks of light beam into our living room. My son, Garikai, and I are building a pillow fortress. He tumbles onto the cushions we've jettisoned onto the floor. He pauses and stares. Eventually, he says, "What's that, Mommy?" I follow his gaze, and my breath catches. For the first time in his life, he has noticed the thousands of minuscule dust particles floating in the light.

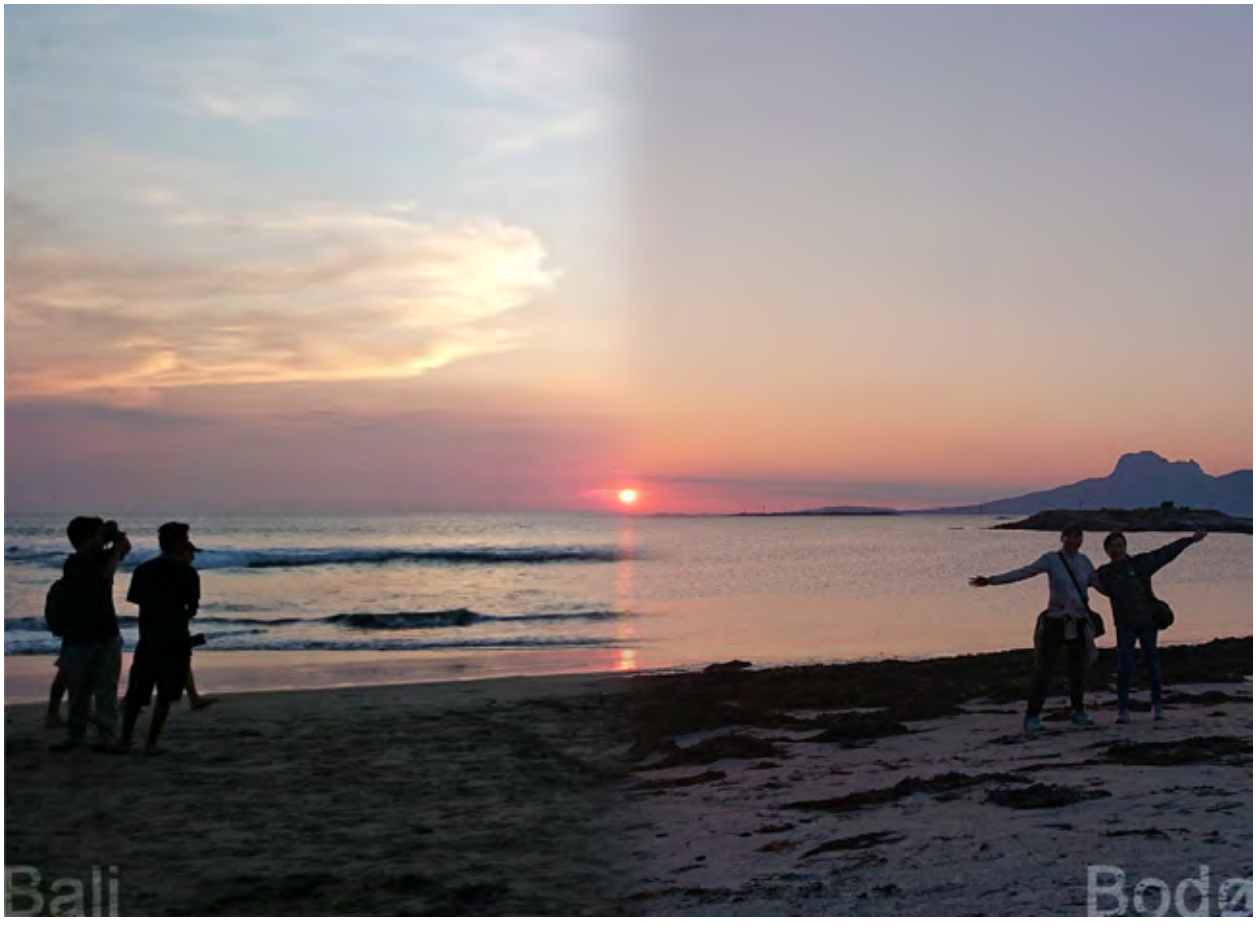
Now I'm thinking of the best way to explain dust and the haphazard cascade of Brownian motion, but Garikai preempts me: "It's toe!" he gleefully declares. I can infer that his 3-year-old lisp is trying to say, "SNOW." As a learning scientist, I know that behind each word he masters lies a network of socially constructed meanings. The words dance in his mind, tiny dust particles, creating the capacity for a vast imagination.

Over coffee, I tell my husband, "Once language comes, children can imagine things that are not right in front of them. Words are arrows pointing to neighborhoods of ideas, allowing us to entertain complex abstract thought and to erect wondrous inner worlds." I think back to growing up in Zimbabwe. Words like "snow," "Nunavut," and the ironically named "Greenland" entered my vocabulary in Geography when I was 8. I imagined Greenland's landscapes like an explosion of talc powder. I imagined indigenous children like me, with fireside songs teaching about their ancestors and ways of life that survive and thrive in the snow. I remember the debate with classmates about how snow could be "soft" if it was frozen water. I had no idea I would encounter snow for the first time at a high school nestled on a remote fjord in the heart of Norway. I couldn't have imagined holding out my hand to catch a snowflake or discovering its delicious sogginess. I had expected perfectly geometric snowflakes.

Now, as I reminisce, I remember saying to friends, "It's chunky and fluffy and cold and wet." It was so much better than I had imagined.

INDONESIA

YATI YATI



INTERACTION

MERJE KUUS

Human interaction – the in-person interaction of people that has been the centerpiece of dialogue for millennia – is at the core of Arctic governance. Both the peoples of the Arctic and the professionals who work in the Arctic understand the value and effectiveness of such interaction. It is a key source of resilience in Arctic networks. How is this so, why is this the case, and what can we learn from it?

From afar, it may seem that Arctic networks are prime candidates for going virtual: distances are great, travel itineraries are complicated, and the individuals involved in the meetings are relatively few in number. The reality is the opposite: the specificity of Arctic contexts makes regional networks relatively open and interactive places.

Among the reasons behind this, the key role of Arctic Indigenous Peoples in the regional governance structures is central. The gravitas of these actors is most visible when the meetings are in person. States know that if they want to engage Indigenous Peoples, they need to support in-person interaction. As a result, such interaction has retained core importance in Arctic networks within and beyond intergovernmental settings.

In part because working on the Arctic requires specialized knowledge, Arctic experts know each other, have often known each other for years, and have developed considerable professional and personal trust through long-term interaction. Those who gravitate toward silos do not stay in the Arctic; the ones who remain are those who enjoy more synthetic modes of working. Such modes thrive on people interacting in physical spaces that extend beyond their national or professional comfort zones.

Arctic networks illustrate why we use spatial idioms in everyday language: why we say that meetings 'take place' or that those who know the field have their 'ear to the ground', why we 'place trust', and why we call confidential discussions in camera (rather than on camera). This in-person and interaction-based character of Arctic networks matters because it enables social trust, and trust enables the thoughtful and creative discussions that we need in the region. Arctic networks have much to teach international governance globally.

INTERRELATIONS

MARJA HELENA SIVONEN

In the Arctic, renewable energy transitions, security, and notions of justice are deeply interconnected in the everyday lives of people and ecosystems. The warming climate reshapes the landscape, with snowless terrains and pine shoots in the tundra symbolizing the tangible links between environmental change and its inhabitants.

Depending on the context, the definition of the Arctic varies. These definitions influence how energy transitions are understood, for whom they are intended, who benefits, and who bears the heaviest consequences. Indeed, the Arctic region is often framed as a resource frontier, essential for Europe's energy demands, with technologies advancing to optimize resource extraction. At the same time, energy is vital for sustaining life in the Arctic as well, where civilian and military needs intersect, reflecting sovereignty's dual requirements: presence in times of peace and conflict. The competing needs manifest, for instance, in land-use requirements, infrastructure planning, and the ways the North is depicted and presented to the rest of the country, region, and the world.

Justice ties these interrelations together. For a just, secure, and democratic society powered by renewable energy, the negative and unintended consequences of these transitions must be addressed and resolved. The increased use of Arctic lands, waters, and airspace cannot occur at the expense of those who live there.

The Arctic's future depends on recognizing these interrelations and balancing competing needs to ensure a sustainable and equitable path forward.

INTERNATIONAL

DONNA RICHMOND

Left to right, Kate Haigh, UK, Shelbi Taylor, USA, Kimberly Jean Marie Bennett, Germany, Zuzana Janovčíková, Slovakia, Malin Åkerström, Sweden.

IÑUPIAT

ANGELA S. NASUK COX

Summer

I awaken to the sound of my Aapa[1] praying. It's Iñupiatun[2] only and filled with immense gratitude. I feel small rocks at the bottom of my puuksraak[3] and forget when I last bathed. The numbers on the calendar and clock are irrelevant at aullaq[4], except it's that time of the year when animals are aplenty, and harvesting is a priority.

The sun rotates high above us, never falling below the horizon. We are drenched in unending light.

Fall

There's morning frost and purple skies. The tuttu[5] are fat and have wandered close to town. The men with their heavy boots and gear look like hills against the flat backdrop of the tundra and sea. They bring in loads of meat. Antlers are tangled together, like Arctic tumbleweed. Tendons are pulled and will be hung to dry. The sinew will be braided into ivalu[6]. An ancient waterproof stitch will pull the umiaq[7] together to keep our whalers afloat.

Snowflakes fall, big and fluffy. A sign. The whales are on the way.

Winter

The northern lights push us into our homes. Women gather to sew, preparing for the needs of the upcoming hunting season. We encircle Aaka[8] for story time, using old country crock and cool whip tubs as soup bowls. It's a simple, sentimental recipe: caribou, water, rice, black pepper. Some of the stories are new; some we've heard before. Aunties take turns translating. The generational lessons are there.

The dragged throat sounds, the pauses, moments of quiet to draw you in. Is there anything more spirited than an Iñupiaq[9] telling a story, I wonder.

Spring

As the light returns, so does the open lead. When the first aġviq[10] is landed, there is only joy. We raise our arms and shout, "yay hey hey!" Hooks and blades glide in and out of the large mammal. No one stops until the work is done. The first cut off the back of the whale is quickly boiled and shared. Teeth sink through the buttery soft blubber.

Another prayer. Quyanaaqtugut Iñupiaġuvluta, we whisper to the sky.

We are thankful for being Iñupiaq.

1 Father; Grandfather (modern use). 2 Iñupiat language. 3 Sleeping bag. 4 Camp (modern use). 5 Caribou. 6 Thread, sinew. 7 Seal skin boat. 8 Mom; Grandmother (modern use). 9 A real person. 10 Bowhead whale.

ISERDOR (ISORTOQ)

REGINE-ELLEN MØLLER

Isortoq, locally called Iserdor, is a small island southwest of Tasiilaq, just 5 kilometers from Sermersuaq (the Ice Cap). With no mountains or hills to shield it, Iserdor is at times exposed to the cold katabatic winds that sweep down from Sermersuaq. Yet, this remote island is home to a resilient community of around 50 people. They have made this island their home because the surrounding waters and land are rich with seals and other mammals, providing a vital source of sustenance and a foundation for their way of life as hunters. Their survival depends on an intimate understanding of the land and sea – a wisdom passed down through generations. This enduring knowledge comes alive in the following story.

One crisp spring morning, a father, a mother, and their four-year-old daughter set out from Iserdor to hunt for narwhales. The family carries with them generations of ancestral expertise: how to navigate icy waters, where to find narwhales in the ocean, how the animals often hide beneath icebergs, and how sensitive they are to noise.

The family travels by motorboat, bringing along a kayak for the hunt. As they near the narwhales' habitat, the father transfers to the kayak, leaving the mother and daughter on the boat. Knowing the importance of silence, the mother and daughter stay completely still, breathing softly and moving only their eyes to avoid disturbing the narwhales. The father sits in the kayak patiently waiting for a narwhal to come. At last, a narwhal surfaces, and with practiced precision, he strikes it with a harpoon. After a successful hunt, he returns to the boat with his catch. The family shares a moment of triumph as they prepare to return to their community, knowing that the narwhal will provide nourishment and resources vital to their way of life.

The family's journey is a living testament to the enduring knowledge and practices passed down through generations in Kalaallit Nunaat. It reflects how such practices, rooted in history, are not relics of the past but are actively sustained and adapted in contemporary society, such as in Iserdor.


J

JOB

PAULINA HIETALA

The word "job" means many things to me, but above all, it is an opportunity to develop and make an impact. As a forestry engineering student, a job is also a path that allows me to combine my understanding of nature and economics and create solutions that support sustainable development.

A job is not only a livelihood but also a responsibility and a source of meaning. As a member of the Barents Regional Youth Council, my job is to work for my community, which gives me the opportunity to promote the voice of young people and make an impact in my own environment.

As an active person, I consider it important that a job is not only physical or mental effort but also self-realization. It can be a way to develop one's own skills, learn new things, and create connections with others.

So for me, a job is also a way to live a balanced, meaningful, and communal life. It is equally a combination of creativity and persistence that takes me toward my own dreams and shared goals.

JOIK

MARI BOINE

Stian Andersen

Stian Andersen


К

KABIN

ALEX TANGEN

In Norway, cabins – or hytte – are an integral part of social culture. On any given Friday, you're more likely to find Scandinavians sneaking off to these retreats than working late at their desks, and hyttes are also a favorite place to spend long winter and summer holidays. The Arctic landscape plays a key role in this tradition – where harsh winters and expansive summers create a rhythm of life that revolves around these peaceful escapes. The cabin serves as a retreat from the everyday, offering a space to reconnect with nature, loved ones, and the serenity of the natural world. These cabins are often situated in remote, scenic areas, allowing people to disconnect from the rush of modern life and reconnect with simpler, more meaningful moments.

Inspired by this Arctic tradition, I opened my own cocktail bar, Kabin, in New York City. Kabin reflects the simplicity, natural materials, and zen-like beauty of Nordic design, creating a space where the Arctic spirit can thrive amidst the urban hustle. Just like the hytte in Norway, Kabin is a place to unwind, reconnect, and share good times with friends – whether it's after-work drinks, cozy nightcaps, or seasonal celebrations like Midsommar and Santa Lucia. At Kabin, we embrace the warmth of Nordic hospitality, welcoming guests into an environment that encourages moments of joy, camaraderie, and connection.

While New York City is far from the Arctic wilderness, Kabin captures the essence of these northern retreats – offering a sanctuary where New Yorkers can momentarily leave their busy lives behind, much like Scandinavians retreating to their cabins in the Arctic. It's a place where everyone is welcome, and the warmth of hospitality mirrors the comforting embrace of the Arctic cabin. Just as the hytte is a space for reflection, rejuvenation, and celebration, Kabin aims to be a home away from home, a space that feels as inviting and comforting as a cabin nestled in the Arctic landscape.

SEE CABIN →

KELP FOREST

NORA DIEHL

In his book "The Voyage of the Beagle," the natural historian Charles Darwin perfectly described the breathtaking beauty and great ecological importance of kelp forests – and the dangers of losing them. Although he describes the kelp forests of the Southern Hemisphere, his description can also be applied to the Arctic region in the present day:

"The number of living creatures of all orders whose existence intimately depends on the kelp is wonderful. […] Often, as I recurred to a branch of the kelp, I never failed to discover animals of new and curious structures. […] I can only compare these great aquatic forests […] with the terrestrial ones in the intertropical regions. Yet if in any country a forest were destroyed, I do not believe nearly so many species of animals would perish as would here from the destruction of the kelp. Amidst the leaves of this plant, numerous species of fish live, which nowhere else could find food or shelter; with their destruction, the many cormorants and other fishing birds, the otters, seals, and porpoises would soon perish […]." – Darwin (1839)

These marine forests are characterized by the largest seaweeds in the world: kelps. Kelps are meter-long, canopy-forming brown macroalgae. Comparable to coral reefs in tropical regions, their three-dimensional structures alter the physical, chemical, and biological conditions in the Arctic marine environment. Thus, kelp forests are among the most productive coastal ecosystems. However, kelps do not only form irreplaceable ecosystems but are also traditionally used by the Inuit as food and medicine. Nowadays, kelp forests are affected by severe changes due to climate change. On the one hand, rising temperatures and reduced ice cover enable kelps to spread further north. On the other hand, however, terrestrial runoff of sediments, for example, leads to a "darkening" of Arctic coastal waters, which poses problems for photosynthetic organisms. Further research is therefore needed to shed light on the still uncertain future of the unique Arctic kelp forests.

KNOWLEDGE

HENRY BURGESS

If we meet, I may give you an Arctic map as a present. If you see me online, you'll notice my office and spare room walls are covered in maps. When we hosted the Arctic Science Summit Week in Edinburgh, we printed a huge one for the venue floor. A favorite memory is of young Greenlanders moving over it, pointing to places they knew. Safe to say, I like maps.

In their myriad different forms, they are one of the earliest non-spoken ways of sharing knowledge. Real knowledge that would keep you alive, feed your family, open a trade route, and make your fortune. And equally, knowledge that could mean you lost your home and independence, that saw someone else decide what you and your community were called. A knife to cure or to cut. A means of democratization and of theft.

Each map is a choice and a compromise. A snapshot of what someone has decided is worth knowing and sharing. What and whose knowledge do you include? What knowledge is too precious or too personal to ever share? The best available knowledge, but always to be superseded. Essential then and equally valuable now as we rapidly reshape our world.

Yet the map I keep coming back to is not an Arctic one. It's simply called 'The Cloudmaker,' and it shows that mountain and part of the Beardmore Glacier around 500 km from the South Pole. Produced as part of that great effort of the International Geophysical Year in 1957-58, the top of the map is sketched in. The rest is completely blank because they hadn't surveyed it yet. Now you open a laptop and are wading in layers of rich detail, going from knowing nothing to showing what is there, to adding meaning, connections, and predictions of the future.

The gathering of knowledge is a duty and a choice. So is how we share it and use it. As we plan to make the 5th International Polar Year in 2032-33 as impactful as possible, I'll be keeping a close eye on my Cloudmaker map to remind me of all that.


L

LANDSCAPE

JULIE EDEL HARDENBERG

My language – my landscape

My language is the landscape I orientate myself through
– so full of tracks and so full of life.

I know my landscape – it isn`t like yours.

LANGUAGE

ASTA MITKIJÁ BALTO

Mu / eatnigiella / sámegiella / čátná mu mu máttuide / ođasmahttá jámma / ovttastallama / singuin / geat leat juo vádjolan / singuin geat / leat dás / ja / singuin geat / boahttevuođas / sámástit

My / mother tongue / Sámi language / binds me to my ancestors / constantly regenerates / my connection / to those who have already passed away / to those who / are here / and / to those who / in the future / will speak Sámi

LAVA

RIKKE PEDERSEN

Lava is a primal product of Mother Earth and has, through degassing processes, contributed to the creation of Earth's atmosphere and, thereby, essentially the origin of life.

Lava is, however, a very diverse term that may be applied to either the molten, viscous, flowing substance emitted during volcanic eruptions, or it may refer to the cooled, solidified products, of which a wealth of variable morphologies exists. A solidified lava may, at first glance, appear as a homogeneous solid, but in reality, it almost always contains various amounts of visible crystals of different sizes and even different origins. Obsidian is the exception that confirms the rule, as it is a homogeneous, solid lava entirely made up of volcanic glass, hence crystal- and cavity-free. However, most lavas display a widely variable amount of vesicles, which are the cavities left by gases escaping from the molten substance as it cools down and solidifies. The amount of vesicles often varies with the distance from the surface of the lava, and a surface-near sample will contain a larger volume of vesicles, hence have a lower density than a sample taken at greater depth. During the cooling process, fractures arise in the lava due to thermal contraction. In some cases, optimal cooling conditions result in a spectacular hexagonal fracture network called columnar jointing. So, lavas are made up of crystals, gaps, and fractures apart from the microcrystalline groundmass.

The most common rock on Earth is basalt: a chemically primitive lava formed at all divergent plate boundaries across the world, hence making up the Earth's ocean floors. "The floor is lava" is therefore not just a kids' game but actually a fact when speaking of the oceans. Lavas also make up vast areas of the Arctic region above sea level. Large parts of Greenland and Siberia are made up of a specific large-scale lava termed flood basalts, and the submerged Arctic sea floor is created through volcanic lava-producing eruptions. It is safe to say the Arctic grows one lava at a time, and there is no expiration date on that process.

LEATHER

HANNA MOEN REINSNES

LIMITLESS

DONNA RICHMOND

M

MAPS

FRANCESCO ANNIBALI

The history of Arctic mapping is a testament to mankind's evolving relationship with this remote and often forbidding region. From antiquity's mythological depictions to today's satellite precision, each phase reflects the challenges and priorities of the time. Today, Arctic maps serve not only as navigational tools but also as critical resources for understanding climate change, resource distribution, and geopolitical stakes in one of the world's most rapidly changing environments.

Early maps and accounts of the Arctic were often filled with mythical elements. The Greeks, for example, spoke of 'Hyperborea,' a legendary northern land of eternal spring where the sun shone all year round. Such myths fueled interest in what lay beyond known borders.

It was not until the 16th century, when European explorers began venturing into the Arctic in search of new trade routes, that maps from this period became more detailed, often based on explorers' observations rather than myth.

In the early 20th century, airplanes allowed explorers to quickly survey large areas of the Arctic, bringing a new level of accuracy to maps.

In 1926, Norwegian explorer Roald Amundsen and American explorer Richard E. Byrd made the first aerial expeditions over the Arctic, creating maps that reflected the vast expanse of sea ice and land. In 1958, the USS Nautilus became the first submarine to travel under the Arctic pack-ice, providing data for mapping the seafloor beneath the ice.

Since the 1970s, satellites have provided continuous, real-time data on sea ice extent, thickness, and seasonal changes, now reflecting unprecedented changes in sea ice and glacier retreat due to global warming. Detailed, multi-layered digital maps track shifts in permafrost, sea level, and ice cover, providing valuable data for scientists studying climate change.

More contentiously, as interest in Arctic resources and routes grows, bathymetric maps (seafloor topography) are now being used to substantiate territorial claims by mapping the shape and contours of the ocean floor. Countries are intensifying their mapping efforts for military and security purposes, highlighting the region's geopolitical importance.

MAYBE

SJÚRÐUR SKAALE

Sitting at the airport, looking at my plane.

It should have departed yesterday. Now it seems it won't be today either. The storm is still too severe.

But maybe tomorrow.

Maybe we'll go for a hike next week. There could be thick fog. Or a storm. Or rain. Or heavy snow. But maybe.

Maybe I'll go out and catch some fish for my own consumption tomorrow, weather permitting.

Maybe a group of whales will come close to some beach in the coming months. It depends on the food they can catch around the islands.

The economy is strong at the moment. The industrial fishery is doing well. It could continue. It depends on the stocks, what there is for them to eat, the temperature of the sea, and the weather. But maybe.

The strong winds darken my mood. The darkness of winter does as well. And the cold. But especially the strong winds. However, the forecast is okay. Maybe I can go for a walk in the mountains during the hours of daylight.

Maybe the sun will even come out and put a smile on people's faces.

The economy of my country, my personal mood, the mood of others, what I do, what I can.

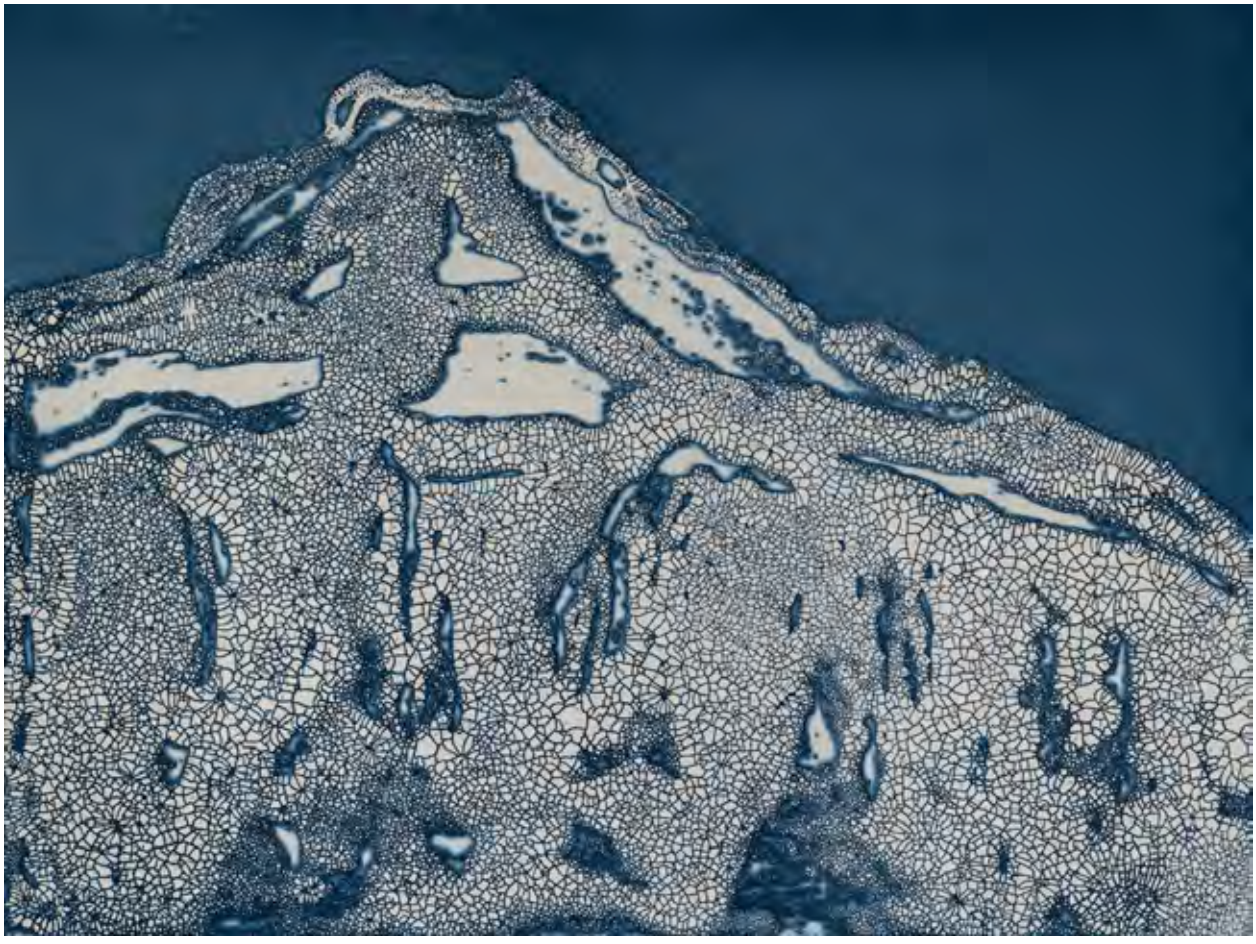
I never know.

And now – right now – the airport speaker announced that the plane will take off at six.

Maybe.

MELT

MARGARET E. MURRAY



Glacial Melt

MENTAL

NAJA-THERESIA HØEGH

Sila Naalagaavoq

Sila is the Ruler
In the Arctic, we strive to keep pace with the rush of our neighbors, but forget that our pace must align with our own wisdom.
In the Arctic, we strive to keep pace with the rush of our neighbors, yet Sila reminds us that this haste does not align with her rhythm.
While we run to keep pace with our neighbors, we lose youth to the shadows of illness.
While we run to keep pace with our neighbors, we forget that Sila is our witness.
Have we forgotten the true bearers of pace, without whom we cannot hope to change?
Have we rushed too far in pursuit of wealth, while our youth suffer from mental health issues?

SEE TABOO ⊖

MINERS

DOMINIQUE GIRARD

SEE GOLD ⊖

MONITORING

ROLF RØDVEN

"I don't know any longer, grandson. The signs of the seasonal rhythm of nature do not fit." The words came from the old man's mouth after a long silence. His eyes were looking out of the window towards the mountains where he had spent all his time since the age of six – hunting, trapping, picking berries, and fishing. Fishing for salmon in the Deatnu, Teno, or Tana River, the seasonal heartbeat of the society, depending on which of the languages is closest to your heart. For decades, his eyes had been observing and monitoring the subtle signs that indicated when the ice would leave the river and when to start fishing.

"I really don't know any longer." A shadow of sadness passed over my grandfather's eyes. Whether it was due to witnessing the rhythm of nature, his knowledge system, or both disintegrating is still unclear to me. I never got to ask.

What is clear to me is that his monitoring was my first lesson in what I later came to know as climate change. We now know that the Arctic is warming faster than any other place on Earth, changing seasons, affecting what lives here, and how we can live here, in every compartment of the ecosystem.

My grandfather's humble words still echo in my ears about how we now monitor the changes happening in the Arctic using the most sophisticated instruments and data models, combining research with Indigenous and Traditional Knowledge. Still, we do not know everything. But we do our best to learn. Every day. And we know enough to act.

And we did act. At least, I hope to be able to tell my future grandchild.

MYTH

ANDREAS ØSTHAGEN

The Arctic invites myths. Or, more accurately, the Arctic invites fascination and interest, which – coupled with limited knowledge of the Arctic – leads to simple statements about complex issues.

The Arctic "region," which in fact consists of many different regions, continents, peoples, and eight different states from three continents, covers four percent of the globe's surface.

The Arctic is larger than both South America and Europe in terms of surface area.

However, when we attempt to discuss Arctic issues, we don't nuance or specify – we talk about Arctic peoples, Arctic climate, Arctic economy, and Arctic geopolitics.

The reason for this is that we think of the Arctic as a "concept," as an idea or a topic, not a space.

Many who are writing and talking about the Arctic have never been there. Or they might have been to Tromsø.

But have they been to Inuvik? Or Nuuk? Or Longyearbyen? Or Kotzebue?

The way we talk about the "Arctic" is similar to how some talk about "Europe" or "Asia." Which part of Europe? Which country in Asia?

Fundamentally, when we discuss the Arctic, we should start with: Which issue in, and which part of, the Arctic are we referring to?

To take a brief example from my own field, international relations, security, and geopolitics: to answer a highly relevant question – Will there be conflict in the Arctic? – we must examine (1) over what issue? and (2) where?

It might be plausible to argue that conflict over migrating fish stocks is likely to occur in the Bering Sea in the future. It is much less likely that there will be conflict over oil and gas in the Barents Sea.

Not everything is connected to everything. When we attempt to describe and explain Arctic issues, accuracy, nuance, and complexity must prevail.

That, in turn, can help dispel some of the "myths" of the Arctic.

NAMELESS

JULIE EDEL HARDENBERG

Nameless
Nameless are we
Of fairytales that ended
In the arms of someone else

Nameless are we
Of flesh and blood
With those, whose ascendants are selected

Nameless are we
Whose blood flow in others
And refuses to be silenced

NEIGHBOURS

SVIATLANA TSIKHANOUSKAYA

To be a "neighbour" is to recognize shared space, intertwined destinies, and the quiet bonds that link us across borders. Growing up in Belarus, my understanding of this word was shaped by shared roots, friendship, and our common dreams of freedom. Today, as Belarus stands at a crossroads, I see "neighbour" as a powerful reminder of what unites us in this world, especially as we face growing challenges together, not in isolation.

The Arctic is a unique testament to this notion. It teaches us that geography is both a barrier and a bond; an immense expanse that cannot be conquered but demands respect and collaboration. This region, where people of diverse backgrounds and traditions work with nature rather than against it, shows us how to be good neighbours. Even the ecosystems here coexist in delicate balance. Just as melting ice in the Arctic affects ecosystems across the world, the actions we take in one place – whether in Belarus, Greenland, or beyond – ripple outward, impacting others in ways both visible and unseen.

As I consider the Arctic, I think about resilience. In Belarus, our strength has always been in our people – our women standing fearlessly with flowers, our communities gathering in solidarity despite repression. It is the same resilience we see in the Arctic, where the land itself endures despite the impacts of climate change and exploitation. And like our shared life on this planet, we Belarusians understand that neighbours do not abandon one another.

In the end, to be a neighbour is to be responsible for one another's safety, dignity, and future. The Arctic reminds us that we cannot afford to think only within our borders. It compels us to see beyond and act in solidarity. And so, in the spirit of shared resilience, I stand with my neighbours – those close by and those far away – united by our shared hopes for a peaceful, free, and protected world.

NETWORK

KARLI ZSCHOGNER

NEWS

ALICE ROGOFF

NOMAD

SOFIA JANNOK

You call me a nomad. Yes, I am a nomad. You might think that a nomad does not have a home, that I lack the sense of being home. Let me tell you, it is quite the opposite.

The land is my home. I follow the reindeer. The reindeer follow the river, from west to east. Like the river, I adapt my journey through the landscape. A river cannot run calm and still through rocky mountains; she needs to be fast and furious at times, a big stream falling from high cliffs at times, a flexible little creek at other times. Her adapting does not mean that she belongs less. Her ways through the landscape are a means of survival. Like the river, being a nomad is a way of surviving – a way of living with the surroundings. It is not about making the surroundings obey, but simply following the various shapes formed by eternity.

My grandfather was the first of his line to buy a house. My mum was three years old. Before that, we were not allowed to live in houses. Sámi nomads were considered unsuited to live in houses. They said, "If you start living in houses, you will stop following rivers and reindeer. This will lead to your death, so this law is for your own good," they said. My grandfather opposed this. It is easier to grab our land from nomads than from residents. Finally, the law changed, and we were allowed to live in houses. My grandfather built small cottages along the riverside and continued to follow the river and the reindeer until his last days. In the phone book, he declared his title: Nomad, with a fixed address and phone number. He proved them all wrong.

You can be a nomad no matter how you spend your nights, whether in a bedroom between white sheets or in a hut made of birch trees by an open fire. It is how you spend your days that makes all the difference.

NORRBOTTEN

FELICIA POURNASIRI

Norrbotten is where the Arctic's beauty meets human ingenuity and resilience. From the Gulf of Bothnia's lush coastline to the majestic peaks of the Scandinavian Mountains, it stands as Sweden's gateway to the Arctic.

For centuries, this region has thrived in harmony with its harsh climate and abundant resources. It is the land of the midnight sun and polar nights, where endless forests and rivers like the Torne and Lule tell stories of time and transformation. But beyond its breathtaking landscapes, Norrbotten's true strength lies in its people and their spirit.

Here, the identity of Norrbotten is woven through traditions like reindeer herding and the artistry of duodji, all rooted in values of community, respect for nature, and care for one another. Life is embraced not as a series of tasks but as a journey to be savored – each day infused with resilience, creativity, and joy.

This perspective on life defines Norrbotten's culture. It thrives in sub-zero temperatures under the northern lights, connecting people across vast distances with an unshakable sense of belonging. It reminds us that life in the Arctic is not merely about survival but about truly living, celebrating both the extraordinary and the everyday.

To me, Norrbotten is more than a region – it's a testament to the human spirit. It is where challenges are met with courage, and where each day is an opportunity to flourish, grounded in a harmony that honors both nature and humanity.

NORTH

OLE ERIK ALMLID

Look more often to the North!

Here, we find the resources, the people, and the will to create a future where growth and sustainability go hand in hand. The North is not just a direction – it is a vision.

In the North, we encounter horizons full of opportunities. Here, the people create the foundation for a competitive society. The lights in the houses are more than symbolism – they are the key to work, growth, and sustainability. Building knowledge and skills is an investment in tomorrow, for the North must be equipped for the challenges of the future.

But the lights demand more. There can be no development without profitable businesses. NHO's member companies in the North stand as cornerstones, supporting half of the jobs and value creation in the private sector.

Energy is the lifeblood of this landscape. Oil and gas have been the foundation, but wind, solar, and hydropower point towards a greener future. In the shadow of this transition, the need for minerals also grows – the North's abundance of resources must be managed with sustainability as the guiding star.

Along the coast, another wealth is found. Fisheries are the lifeblood for many communities, while the clear, cold water provides the world's best aquaculture conditions. Here, food for the world is secured, along with the future for those who live here.

The wilderness of the North attracts travelers from all corners of the world. Tourism brings not only income but also connections between cultures, allowing the grandeur of nature to be seen and appreciated.

But all this needs coherence. Roads, ports, networks – the invisible threads that bind everything together. In the air, bridges are built between cities and people, and airports are the gateways to new opportunities.

Look more often to the North!

NORTHWEST PASSAGE

SOHVI KANGASLUOMA

The Northwest Passage is one of the three mythical Arctic marine routes, often present in geopolitical imaginaries and economic aspirations. The other two are the Northeast Passage (often referred to as the Northern Sea Route) and the Transpolar Sea Route.

The passage traverses above North America – from the Pacific to the Atlantic, from the Bering Sea to Baffin Bay – through Inuit Nunangat. The passage is situated in the homeland of the Inuit, who have lived and traveled on the route, on the sea and on ice, for thousands of years.

After spending a few years in Alaska with our boat Lumi, we wanted to return to the Atlantic. This summer, we sailed the Northwest Passage with our sailboat. The journey was a bittersweet experience, as sailing the passage with a small sailboat is only possible because of global climate change.

With the warming planet, the sea ice in the Arctic Ocean has diminished dramatically. The melting of the sea ice is not just a tragedy for the climate, but also for all the creatures that depend on the ice.

However, ice still determines the passage, and sea ice covers it for most of the year.

We left Nome, Alaska, in late July. For a few months in early fall, ice loosens its grip on the passage, allowing a boat to pass – most years. For two months, we encountered sea ice, wonderful people, vast smoke from the forest fires in mainland Canada, majestic icebergs, polar bears, gentle winds, and storm gales. In early September, we made landfall in Qeqertarsuaq, Kalaallit Nunaat.

Ice must be taken seriously, as an equal, for any boat without ice-breaking capabilities to be able to sail the passage. Ice determines when, where, and how fast we can sail; one needs to learn to read the ice.

The large-scale year-round utilization of the Arctic marine routes – a concept deemed utopian or dystopian, depending on whom you ask – is still far from reality.

Hopefully, ice will continue to determine the passage in the future.

NOTHINGNESS

ANITA LAFFERTY

There is no word for "nothingness" in my language; Denè
Language so deeply rooted in the Land
The Land of the North,
Where nothingness does not exist.

So then maybe, nothingness is nonexistence of spirit.
The feeling obscured by the history of kings
Where my identity is lost among the
Nothingness of history.

As though the bending of this word, nothingness,
Shifts me to reimagine a state of nil
Where another colonial construct tries to hijack meanings
out of nothing to create absurdity

This word floating among the abyss of the Northern landscapes
Scraping the Land of its nurturing ability.
Nothingness is the reality of where the hearts of Indigenous Peoples
Were almost abolished;

But with avengeance
We are shifting the antithesis of nothingness
Towards a pardox of another oxymoron!
Nothingness does not exist.

NÝTIN

THOR SIGFUSSON

In Icelandic, "nýtin" is a positive term used to describe a person who makes full use of things.

This positive attitude toward maximizing utilization in Iceland can partly be explained by the fact that Icelanders historically had limited resources, which meant they had to treat what they had with great care and respect.

To use things to their fullest potential is, in my view, a mindset that has deep roots in the cultures of Arctic nations more so than in many others. While these nations are diverse in many ways, they have historically lived with few resources, leading to a mindset of "nýtni."

This, of course, meant that efficiency became a necessity. Everything was used to the fullest, and long before terms like "zero waste" or "circular economy" became popular, these nations had already embraced this culture, even without the terminology!

However, modern times have arrived, and consumerism is now present in these societies just as it is in others. Beneath this, though, is a strong desire to maintain this culture of full utilization. We can see this across the Arctic region, though it certainly faces challenges. Our task in the coming years and decades is to ensure that this strong characteristic of Arctic nations is not lost. But to do so, we must ensure that the benefits of full utilization are not only environmental and cultural but also economic.

Icelanders have demonstrated that it is possible to significantly increase the value of fish by using innovation and the ancient tradition of Icelanders and other Arctic nations in maximizing resource use. What has been achieved is the successful integration of all three goals of benefit from the full utilization of fish: environmental, cultural, and economic.

We should always focus on how we can do more with less. Now is the time to be stewards of our natural resources for the benefit of our future generations, and to re-ignite that rich heritage of smart utilization.

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OCEAN

JONAS GAHR STØRE

The Arctic Ocean is an incredible and unique place on Earth, with large amounts of pack ice covering the ocean. Despite the extreme cold and the ice cover, the Arctic Ocean supports a surprisingly rich ecosystem.

It is home to species adapted to cold-water environments, including polar bears, walruses, seals, whales, and Arctic fish species like the Arctic cod. Many species migrate between the Arctic and other regions, making the health of the Arctic Ocean critical to maintaining biodiversity in other parts of the world.

The chilling effect of the ice and the cold seawater is also of immense importance and plays a critical role in regulating the Earth's climate, supporting unique ecosystems, and influencing global weather patterns.

It has also provided, and will continue to provide, economic opportunities for people and communities in shipping, tourism, and the harvesting of marine resources. However, these benefits and services are currently at risk, particularly as the Arctic warms and human activity increases.

Indigenous peoples, particularly the Inuit and Chukchi, have relied on the ocean's resources for thousands of years. These communities are increasingly impacted by climate change, as melting ice affects traditional hunting practices and local ecosystems.

Protecting the Arctic Ocean by halting the global temperature rise is therefore crucial – not only for the region itself but for the livelihoods of Arctic peoples as well as the planet as a whole.

OFFSHORE

HILDEGUNN BLINDHEIM

We stand where the sea meets the sky, in the Arctic's cold grip, where polar nights stretch for months and summer days never end. Here, in this endless blue, we extract oil and gas – energy hidden deep beneath the ocean's surface that creates light, warmth, and deep bonds with our friends in Europe. Technology is our tool, but we bow to nature's power. Energy is a word filled with human possibilities, challenges, and responsibilities too.

We are modern pioneers exploring the depths of the sea for the resources that drive our world. Our world is a vibrant and resource-rich area where many industrial players find their place. Here, various industries live side by side, like a symphony of human effort and tradition that ensures food, work, and shelter for millions of people in the high north. Every ripple on the ocean's surface carries stories, including those of what is to come. CO2 storage, offshore wind, and minerals are industries that will take us further.

With exploration and development comes responsibility. We must balance ambition with respect for the environment. The sea is our ally and our challenge, a force that gives and takes. We must be careful, always aware of our impact, and always striving for sustainability.

Energy and other resources extracted at sea symbolize humanity's ability to adapt and overcome. They represent innovation and progress but also remind us of our place in nature. We are part of this planet, and we must act with care and respect.

In the Arctic, where nature's raw beauty is displayed, each day reminds us of the importance of our work. We extract the resources the world needs, but we also protect and preserve.

Offshore is more than a place; it's a way of thinking, a way of living.

OPPORTUNITY

DOUGLAS A. YATES

ORCA

HELEEN MIDDEL

Orcas, or killer whales, are the undisputed apex predators of the oceans, a position they have maintained for millennia due to their extraordinary intelligence, complex social structures, and innovative behaviors. These traits mirror human adaptability in the Arctic, where diverse Indigenous Peoples have thrived for generations, perfectly attuned to their environments. Similarly, killer whales are not a homogeneous species but rather a collection of distinct ecotypes, each shaped by the demands of their environment over hundreds of thousands of years. From pole to pole, killer whale populations possess unique vocal repertoires, social structures, appearances, food preferences, and hunting techniques.

In the Arctic, killer whales are found from the icy Canadian waters, through the herring-rich seas of Iceland and Norway, to the Russian Far East and the Chukchi Sea. Killer whales in the Canadian Arctic are known to cooperatively feed on larger marine mammals like bowhead whales, narwhals, and belugas, as well as seals. Icelandic and Norwegian killer whales herd herring into tight balls using acoustic signals, blowing bubbles, and flashing their white undersides, then stun the fish with tail slaps before feeding. Such strategies are not instinctive but learned behaviors, passed down and refined through perhaps thousands of generations.

Melting sea ice and shifting habitats now allow killer whales to expand their ranges in the Arctic, with sightings increasing in the Alaskan Arctic, the Canadian Arctic, and off the Greenlandic coasts. While these changes offer new opportunities, they also pose challenges, such as ice entrapment and increased hunting pressure from local communities. A growing human presence adds further pressure, forcing killer whales to adapt and innovate, though some threats, like chemical pollution, they may not be able to outsmart.

Killer whale cultures reflect the value of community, resilience, and learning. As we witness their struggles in the Arctic, we are reminded of the impact of our actions on their survival and our responsibility in preserving not only this vital environment but also the diverse perspectives and solutions the Arctic inspires.

ORIGIN

AVIAAJA SCHLÜTER

OULU

ARI ALATOSSAVA

Oulu originates from the indigenous Sámi language word åulo, meaning "melted snow" or "floodwater."

Located by the Gulf of Bothnia and the delta of the Oulu River, the city was founded in 1605 by King Charles IX of Sweden. Oulu began as a center of innovation in tar production and weatherproof shipping, evolving into a thriving hub of modern technology and diverse expertise.

Today, Oulu has over 216,000 residents and is one of the largest urban centers in the Arctic. With an average age of 39.6 years, it is also one of Europe's youngest cities. The city's strength lies in education and innovation: one-third of its population holds an academic degree, and Oulu leads Finland in per capita research and development investments.

Oulu has boldly developed its cycling highways, earning recognition as the winter cycling capital of the world. Over 1,000 kilometers of cycling routes enable 20% of daily commuting to be done by bicycle year-round, even in Arctic conditions.

Thriving in the northern latitudes demands courage. For Oulu, courage means bold ideas and the confidence to pursue them. For example, three billion people worldwide use mobile technologies developed in Oulu every day. The city is also home to the world's leading 6G Flagship research program at the University of Oulu, showcasing its role as a pioneer in ICT advancements.

Oulu is known for its unique events like Polar Bear Pitching, where startups pitch their ideas to investors from the ice hole of the frozen Oulu River – arguably the coolest startup event in the world. Since 1996, Oulu has hosted the Air Guitar World Championships, using captivating performances and creativity to promote world peace.

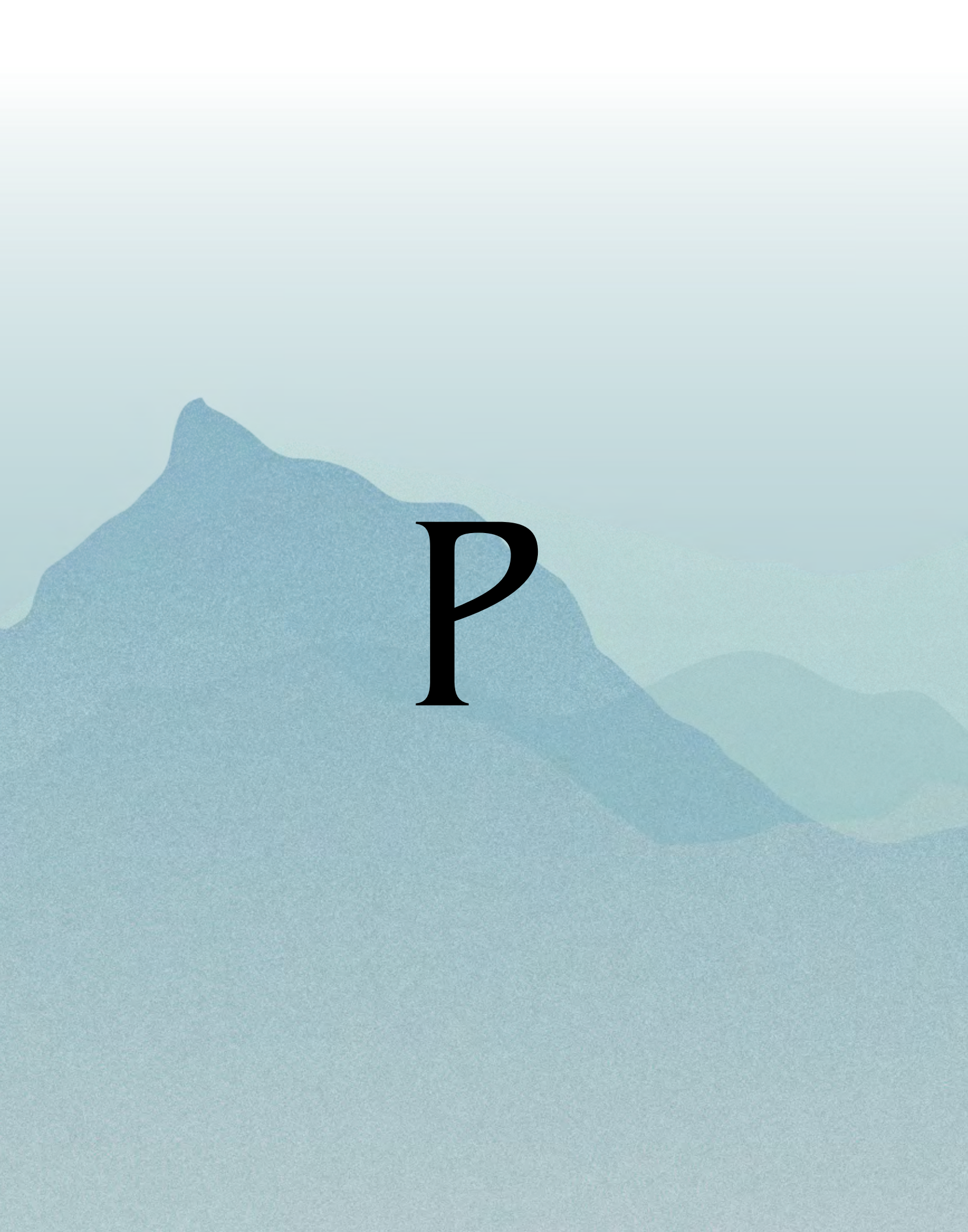
Oulu is the European Capital of Culture in 2026. Culture, art, and thousands of diverse events will take over Oulu and 39 other municipalities in the northern region. Oulu2026 seeks to create a lasting cultural climate change, where culture, art, and technology merge in sustainable and surprising ways.

Oulu is a city where innovation, courage, and culture converge to shape a vibrant future in the Arctic.

OUTSIDER

ÁSGERÐUR ÓLÖF ÁSGEIRSDÓTTIR

It is such a negative word, isn't it? When I picture it, I see a person left outside in the cold, and in the Arctic, it gets very cold. Someone who – for one reason or another – is not allowed to join the warmth inside. Perhaps that person has done something to be deemed untrustworthy, or they pose a threat to the safety and warmth inside a shelter during an Arctic storm. Perhaps that person has only good intentions and just wants to cozy up with new friends by the fireplace. Either way, it is not the Arctic way to leave a person outside during a raging storm. So when I look at my picture again, the Arctic community opens its door and invites the outsider in.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PALEOCLIMATOLOGY

JULIE BRIGHAM-GRETTE

Paleoclimatology in the Arctic is the study of past climates, typically extending from hundreds to thousands to millions of years, by using various natural proxy records found in high-latitude geological and biological materials. This field helps scientists understand how Earth's climate has changed over time, the processes driving those changes, and how the climate system might behave in the future.

It is studied using a variety of "proxies" that provide indirect evidence of past climate conditions, such as temperature, precipitation, and atmospheric composition, including greenhouse gases. These proxies can be found in naturally layered systems, including ice cores from glaciers and ice sheets, tree rings, coral reefs, speleothems, ocean sediments, lake sediments, and the pollen and microfossils, such as foraminifera or diatoms, contained in those sediments.

By comparing proxies of the same age across continents and ocean basins, paleoclimatology can reconstruct latitudinal and meridional gradients in temperature, precipitation, or even salinity in the oceans. These data can also be used to determine the rate of change over time (from years to millennia), which helps to understand the spatial sensitivity of different regions of the world to change.

By studying natural archives of changing climate over time and spatial scales, scientists can better understand natural climate variability and work with climate modelers to adjust computer-generated models for accuracy in reconstructing past climate change. Accurately calibrated models can then be used to improve our predictions of the influence of human-induced global change caused by the burning of fossil fuels, which drives the warming of the atmosphere and the oceans.

Similar paleo-geochemical models can also determine the negative consequences of ocean acidification, such as the PETM event, 55 million years ago, which is associated with higher greenhouse gases in the atmosphere. While understanding that "the present is the key to understanding Earth's past history" (James Hutton), Arctic paleoclimatology is also key to better understanding Earth's future and the consequences of far-field Arctic change if humans do not stop (or mitigate) the influence of fossil fuels on the planet's vital natural systems and the ecosystem services we take for granted.

PATHWAYS

ANNA KROOK-RIEKKOLA

Pathways are time-set plans for how to achieve articulated goals for the future. Pathways encourage movement and action. They guide us to new places.

Pathways to the future – Pathways for the future.

The Arctic regions across countries are characterized by vast landscapes rich in natural resources, low population density, and are inhabited by indigenous communities and locals who are already experiencing the effects of a changing climate. These natural resources attract multiple interests and can support the world in reducing the global climate impact, but to what extent should the Arctic regions contribute at the expense of the local ecosystems and population?

There is a need to develop pathways for the Arctic regions – community-rooted pathways that also consider global challenges. We must understand which actions will prepare us to meet a desired future and plan the pathways accordingly, or they will be decided for us. An important starting point is to agree on the long-term goals, which includes agreeing on who should be part of defining these goals.

Path dependency – what we do today impacts which paths we can take in the future. To avoid future detours, it is important to consider different perspectives in the planning process. The pathways that are possible will depend on what is socially acceptable, how technologies evolve, and how nature is impacted. Actions will benefit some and negatively impact others. Values will clash. No one has ever made this kind of change before, so there are no clear answers on how to proceed. This is a so-called wicked problem. But this is not a reason to give up on identifying pathways to a desired future.

There are several ways that can lead us to the destination. Some are faster, others more pleasant, and preferences will vary.

The future is not just something that happens; the future is something we can influence.

Dream big dreams!

PEACE

GUNNAR REKVIG

The Arctic demonstrates how peace can emerge from trust-building activities across ideological divides. After 1814, the year marking the onset of the Nordic Peace, the region established lasting patterns of conflict resolution through highly innovative diplomatic means rather than military confrontation, as was the norm in the Nordic Arctic before 1814. This Nordic Peace became instrumental in developing Arctic cooperation.

Despite global tensions during the Cold War, Norway, a NATO founding member, implemented rapprochement with the Soviet Union that helped transform the Arctic into a zone of low tensions where deterrence was balanced with reassurance policies. Norwegian self-imposed military restrictions prohibited foreign military bases on Norwegian soil in peacetime, banned nuclear weapons, and restricted NATO activities in North Troms and Finnmark counties on the Soviet border. Parallel to these, cultural and scientific collaborations, joint fisheries management, and a moratorium on hydrocarbon extraction in the contested Barents Sea were established while the Barents Sea Agreement was negotiated.

The 1987 Murmansk speech by Gorbachev proposed the Arctic as a "zone of peace," which led to increased regional cooperation after the Cold War through institutions like the Barents Euro-Arctic Council (1993) and the Arctic Council (1996). These initiatives transformed former ideological demarcations into spheres of cooperation.

However, this cooperative framework faces mounting challenges. Putin's 2007 Munich speech marked a turning point away from this ethos of cooperation, with tensions escalating following the 2014 annexation of Crimea and more dramatically after the 2022 invasion of Ukraine. The re-emergence of military buildups in the north has redrawn the dividing lines that had been gradually dismantled through decades of diplomacy, and while the Russians highlighted worsening relations with the West, they did not express this sentiment in the Arctic.

The Arctic today reflects global shifts toward multipolarity. New actors like China introduce further complexity as climate change increases the region's strategic and economic significance. Despite these challenges, peace continues to endure in the Arctic, maintained through established institutional frameworks, ongoing fisheries management between Norway and Russia, and the persistent historical legacy of successful conflict resolution mechanisms that remain active even as geopolitical tensions rise elsewhere.

PEAK

KRISTIN HARILA

The Arctic: A Journey of Peaks

The Arctic is a place of extremes, where nature shows its wild and untouched beauty. As an adventurer and climber, standing on one of its snowy peaks is not just a physical triumph but also a moment of profound reflection. The silence up there feels eternal, broken only by the wind, as you look out at a world covered in white. These peaks, both stunning and challenging, represent the spirit of adventure – a reminder that reaching the summit requires determination, strength, and respect for nature's harsh conditions.

But the peak is not the end. It's only a brief moment of achievement, a high point that must be followed by the climb back down. In climbing, as in life, the way down calls for caution and humility. The thrill of standing on the top must give way to the focus needed to return safely. This repeated journey reflects the ups and downs in our lives: the goals we strive for and the moments we celebrate.

Reaching life's peaks can feel like conquering a mountain. Yet, no peak lasts forever. Coming back down doesn't mean failure; it's a necessary part of growing. Only by stepping down can we build the strength and understanding needed for the next climb. Peaks are exciting, but the valleys offer the rest and renewal needed for what lies ahead.

In the Arctic, every summit climbed and every ridge traversed reminds us that life is full of ups and downs. Each one helps us grow, tests us, and pushes us to keep going. The journey, after all, is not just about the summit; it's about learning to embrace all the moments that lead to the next peak.

PERESTROIKA

FRODE MELLEMVIK

My first visit to Russia was as Dean of Bodø Graduate School of Business in the fall of 1991. Motivated by Gorbachev's Glasnost and Perestroika policies, the aim of the visit was to discuss opportunities for education and research cooperation with Russian universities in the fields of business and management. In his well-known Murmansk speech on October 1, 1987, Gorbachev invited an East-West dialogue, especially around economic, environmental, and security issues in the Arctic region.

This first visit to Russia resulted in education and research cooperation based on ideas of openness (glasnost) and reforms (perestroika) with universities all over Russia. Thousands of students have, over the years until recently, studied management in East-West education cooperation programs built on the ideas of glasnost and perestroika policies.

Gorbachev's Murmansk speech inspired the development of bodies for international intergovernmental cooperation in the Arctic. The Ottawa Declaration of 1996, establishing the Arctic Council, is in line with such glasnost thinking. The work within the Arctic Council relies on openness and the competence to find new structures when needed. The establishment of the Arctic Economic Council (AEC) is one such example. The AEC did not fit into the established structure of the Arctic Council, and a new structure was created for the AEC.

Will the spirit of glasnost and perestroika survive in cooperation in the Arctic? We have seen signs of that even in these tough times. Good examples include the agreement between all Arctic States and Permanent Participants of the Arctic Council on both the Norwegian Arctic Council Chairship program for 2023-25 and the recent agreement allowing meetings in the Arctic Council's Working Groups and Expert Groups.

The Arctic represents important shared challenges and opportunities, and dialogue and cooperation are necessary. The work ahead for increasing dialogue and finding structures for cooperation to manage shared challenges is more important than ever, not only for the Arctic but for the global community. Knowledge is key in the pursuit of sustainable development in the Arctic. We need shared knowledge and commitment in education and research cooperation that is open to all in the Arctic.

PERMAFROST

HANNE HVIDTFELDT CHRISTIANSEN

Five million people live on permafrost in the Arctic. No surprise, as permafrost is found in about 20% of the terrestrial parts of the Earth, and most of it is in the Arctic.

Permafrost is permanently frozen ground, with a temperature typically between -1°C and -10°C. Thus, permafrost is very sensitive to climatic warming. The permafrost can be more than 1 km thick but can also be thin, with only a few meters. The thickest permafrost is found where the ground has been exposed to cold conditions without glaciers for long periods, such as in Arctic Russia.

Permafrost is only found below ground, and therefore most people do not observe it directly in Arctic landscapes. Consequently, the focus on permafrost has been less than its importance to the Arctic people. However, with the Arctic being mostly affected by the ongoing increase in air temperatures, permafrost is thawing in many parts of the region. We must therefore study how much ground ice is in the top permafrost that can thaw. Thawing permafrost causes thicker and wetter active layers on top of the permafrost. The temperatures of the permafrost will increase, and some permafrost will disappear. These changes increase the risk of landslides, hydrological system changes, and deformation of infrastructure and cultural heritage.

Therefore, Arctic societies need permafrost online observation and response systems that allow for preparedness actions during extreme weather events. Such systems must provide direct access to permafrost temperatures and other key parameters, as well as long-term observations for societal planning.

In addition, education on permafrost is needed. Presently, there are too few university courses on permafrost offered, while there is a growing societal need and demand for knowledge about it due to the described situation. Additionally, there is an increasing demand from students to learn about permafrost. A promising way to accommodate this is by enabling internships in the many fields of permafrost studies, from academia to societal management and businesses, for all interested students. Such a service has recently been developed: www.PermaIntern.org. Let us hope this will be widely used to improve societal understanding of permafrost.

PHILANTROPY

FREDERIK PAULSEN

In the cultural-historical context of human coexistence, the concepts of welfare and individual social outreach were limited exclusively to the family. It was also the norm in the past for the family to be the smallest human community.

Individual engagement with a larger community was not yet recognized as an advantage at that time, and the concept of community spirit was unfamiliar.

Socio-anthropological developments in the ancient world, spearheaded by Athens, led to the formation of community structures such as city-states.

For the first time, citizens were able to play an active role in determining the fate of the wider community outside the family. They recognized and accepted that improvements could only be achieved through cooperation. Unfortunately, these communal improvements were sometimes detrimental to individual interests. This was the price to be paid. From that time onward, the mainstays of successful communities involved reciprocal obligations between individuals, compromises, and personal commitment.

Until the Middle Ages, a sense of community legitimized every form of social and political action. It was taken for granted that peace and prosperity could only be achieved if all citizens stood together in solidarity, as a community. People also believed that self-interest would lead to the ruin of the community because it went against human reason and divine precept.

However, by the end of the Middle Ages, when the balance of economic power had shifted toward the individual, solidarity and the common good had become relics of the past. The large trading companies and their monopolies were opposed to traditional civil society based on "community welfare" and thus to its ethical principle of community spirit.

And yet, this economic power of certain individuals put them in a position to create something new – something that continues to sustain society today and transcends self-interest: private initiatives characterized by the self-responsibility of the individual and complete economic freedom as the highest principle.

Such initiatives have always served to strengthen the community principle of communal welfare. Today, and even more so in the future, they play an extraordinarily important role in supporting large-scale climatic intervention projects in the polar regions.

PICEA MARIANA
(BLACK SPRUCE)

PATRICK BEAUCHESNE

You embody excess,
Boundlessness of Nordicity and its territory
Of the people who live there,
You encircle the Earth.

Your resilience is matched only by your ubiquity,
You are the extent of the span,
The blue hour of our boreal nights.

Cities evoke your monotony,
An expected routine.
They call you wild and yet,
Are you not the fiber on which ink and words have supported
democracy and freedom of expression?

You are the cardinal point of our imaginations,
The North, the great. The one I need.
The one surviving in the cold, bound with lichen and snow.
The North of the great fires.

Oriented, we can rise, capturing the horizon.
Tirelessly walking towards exploration and discovery.
You have become the destination for land surveyors and migrants.
For hunters and trappers.

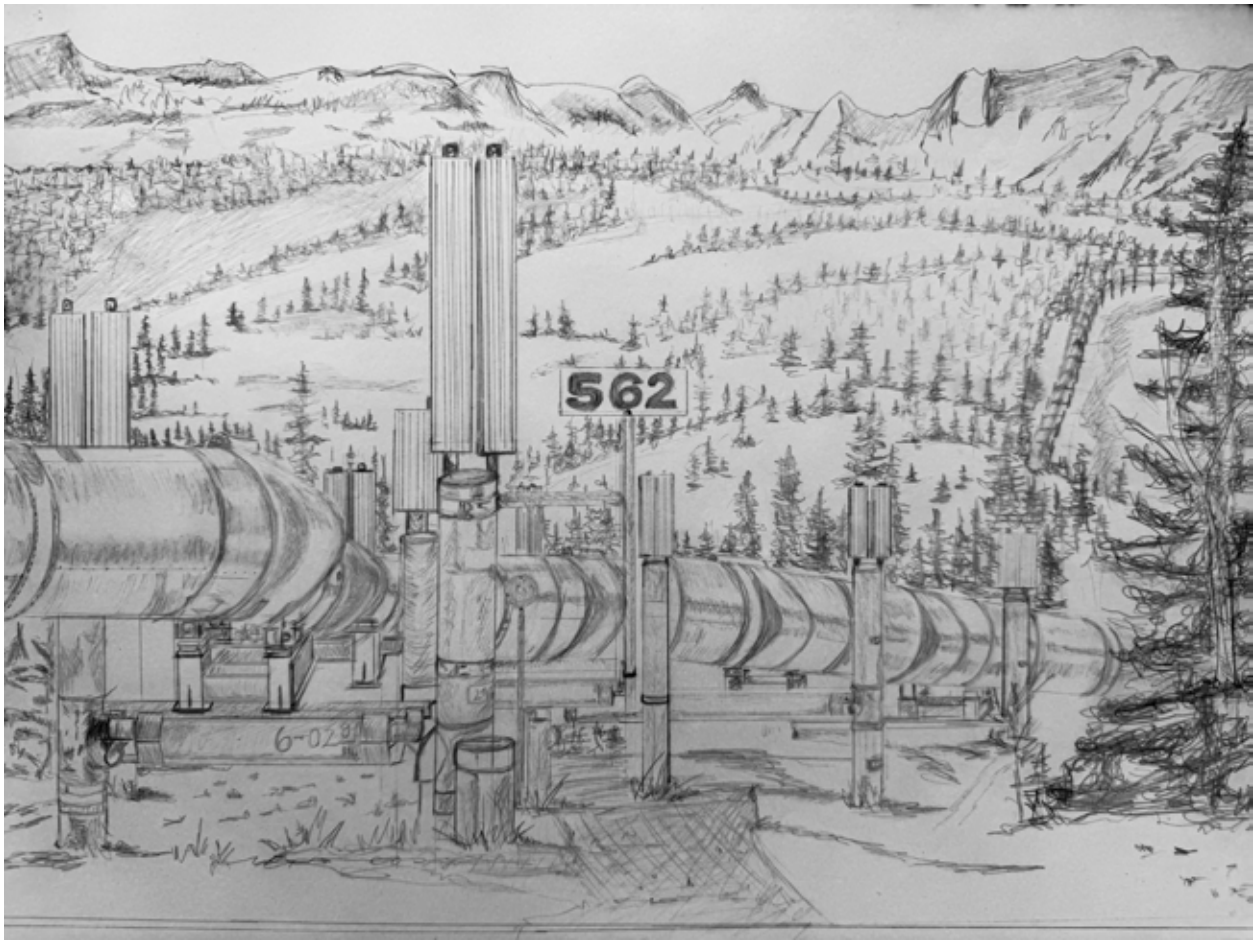
Disappeared under the reservoirs of excess,
You stood up, underwater.
You screamed for the sea to cure your pain.

But your sisters and brothers remained proud and upright, like you,

Like the North.

PIPELINE

TRACY SMITH



James Evans, University of Alaska Anchorage

POLAR

LAURENCE FISCHER

Winter came this morning.
Autumn was short,
only two days.

First snow.
Away from the cliff,
the flight of the guillemots.

POLICY

YANG JIAN

Arctic affairs is a regional issue that involves the goals of global governance and international interaction in terms of economy and politics. Arctic-related policies from Arctic countries, international organizations, and other stakeholders, as well as the results of their implementation and the interaction between different policies, are important references for observing the development and changes in the Arctic region.

In the broadest sense, policy refers to a series of plans, programs, strategies, methods, and pathways designed and implemented by specific entities (such as international organizations, national governments, provincial governments, NGOs, local communities, etc.) to achieve specific governance goals. For example, the International Maritime Organization, the Arctic Council, the governments of Arctic countries, municipal governments in the Arctic Circle, WWF, and the governments of non-Arctic countries may all introduce policies related to the Arctic. Policies have a profound impact on the process of social development, the distribution of social resources, and the coordination of social relations. After a consensus on the goals of Arctic governance is reached, the content of the policies will be established, including in the domestic field the selection of the best implementer, the allocation of tasks, the establishment of a time schedule, the allocation of resources, and the tools available for use, and in foreign relations the establishment of international cooperation goals, selection of partners, and choosing international negotiation methods.

The policy is clearly goal-oriented. Arctic policymaking is geared around specific goals for environmental protection, economic development, cultural inheritance, and knowledge accumulation. Policies are also dynamic and adaptable. With the continuous changes in the social environment, the rapid development of science and technology, and the continuous emergence of new problems and challenges, policies need to be adjusted and improved in a timely manner.

The Arctic countries take on more governance tasks. These policies need to find a balance between short-term and long-term interests, as well as a balance between environmental protection and economic development in the northern region. Economic utilization, scientific cooperation, and addressing global challenges have become the core contents of the Arctic policies of both Arctic and non-Arctic countries.

The policy-making process is a systematic one that needs to take into account a variety of factors and interests. As part of systemic policies, Arctic policy does not exist in isolation but is interrelated and mutually influencing with other policies, together constituting a large and complex policy system.

PORT

THOMAS MACK

In the Arctic context, a port is more than a physical infrastructure where ships dock – it is a vital hub of connectivity, resilience, and opportunity in one of the planet's most challenging environments. Ports in the Arctic are crucial for supporting local communities, facilitating trade, advancing scientific research, and enabling sustainable economic development. They serve as gateways to the Arctic's vast natural resources, as well as critical lifelines for food, fuel, and essential supplies to remote and often isolated populations.

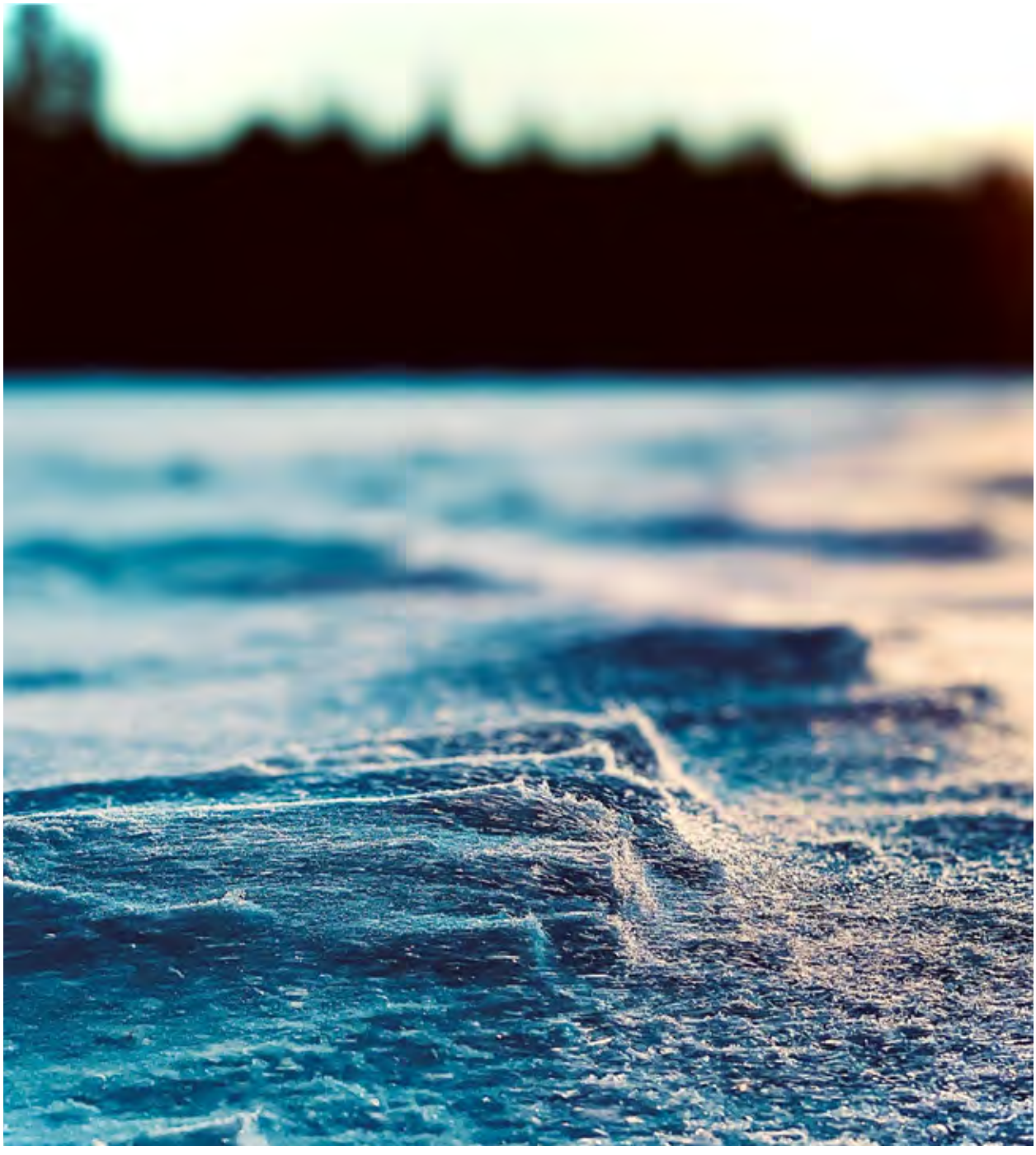
The Port of Adak, located on the Aleutian Islands of Alaska, exemplifies the strategic importance of Arctic ports. Once a military base, the Port of Adak has been transformed into a key maritime hub in the North Pacific. Its location near major shipping lanes connecting the Pacific to the Arctic makes it an ideal stop for vessels navigating the Northern Sea Route or trans-Pacific routes. As climate change reshapes Arctic shipping patterns, the Port of Adak's role is growing in significance – not just as a logistical hub, but also as a catalyst for sustainable economic opportunities in the region.

The Arctic Economic Council (AEC), where I have had the privilege to serve as the Aleut International Association's Permanent Participant representative on the Executive Committee since its inception, has been instrumental in advancing the role of Arctic ports. The AEC was founded to foster collaboration between Arctic states, Indigenous peoples, and the business community to ensure responsible development in the region. Ports, as critical infrastructure, are central to this mission. The AEC has worked tirelessly to address challenges like climate change, the need for modernized infrastructure, and enhanced connectivity across Arctic nations.

In this evolving landscape, ports like Adak not only anchor economic growth but also symbolize the resilience and innovation of Arctic communities. They embody the spirit of collaboration that drives the Arctic Economic Council's vision – a future where the Arctic is not only a region of challenges but also of profound global opportunities.

POUDRERIE GLACIALE

MAÏTÉ BLANCHETTE VÉZINA



PREPAREDNESS

OLE KRISTIAN BJERKEMO

Are you prepared for a fire in your house, a prolonged power outage, or other unexpected situations that might occur for you and your family? National authorities have most likely informed you to be prepared. Have you taken steps to meet their recommendations? You might have a plan to handle such events, your house may be insured, and you might have some extra food available in case of an emergency.

Nowadays, preparedness seems more relevant than ever. Climate change has already led to more storms and other climate-related events such as floods, permafrost thawing, ice melting, droughts, and wildfires. Climate change will also create new opportunities, such as the possibility to sail in areas that were previously inaccessible. The Arctic is warming three times as fast as the global average. This presents an additional challenge for the states in the Arctic and the people who live there. How should we prepare to be more resilient and reduce the effects of climate change?

The governments of each country have an important role to play in preparing for the effects of climate change. Funding measures to address these effects is crucial. This includes research and development, as well as investments in robust and hazard-resistant infrastructure, such as roads, telecommunications, and other essential services. Climate-related events have also challenged emergency preparedness systems. Therefore, a robust national emergency preparedness system is vital. This includes plans, equipment, and skilled personnel trained to handle such situations.

Sometimes, emergencies are too large to be managed by a single state. For this reason, international cooperation is important. International cooperation can occur on a bilateral basis (state to state) or among several states (multilateral). Through international cooperation, states may agree on efforts to mitigate the effects of climate change. They might also establish mutual agreements to support each other in emergencies, such as oil spills, natural disasters, or other situations where international collaboration is necessary.

PRESERVATION

JASON RICHARD BALL

Lack of equipment or technology. An abundance of raw material for a short time. A desire to eat seasonal products after the season changes. A desire to eat. A lack of choices. A lack of options. No food takeout or delivery. A sense of place and time. Salt, sugar, smoke, or drying to reduce the amount of water. Use acid to decrease pH. Thermal processing. Reduce oxygen. Suitable packaging. Minimize exposure to light. History. Culture. Survival. Adaptation. Determination. Appreciation for nature. Respect for nature. Knowledge passed down to the next generation. And the next. And the next. Pride. Creativity. With time comes flavor. Traditional knowledge helps to hold nature captive. Science helps us understand why. Fish from the ocean can be eaten fresh, but it can also be soaked in lye to make Lutefisk, which is not fresh but tastes good, too, especially during a cold winter's night. Preservation is rotten; culture is knowledge; is controlled; is fermented; is delicious.

PROJECT

IRINA ZHILINA

PROSPERITY

ALEXANDRA BAUMANN

Prosperity is far more than wealth – it is when all people have the opportunity and freedom to thrive – sustainably and with dignity. The world's most prosperous countries are all Arctic states. According to the Legatum Prosperity Index the top four places are occupied by Denmark, Sweden, Norway and Finland. Switzerland – also known as the "Vertical Pole" thanks to the Alps – comes in a respectable fifth place. The Prosperity Index is based on twelve criteria and reminds us that prosperity is a broad concept: the index includes dimensions such as personal freedom, governance or sustainability.

Committed to global issues, Switzerland views prosperity as a multidimensional concept that takes into account economic, social and environmental dimensions. This concept is particularly relevant in the Arctic, a region rich in opportunities but also facing major challenges. In Switzerland, as in the Arctic, global warming is above the global average and is creating new dynamics. Melting ice and permafrost open up new opportunities, but also threaten vital habitats. In this context, a delicate balance must be struck between economic development, environmental protection and respect for indigenous cultures. Anticipation is key in this process, as meeting the challenges of the Arctic requires forward-looking solutions that take into account future impacts.

Switzerland is convinced that scientific and technological progress must be harnessed for the sustainable development and prosperity of the Arctic region and its peoples. Science-Diplomacy plays a crucial role in this context as science and diplomacy must work hand-in-hand to harness opportunities and approach challenges. As an Observer State to the Arctic Council since 2017, Switzerland is committed to a peaceful, sustainable, cooperative and prosperous development of the Arctic.

PYRAMIDEN

MIA BENNETT

The name evokes the eternal grandeur of the Pyramids of Giza, ensconced in the golden sands of the Sahara. But in the Arctic desert of Svalbard, the name belongs to the ruins of a different empire preserved by dry cold rather than scorching heat: the Soviet Union, and it is Lenin rather than the Sphinx staring down the ravages of time.

In 1998, the coal mining town founded by Sweden in 1910 and sold to the Soviets in 1927 was hastily abandoned. Residents of the town, named after the triangular mountain looming above, were given just hours to pack up their belongings and board a ship bound for the still-nascent Russian Federation, where the quality of life risked being markedly poorer.

Pyramiden had the world's northernmost heated swimming pool, a colorful basketball court, a cinema, and many other amenities, along with a tight-knit, family-oriented community. A devastating plane crash in 1996 from Moscow to Svalbard, which killed all 141 people on board, ripped a hole through the community's heart and is allegedly one of the main reasons why the Russian authorities decided to shutter the town.

Pyramiden once bustled with 1,000 residents in the 1980s, just a little under half of Longyearbyen's population in 2024. But a glaciated hush has since descended, compounded by Russia's full-scale invasion of Ukraine in 2022. Visitor numbers have dropped due to the Svalbard Tourism Council's exclusion of Trust Artikugol, the Russian state-owned mining company that has operated the town for almost a century.

One Longyearbyen-based outfitter still operates cruises that dock in Pyramiden, allowing passengers a firsthand glimpse of post-Soviet Russia when access to the country is challenging and risky for NATO member state passport holders. These geopolitical tensions and the contemporary international order, however, are likely to crumble long before Pyramiden. Projected to endure at least half a millennium, the town may even persist longer than the Nordenskiöld glacier melting away across the fjord, which may not outlast this century.

In the land of ice, it seems only concrete will find a way.

PYRAMIDS

SAHAR ALBAZAR

SEE PYRAMIDEN ⊖

Q

QEQERTARSUAQ

SUSAN CHRISTIANEN

QIVAAREQ

NAUJA BIANCO

In the icy waters of Kalaallit Nunaat (Greenland), a fish swims quietly in deep underwater worlds. Known as 'qivaareq' in the eastern Greenlandic dialect, 'kanajoq' in the western Greenlandic dialect, or simply "sculpin" in English, this humble creature bears more than one name and more than one story.

Phonetically, its name in the east is pronounced [khi-VAH-rekh], a name as textured and rough as the fish itself. The kh mirrors a throaty growl of wind sweeping through fjords, while the VAH carries the steady heartbeat of survival. Finally, rekh leaves the tongue with a guttural edge, a sound of ancient echoes across the tundra. In the west, its name shifts to [ka-NAH-yok], a rhythm gentler and rounder, like the milder mountains of the west.

But 'qivaareq' is more than a name or a fish. It is a symbol, a sustainer, and, for some, an outsider. This hardy sculpin thrives in the cold, dark depths, its spiny armor a testament to resilience. In eastern Greenland, 'qivaareq' is both a familiar face and a subtle reminder of the cultural divides within Kalaallit Nunaat. For centuries, Eastern Greenlanders – like the 'qivaareq' itself – have been viewed as distinct, sometimes even as outcasts, by their western neighbors. Yet, as with all good stories, the true value of 'qivaareq' lies beneath its rugged exterior.

For generations, 'qivaareq' has been the backbone of survival for Inuit families. It's not the prettiest fish, nor the most celebrated, but it's there when needed – an ever-reliable source of nourishment.

Women and children, standing on rocky shores, expertly dart it from the water with skills passed down through time. Its firm, flavorful meat fills stomachs, and the bones become the foundation for a soup that fills souls – a dish steeped in umami, rich with the taste of the Arctic itself.

In a land where survival often depends on what the sea provides, 'qivaareq' is not just a fish – it's a lifeline. In this way, it embodies the spirit of Kalaallit Nunaat: enduring, essential, and quietly extraordinary.

QIVITTOQ

JUAAKA LYBERTH

A person who, due to grievance, insult, or disappointment, chooses to live alone in hiding, outside normal society, is called a Qivittoq – a mountain wanderer, either man or woman. The plural form is Qivittut. According to Greenlandic folklore, this usually happens by fleeing to uninhabited areas inland or out over the sea, towards the owners of the celestial bodies.

Over time, a Qivittoq can acquire supernatural and magical powers. The older a Qivittoq becomes, the more abilities they gain. A Qivittoq can become all-knowing, read people's thoughts, understand the language of animals, change their body, even in size, and gain the ability to fly. According to pre-Christian folklore, a Qivittoq can take revenge on people and is capable of living until the end of the world; hence, they also possess knowledge of the 'nature of the earth's foundations.' Therefore, a Qivittoq was and still is a very feared being among people – even today.

Since the introduction of Christianity in 1721 up to today, Qivittut are still part of everyday belief everywhere. Few Greenlanders dare to deny the existence of Qivittut. The Christian mission has unsuccessfully tried to combat the folk belief in Qivittut. In today's Greenland, Qivittut stories flourish in the autumn when daylight fades.

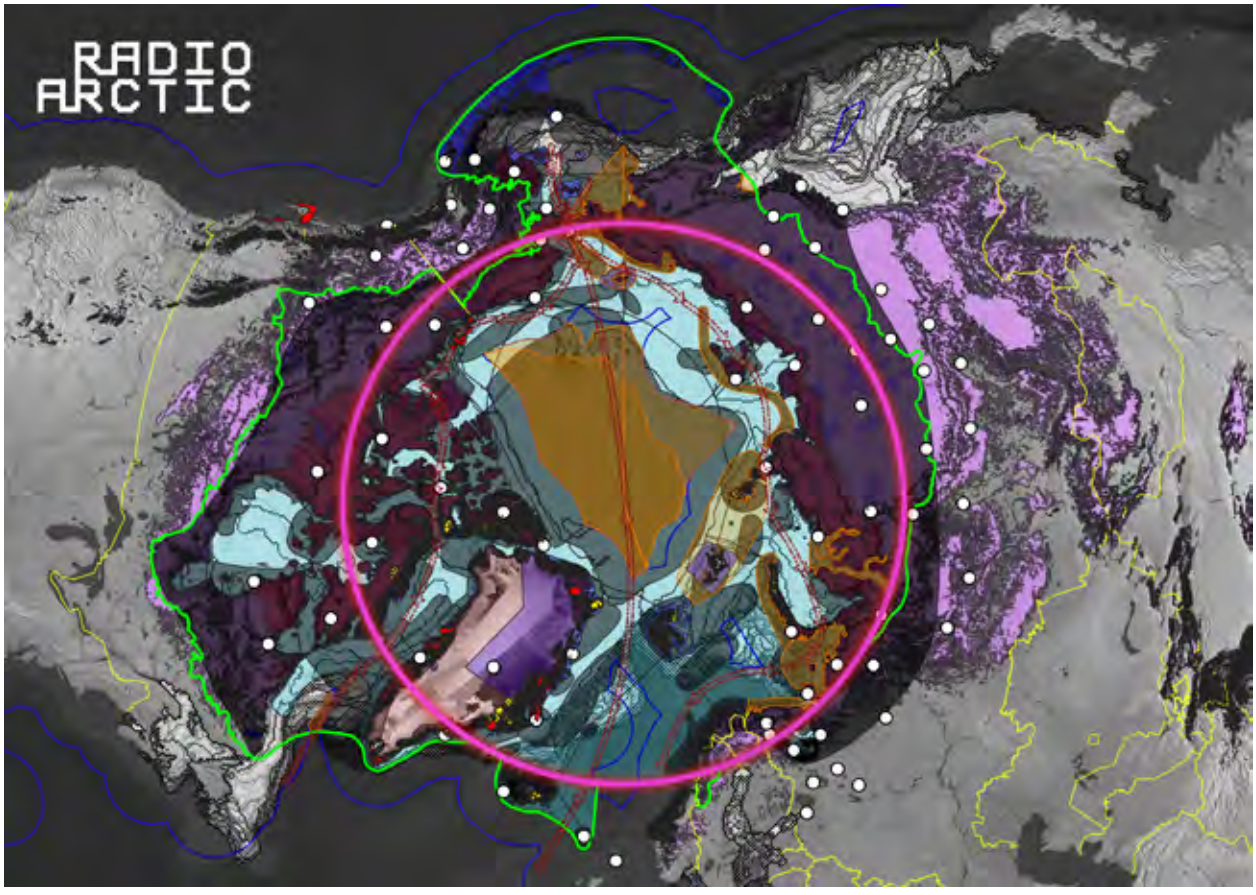
The idea of the Qivittut's character changes over time. Among the Herrnhut congregation of the 1800s, the view was that a Qivittoq made a pact with the devil, thereby acquiring demonic qualities. In literature, Qivittut are used to evoke fear and suspense. In 2022, the author Katrine Rasmussen published the successful book "I Have Lived Among True Mountain Wanderers." The book's Qivittut include both 'the truly old' with supernatural powers and 'modern people,' and they live together in a Qivittoq community in the mountain landscapes with their own unique code. However, they secretly come to towns and settlements to steal modern necessities. Other authors have also written about newer Qivittut, who choose to return to society secretly and settle in other countries, as did K. Rasmussen's main characters.

Whether other Inuit nations have similar stories about Qivittut, I do not know. The word Qivittoq is known in all Inuit dialects, with varying meanings of 'to leave in anger' or 'to turn one's back on others.' This is precisely what a Qivittoq does.

R

RADIO

GUDRUN HAVSTEEN-MIKKELSEN, ANNA DILJÁ SIGURDARDÓTTIR



RAIN

JUAN GABRIEL MADRIGAL CUBERO

RANDONEE

NIKOLAI SCHIRMER

RED

ELIZABETH BUCHANAN

Beneath the northern lights, where silence reigns,
The ice grows thick with ancient pains,
But now, a tremor shakes the frost,
As war unfurls, and lives are lost.

The red mist spreads across the snow,
Where soldiers march and guns blow.
A bitter wind, a cruel refrain,
As fire meets the frozen plain.

In the Arctic's heart, the tundra weeps,
Where icy graves and shadows creep.
Beneath the stars, the blood is spilled,
Where once the earth was calm and chilled.

Howling winds and fractured skies,
The sun does not dare rise.
Cold steel and fire, the clash, the fight,
The Arctic drowns beneath the night.

In the darkened north, the frost won't hold,
As armies clash in the bitter cold.
For power, for pride, for what's unknown,
The red stains where no man's flown.

And in the depths of frozen deep,
The souls of soldiers never sleep.
A red Arctic, torn and scarred,
A land once pure, forever marred.

REFLECTION

JULIAN CHARRIERE

Towards No Earthly Pole – Slessor, 2019
VG Bild-Kunst, Bonn, Germany

RELATIONSHIPS

LILLIAN HVATUM BREWSTER

Relationships are the cornerstone of progress, trust, and shared prosperity, particularly in the context of responsible Arctic economic development. They are not merely transactional but are deeply rooted in respect, reciprocity, and mutual accountability, connecting individuals, communities, businesses, and ecosystems. Through the lens of those who live and make their homes in the Arctic, these relationships are reciprocal and grounded in respect and accountability. They extend beyond human interactions, embracing the land, waters, animals, and spirits essential for life in this unique environment. Reflecting on these relationships reminds us that every decision we make impacts our present, future generations, and the natural world.

With its environment, peoples, landscapes, and unique challenges, the Arctic demands a relational approach that honors Indigenous peoples, safeguards the environment, and fosters partnerships that uplift rather than exploit. Relationships here are about listening, learning, and embracing Arctic communities' sovereignty, culture, and traditions. They require transparency, humility, and a shared commitment to ensuring development is socially, environmentally, and economically sustainable.

For engaged advocates for the Arctic region, relationships mean seeing people not as stakeholders but as equal partners with invaluable contributions to make. They are about co-creating opportunities that balance economic potential with the responsibility of care. This includes nurturing bonds that transcend immediate goals and ensuring development aligns with the long-term stewardship of the Arctic for future generations.

Relationships in the Arctic are multigenerational and deeply interconnected. They call for a delicate balance between the pursuit of opportunity and the responsibility to protect the land, water, and cultural heritage. Strong relationships amplify trust and collaboration, making the Arctic a place for business and a thriving home for its communities.

Ultimately, relationships are about creating a shared vision of prosperity, where economic progress and community well-being coexist harmoniously. They remind us that success in the Arctic isn't measured solely by profit but by the enduring strength of the connections we build that are rooted in respect, shared purpose, and care for the land and its people. When relationships are approached with integrity, humility, and honesty, they create the foundation for a vibrant future where the Arctic, its people, and its businesses can thrive together.

SEE TRUST ⊖

RELEVANCE

SAHAR ALBAZAR

Egypt and the Arctic may seem worlds apart geographically, but their historical relevance intertwines through unique narratives that span millennia.

Egypt, renowned for its ancient civilization and iconic landmarks like the Pyramids of Giza and the Sphinx, stands as a testament to human ingenuity and architectural marvels. The country's rich history dates back to the Pharaonic era, where advanced engineering, art, and culture flourished along the fertile banks of the Nile River. Egypt's legacy continues to captivate the world, drawing millions of tourists each year to witness its historical treasures.

On the other hand, the Arctic region, characterized by its icy landscapes and remote wilderness, holds a different allure. This polar expanse, encompassing the Arctic Ocean and surrounding territories, is home to unique ecosystems, indigenous cultures, and environmental significance. The Arctic's history is deeply intertwined with exploration, scientific discovery, and the impacts of climate change on its delicate ecosystem.

The relevance between Egypt and the Arctic can be traced through their shared exploration narratives. Both regions have attracted adventurers and researchers seeking to unravel mysteries and push the boundaries of human knowledge. From ancient Egyptian expeditions along the Nile to modern scientific missions in the Arctic, exploration has been a common thread weaving through their histories.

Furthermore, the global impact of climate change has brought Egypt and the Arctic into a shared conversation. Rising sea levels present a threat to Egypt's coastal regions, while the melting ice in the Arctic accelerates the pace of climate change worldwide. Both regions face environmental challenges that demand international cooperation and sustainable solutions.

In conclusion, Egypt and the Arctic, with their fascinating histories and unique attributes, showcase the breadth of human experience and the interconnectedness of our world. By understanding and appreciating this relevance, we will gain insights into our planet's past, present, and future.

RENEWABLE

STEIN-GUNNAR BONDEVIK

Actually

there is no renewal about renewables.

I mean the water thrust down tunnels pounds so hard
towards our Francis and the odd Pelton.

Steel screams can't take the heat from the cold water
as air flows into the system, causing supersaturated
not-so-super salmon.

There is no renewal about it.

Wild winds, when blocked by blades on top of a tower,
lose their power in the wake.

Loss of height, loss of energy.

Thrust towards the ground, picked up by no one, not
even the odd dead bird or divided herd care.

Typhoons tamed by mountain rangers on rotation.

There is no renewal about it.

You will have to go to the ends, to the source, where
things are if not renewed, but eternally replenished.

There is little extraction at the start, and far less
destruction at the end.

This is the triumph of the turbines.

But there is no renewal about it.

Actually

REPRESENTATION

AAJA CHEMNITZ LARSEN

Representation means being heard, being seen, and having the power to influence the decisions that shape our lives. For Inuit across the Arctic, representation is about more than inclusion; it's about ensuring that our voices lead the way in shaping our region.

Being a Greenlandic representative in the Danish Parliament reminds me daily that representation is not static – it evolves with the needs of the people. It is about creating pathways for others so that future generations of Indigenous youth grow up knowing that they belong in every room where decisions are made. Whether in national parliaments, international forums, or local councils, having Inuit representation ensures that Arctic governance is truly inclusive and just. Decisions about the Arctic must respect the lived realities of its people, honoring both our traditions and our aspirations.

In Greenland, we say: nothing about us, without us. This principle underpins our determination to shape the conversations that determine our future. Meaningful representation is not just a seat at the table; it's about influencing the direction and priorities of the dialogue.

Representation is political, cultural, and deeply personal. It is about addressing power imbalances and ensuring that the lived realities of Indigenous communities are heard, valued, and respected. It's about a collective commitment to equality and respect. And most importantly, it's about young Inuit girls and boys growing up with the confidence to know that they belong.

For me, representation is both a duty and a privilege. It's a reminder that our presence is vital, our stories are valuable, and our contributions are indispensable to the Arctic and beyond.

Representation matters!

RISING

HAJJA NASEEM

If there is one singular word that best encapsulates the climate catastrophe for those of us who hail from low-lying island countries such as the Maldives, it is: rising. This is equally true of the Arctic, where rising global temperatures will result in the melting polar ice caps, which in turn will lead to rising sea levels.

While geographically far apart, for both low-lying islands like the Maldives and polar regions in the Arctic, rising represents a duality: both the threat that climate change poses and a call to action to resist, adapt, and mitigate the effects of climate change.

We in the Maldives grapple with the relentless rising of sea levels, which threaten our very existence. Communities, be they Naifaru in Lhaviyani Atoll or Nuuk in Greenland, face the daily challenge of adapting to rising temperatures that disrupt our fragile ecosystem. This causes upheaval in core livelihood industries like fishing and agriculture. The rising intensity of storms and unpredictable weather patterns underscores the urgent need for resilience. This ever-rising need to adapt, in turn, results in other kinds of risings: that of fiscal pressure as limited resources are diverted for adaptation, rising social costs such as crime, the proliferation of radical ideologies, and the underdevelopment of society's most marginalized.

But amidst these challenges, there is also the rising determination of the people. From advocating for climate justice on the global stage to innovating with sustainable practices at home, our communities embody a spirit that refuses to be submerged by adversity. This duality of rising – both as a threat and a call to action – captures the essence of our fight against climate change.

RÓ

AMY HANSEN

ROCK

MINIK THORLEIF ROSING

Rocks are the foundation of everything, even if "rock" can mean two different things. It can refer to an object – a rock, which is made of a material also called rock – a natural substance without a defined shape or size, but with well-defined material properties.

Rock defines the maximum on our scale of solidness. To the human eye, mountains seem unrockable and everlasting. Human life is nothing but a tiny glitch in the geologic time scale, and because rocks outlive us, we think that rocks are forever. True, the material "rock" can be quite old, but all things considered, most rocks are no older than a billion years or two. Only the Arctic holds a small inventory of truly ancient rocks more than 3,700 million years old.

As I write this and as you read it, the Greenland continent is being transformed into rocks by the mighty powers of its Ice Sheet. Mountains are broken into boulders, boulders into cobbles, which are reduced to pebbles, ground into sand, and finally milled into flour. Every time the size of a rock fragment is halved, the total rock surface area is doubled. Under the Ice Sheet, a cobblestone is crushed into 10,000 billion rock flour particles, with a collective area that is a million times greater than the surface of the original cobble.

Rocks can also dissolve in plain rainwater. This weathering is a slow process. A rock surface weathers less than a millimeter in the lifespan of an entire civilization because it only works from the surface. The cobblestone, which would have taken a million years to weather away, can dissolve in a year if it has been milled into rock flour. There is a much shorter distance from the surface to the center of a tiny particle.

Rock weathering consumes carbon dioxide from the atmosphere. In the cold Arctic climate, weathering is extremely slow, and fresh, unweathered rocks pile up. In warmer climates, weathering speeds up, and rocks weather into clays and sand, which dominate those landscapes. Over billions of years, rock weathering has balanced a steady emission of CO2 from Earth's interior and kept our climate stable and pleasant. If CO2 increases, Earth gets warmer, weathering speeds up, and CO2 would be consumed by the rocks. If it gets too cold, weathering would cease, and CO2 would increase until the temperature got back on track.

When we humans began burning fossil fuels, we soon outcompeted all the volcanoes on Earth, and the natural thermostat could no longer keep up with the supply of CO2 in the atmosphere. A solution to bring our atmosphere back into balance would be to increase the rock surface area in warm climates. This is what Greenland's rock flour offers. The glacial rock flour can consume one-fourth of its own weight in carbon dioxide. Billions of tonnes could easily be transported south from the fjords of Greenland and help restore the clement climate that we are on the brink of losing.

RUIN

MIKI JENSEN

A ruin – a piece of the past that time has worn down. It shows us glimpses of past ambitions, dreams, and losses. Once whole, now fractured, it stands as a reminder that everything changes, because nothing lasts forever. Lives, dreams, and ways of living fade over time, serving as a reminder of our fragility and resilience.

Ruins today spark curiosity and give us a glimpse into our common history. The silence and decay speak loudly, inviting us to uncover and reimagine history. What happened here? What stories were told? What dreams were lived? And why did it fall apart?

In South Greenland, where I'm from, there are around 500 ruins that showcase our Norse and Inuit roots, which to this day remain untouched by mass tourism. People built farms, churches, and communities here over a thousand years ago, a testament to our culture's effort to establish a home and community in some of the world's toughest yet most beautiful landscapes. The Greenlandic word for ruin is illukoq, which means "an old house." That's what it is. When I stand among the old houses today, it connects me with the people who lived back then. The old houses serve as a bridge between the present and the past, offering a perspective on our current lives and way of living.

The old houses in the place I call home prompt us to reflect on our culture and our relationship with nature – and what we, as humans in the Arctic, leave for future generations. The old houses demonstrate that we don't just create; we also protect our history and surroundings. Our lives and culture today are rooted in what came before us.

S

SALMIAKKI

JULIE DECKER

Salmiakki is the Finnish salty licorice, flavored with salmiak salt (sal ammoniac; ammonium chloride). To me, it's the Arctic.

Salmiakki was originally used in Finland and other parts of the Nordic region medicinally to help with respiratory and digestive issues. The chemical compound ammonium chloride has been used since the Middle Ages in Europe for its expectorant and soothing effects on the throat and other medicinal purposes.

In the 19th and early 20th centuries, people in Finland and neighboring countries began to experiment with incorporating it into candy making, and it morphed into a culinary preference – along with other strong, distinct flavors that challenge conventions – like kalakukko (fish pie), leipäjuusto (a fresh cheese), or fermented fish.

For many Finns, salty licorice is nostalgic, a treat with cultural significance, tied to childhood traditions, enjoyed during celebrations and as part of everyday life – a familiar, comforting flavor rather than jarring and bitter.

I remember traveling from Alaska to Arctic Finland (Rovaniemi) and thinking about my Finnish grandmother. I wandered into a small corner grocery store for something sweet after a day of meetings. I came across a licorice section that took up significant space in the small shop. As I browsed with great intent to pick out just the right salmiakki for the winter moment, I encountered my friend Aaron, also from Alaska, who had gone to the store specifically for salmiakki. I love this memory of a shared experience and sensibility. Another friend from Alaska, Julia, just gave me and others salmiakki advent calendars for the holidays. So, salmiakki is sentimental, associated with places I love and people I respect.

Perhaps it's also because salmiakki is an acquired taste, just like the Arctic. When we are from the Arctic, we understand how it's tied to identity, to the experience of the land and people, to the pride in something different, something shared. Salmiakki is described as a "love it or hate it" treat outside Finland. So is the Arctic. I love this salty, sweet place we call home.

SÁMI

ASLAK HOLMBERG

The Sámi are an Indigenous people of northern Europe. The traditional homelands of the Sámi are called Sápmi in the North Sámi language, which is the largest of the nine Sámi languages still spoken today. Sápmi covers large parts of Norway, Sweden, Finland, and the Kola Peninsula in Russia, and if it were a country, it would be the largest country in Europe. Sámi, Saami, and Sami are different spellings referring to the same people.

The Sámi have lived side by side with neighboring nations for centuries, while in some inland regions, they have only become more closely acquainted with other cultures during the previous century. The Sámi maintain their own culture, languages, livelihoods, and close connection to their lands and waters.

While most Sámi today have ordinary 9-to-5 jobs, many are still involved in traditional livelihoods and practices, which are important carriers of culture. Reindeer herding is a key traditional livelihood, and most land areas in Sápmi are reindeer herding pastures. Fishing is also a key practice for the Sámi, both in freshwater and in the sea. Other traditional practices include hunting, gathering berries, and handicrafts.

As the Arctic is rapidly changing, these changes bring great challenges to our livelihoods and culture. Unpredictable weather and changing seasons create difficulties for Arctic species that the Sámi depend on, such as reindeer and salmon. With more rain-on-snow events and an increased freeze-thaw cycle, the grazing lands tend to freeze, making access to food more difficult, which necessitates more supplementary feeding, adding to the costs. Atlantic salmon has declined significantly across Sápmi, creating a huge gap in the traditional diet of river and coastal Sámi.

The Sámi remain a vibrant nation and are maintaining and developing their cultures while facing many challenges related to climate change and competing forms of land use. Rights over traditional territories, the continuation of languages and traditions, and adapting to climate change remain essential priorities for the future.

SCHOOL

SUSAN CHRISTIANEN

SEA URCHIN

SIMON JUNGBLUT

Sea urchins are invertebrate animals characterized by their spherical appearance. They belong to the group of echinoderms (along with starfish, brittle stars, and sea cucumbers), all of which exhibit pentameric radial symmetry. This means one can imagine the animal having five mirror axes through its body. Generally, sea urchins are widespread grazers and sediment feeders found in all oceans worldwide. While some live in soft sediments, most species are known from rocky shores and are typical herbivores within kelp forests.

In the Arctic, several species populate the coastal areas. The Green Sea Urchin *Strongylocentrotus droebachiensis* and its closely related sibling species, the Pale Sea Urchin *S. pallidus*, are the most prominent. The Common Sea Urchin *Echinus esculentus* is much less abundant but more visible due to its vibrant orange color and its size, which is about triple that of the other two species.

Sea urchins can be seen in harbors, along piers, and anywhere seaweeds are present for them to eat. The two species of *Strongylocentrotus* can reach sizes of about 6 to 8 cm in diameter, and a healthy Arctic kelp forest would normally accommodate about 10 to 20 individuals per square meter.

In some sub-Arctic environments, such as the Norwegian Porsangerfjord, the two species of *Strongylocentrotus* together can number over 200 individuals per square meter. With such high densities, it's easy to imagine that they exert significant grazing pressure on seaweeds, particularly kelps. Eventually, the sea urchins can eradicate the entire kelp forest and all seaweeds in a given area, which is then referred to as a "sea urchin barren."

At warmer seawater temperatures, sub-Arctic sea urchins increase the amount of kelp they ingest, likely leading to rising population numbers and expanding barren areas. To mitigate these cascading effects, sea urchins are sometimes crushed underwater or collected to dry out. Human consumption of sea urchins is limited to local markets, but their high fat content presents an untapped potential for commercial utilization.

An increase in sea urchin abundance can already be observed locally and may be a consequence of climate change. The more widespread extension of barren areas could have severe consequences for Arctic coastal ecosystems. The complete grazing of kelp and seaweed forests prohibits the use of this habitat by other associated animals, such as nursing grounds for coastal fishes or crustaceans, ultimately leading to declining populations. In areas like Porsangerfjorden, which partially depend economically on touristic recreational fishing, increasing sea urchin populations may ultimately cause economic disadvantages.

SEAL

LLOYD PIKOK 'PIKOK' JR.

SEAWEED

KAI BISCHOF

Seaweeds (also referred to as marine macroalgae) represent a group of macroscopic algae that form the functional base of shallow coastal ecosystems along rocky shorelines. As photosynthetic organisms, seaweeds fulfill the critical ecosystem function of primary production. They come in a wide size range, from a few millimeters to several meters, and in three basic colors: green, brown, and red.

There are approximately 150 species of seaweed in the Arctic, but they are not necessarily taxonomically related. Only a few Arctic endemic species of seaweed exclusively thrive in Arctic waters. For these few species, increasing seawater temperature poses a severe threat. The vast majority of seaweed inhabiting the Arctic, however, have their center of distribution in lower latitudes and may follow an increase in temperature with a northward shift in distribution. Facilitated by rising temperatures and reduced mechanical stress from ice scouring, seaweeds are believed to thrive in a warming Arctic and are consequently regarded as winners of climate change.

On a local scale, seaweed productivity is driven by light availability, which is essential for photosynthesis and, ultimately, biomass production. With glacier and snowmelt, the discharge of sediments with terrestrial runoff into fjord systems is increasing. Consequently, the underwater light climate is deteriorating, limiting the depth distribution of seaweeds.

Overall, the following changes have recently been observed in Arctic seaweed communities: a northward expansion of seaweed habitats of about 20 km per decade, an upward shift of the lower depth limit as a consequence of coastal darkening, incoming species migrating from lower latitudes, and the establishment of a vegetated intertidal zone due to the diminishing influence of ice.

Because of their function as ecosystem engineers, changes in seaweed communities might have significant cascading effects on the associated fauna. Besides their ecological value, there is high economic interest in seaweeds. There is a long tradition of seaweed cultivation in Asia, and there has recently been a strong increase in seaweed farming in the Nordic countries. The potential for Arctic seaweed farming in increasingly accessible, ice-free fjords is yet to be explored.

SECURITY

ADMIRAL ROB BAUER

SECURITY is protecting one billion people in 32 NATO countries on Allied territory, including in the Arctic. The sacred promise of solidarity is at the heart of NATO – the basis of collective defense, uniting all Allies. Security in the Arctic is crucial as we see increased strategic competition in the region and face the most dangerous world in decades. Our seven Arctic Allies are vital to this mission of security, contributing their capabilities and knowledge.

We also keep people safe and secure by protecting the environment in the Arctic – promoting scientific research, sustainable use of resources, and ensuring freedom of navigation. Climate change will require us to fundamentally transform our approach to security and defense. We see threats to our security in extreme weather and witness wildfires blazing across the Arctic tundra. The reduction in sea ice means that new shipping routes are coming into play, making them economically and militarily significant. That is a security challenge of strategic importance.

NATO is a defensive alliance preserving peace on its territory for 75 years. NATO will protect Allied interests in the Arctic as Russia ramps up its military presence in the region, and we see signs of increased military Sino-Russian cooperation. Major geopolitical changes drive home the need to ensure security and stability in this part of the world. Freedom and democracy go hand in hand with security. The Alliance has the readiness, resolve, and capabilities to defend and deter any aggression, securing our freedom and upholding the rules-based international order.

Throughout history, courage, endurance, and resourcefulness have been crucial to surviving Arctic blizzards, freezing cold, and rough seas. But preparedness, planning, and training are the ultimate keys to success. This is constantly demonstrated by our NATO troops. Security is defined by expecting the unexpected and being prepared on all fronts.

Security is being free from danger and threats in our daily lives, allowing us to enjoy the midnight sun and Northern lights. Essentially, security is the promise of a bright future for future generations in the Arctic and globally – to explore, learn, and enjoy.

SHAREHOLDER

AARON SCHUTT

SHIP

IONNA PROCOPIOU

As the ship glided silently through the icy waters of the Arctic, the breathtaking landscape unfolded around it. Towering glaciers reflected the brilliant hues of the setting sun, creating a scene that felt almost otherworldly. This remote region, characterized by its stark beauty and harsh conditions, has long captivated explorers and scientists alike.

The ship was equipped for Arctic exploration, featuring reinforced hulls designed to withstand the crushing forces of ice. Onboard, a diverse crew prepared for the journey ahead, eager to study the unique ecosystems that thrive in this frigid environment. From polar bears roaming the ice floes to schools of fish darting beneath the surface, the Arctic is home to a rich tapestry of life.

As the vessel navigated through narrow channels, the crew utilized advanced technology to monitor the changing climate. With temperatures rising and ice melting at an alarming rate, the ship's mission was not only to observe but also to gather critical data that could contribute to global climate research. Each day brought new discoveries as scientists conducted tests and shared their findings with the world.

The ship's presence in the Arctic also highlighted the delicate balance between exploration and conservation. While the allure of this pristine wilderness is undeniable, there is an urgent need to protect it from the threats posed by climate change and human activity. The crew understood that their journey was about more than adventure; it was a call to action to safeguard this remarkable environment for future generations.

As night fell and the stars twinkled above, the ship anchored in a secluded bay. The silence was profound, broken only by the distant sounds of ice cracking. It was a reminder of the raw power of nature, a moment of reflection on the importance of preserving the Arctic's beauty and biodiversity.

SILA

NAJA-THERESIA HØEGH

In Kalaallisut (Greenlandic) and many other Inuit cultures, there is a profound belief that everything around us is interconnected. The language itself is poetic and expressive, embodying this worldview. One key concept in this philosophy is sila, a natural force that is both invisible and visible. Sila encompasses everything – nature, weather, thoughts, animals, and the world itself. It is a force that binds all things together.

As a child, whenever I made a mistake, my mother would humorously ask, "nanaa sila-vit qeqqa?," which means, "Where is the center of your sila?" This playful question suggested that good decisions require the sensibility of sila, the natural intelligence that exists in everything, from the wind to the water to the animals. To ignore sila is to lose touch with this wisdom, leading us to make mistakes.

In this view, sila is a guiding force, one that connects us and helps us navigate through life with harmony and awareness.

SINGAPORE

SAM TAN

The Arctic is not the first thing that comes to mind when one thinks about Singapore. However, while Singapore is about 7,000 kilometers from the Arctic region, the impact of melting ice and rising sea levels poses an existential challenge for low-lying coastal nations. The melting ice will also change shipping routes and trade patterns, transforming the global strategic architecture and impacting trading nations like Singapore.

Therefore, Singapore has a deep interest in the future of the Arctic. As an Observer in the Arctic Council and through our consistent participation in forums like the Arctic Circle Assembly and the Arctic Frontiers Conference, Singapore actively engages to deepen our understanding of Arctic issues and contribute to efforts to protect the region.

Singapore hosted the first Asia-based Arctic Circle satellite forum in 2015, the Arctic Frontiers Abroad Conference in 2017, and conducted a workshop on the Arctic Migratory Birds Initiative East Asian-Australasian Flyway in 2017. To underline how connected we are, Singapore's Wetland Reserves serve as a refuge for over 30 species of Arctic migratory birds annually. Singapore regularly shares its knowledge in the Arctic Council Working Group on Emergency Preparedness, Prevention, and Response in areas like the cleaning of oil spills.

Singaporean universities are also involved in Arctic research. Researchers from the National University of Singapore and Nanyang Technological University have participated in several expeditions to the region since 2022, conducting research in areas such as the impact of climate change on polar ice sheets and ways to facilitate remote energy access in the Arctic. Their research has contributed to the overall understanding of Arctic ecosystems and the impact of climate change on the region.

Singapore is also committed to working with the Arctic indigenous peoples, who are most directly affected by changes in the Arctic. We have hosted senior representatives of the Arctic Council Permanent Participants on study visits to Singapore to exchange knowledge on issues such as environmental protection, biodiversity conservation, and coastal management.

Singapore will continue to contribute where we can to the important work in the Arctic region, building a shared future that is more sustainable for all.

SIZE

AVAARAQ OLSEN

"British Airways A380 Pilot, Martin Day ©"

Early morning – December 25th, 2023 – from 40.000 ft.

SOLITUDE

HEIDI ANDERSSON

Alone, you can be strong and go far, but together, we are at our strongest and can achieve the impossible.

SPACE

TIM REILLY

The Arctic: a high-latitude stepping stone into space

The U.S. has designated the Arctic as one of three crucial geopolitical regions in the world; this century, however, the non-terrestrial domain of space will be added to that list.

The Arctic is crucial for climate data gathering, as its rate of climate change is four times greater than anywhere else on Earth. Secondly, its high-latitude position is both geo-strategically and geo-economically vital to the U.S., Russia, China, and the EU for activities such as military and intelligence up/down links to space, serving as an operational platform for space exploration, and for the deployment of commercial technologies, including satellite-facilitated social media, IoT, AI, machine learning, and big data technologies. The satellite presence of the latter over the Arctic is strategic, as their "ownership" introduces the possibility of asserting virtual governance over the Arctic and, de facto, the entire Northern Hemisphere, from unregulated space.

With NATO's expansion into the European Arctic alongside the growing presence of Asian BRICS countries, discussions are ongoing about reclassifying the European Arctic as the Eurasian Arctic, considering the Poles as part of the heritage of all mankind, and appeals from observers to the Arctic Council (AC), such as India, to become permanent AC members.

The growing intersection between the Arctic and space is reflected in multiple ways: in terms of establishing international law/a treaty for space, both the UNCLOS instrument – applied to the Arctic – and the Antarctic Treaty are considered useful models. The Eurasia-spanning Northern Sea Route (NSR), in part, is strategically considered a Northern Hemisphere maritime platform for activities into/from space. This has led to increased Arctic and space domain/situational awareness and the establishment of both China's Beidou system over the Pacific Arctic region and Russia's latest weather-satellite system, "Arkteka." Each of these is a space-based (and dual-use) technology tasked with improving communications, SAR, and navigation/weather forecasting along the NSR.

Space's predicted market value is at $1 trillion by 2030. The commercial opportunities for technology investment in the space domain and its direct linkage with the Arctic are unlimited and include, for instance, Arctic C5ISR capacity-building, commercial space exploitation, and the installation and management of satellite systems in LEO, polar, and geosynchronous orbits.

SPAIN

EVA ORTEGA-PAÍNO

Although the Arctic is well known by the Spanish society, still a mystery curtain covers the collective imaginaries. Having lived myself in an Arctic country for more than a decade, I understand well the perception of both sides, the Mediterranean country about the northern regions and their inhabitants, and the northerners about the sunny warm holidays land. This is why myself and the country is resolutely committed to bridge the gaps, bringing the reality of those distant regions and working with the Arctic nations and peoples towards a sustainably developed, peaceful, and environmentally protected Arctic.

Spain and all the Mediterranean region is also affected by extreme weather events, and data analyses clearly indicate that the Arctic climate modification, driven by climate change, is affecting those events, with a clear example of the terrible floodings in Valencia October 2024. Spain is highly interested in Arctic developments and is historically connected to the region. Science is the driving force of our participation in Arctic activities, which go back to the early 1980s. Our commitment became better organized and wider since joining the Arctic Council as an Observer, after the Salekhard Ministerial Meeting in 2006.

From that moment, Spain has endeavoured to meet its new Arctic duties, by participating in the relevant Arctic Council meetings, active participation in the working groups, and also becoming a member of IASC, plus giving consideration to strategies and actions that might increase the level of cooperation and interaction between Spanish institutions and their equivalent Arctic partners. Arctic scientists have a plethora of contacts with the scientific Arctic communities, and work in collaboration with their colleagues, with the facilitation of the Spanish Polar Committee.

Our scientists have also participated in large international scientific initiatives as MOSAIC and are committed to participating in future ones. The future is promising in terms of polar sciences and particularly on the Arctic with high engagement initiatives as the Cryosphere Decade, the International Polar Year, and EU funded large projects as POLARIN. Spain will do its best to fund our researchers participating in these initiatives that will provide a global perspective about the Arctic and the entire world.

STARS

DIMITRIS DIMITRIADIS

In Greek, the word άρκτικός (Arktikos) refers to the Great Bear, the famous star constellation in the Northern sky that appears in several stories from Greek mythology and forms part of myths and lore in many cultures.

For me, a Greek who has traveled the world, my encounter with the Arctic was overwhelming because of the contrast to my own Mediterranean home region. Seeing the vastness, the austerity, the scenic splendor, and the clear sky of the Arctic night was an eye-opener in many ways.

Meeting the courageous, resilient, and proud people living in the Arctic impressed me even more. It made me realize that they are the true STARS of the Arctic. It is by them that we should all navigate when we look to the future of the Arctic, which seems challenging and promising at the same time.

I am convinced that the further development of the Arctic can only be achieved in a meaningful and sustainable way if the voices and knowledge of the people who live there are central to every decision made.

Greenland is an area that is becoming increasingly disputed among various competing world powers. Anders Ladefoged reported on a fact-finding mission to Nuuk, where three members met with local stakeholders, government officials, and representatives of indigenous peoples over two days. They also met with the Head of the EU's new Greenland Office, which was opened by President von der Leyen earlier this year. The purpose of the mission was to collect input for the opinion "Developing Europe's strategy for the Arctic." Greenland faces many of the same problems as other Arctic areas in Finland, Sweden, and Norway. Concerns include climate change, vast sparsely populated areas, extreme weather events, and long distances, but there are also extractable raw materials that are needed for a green transition. Greenland's high ambitions for its future are outlined in the strategy called "Nothing about us without us." Today, Greenlanders' income is based on the export of fishery products, but they are striving hard to diversify the economy. They believe they can achieve this with the help of renewable energy and critical raw materials. However, this can be quite tricky for a country like Greenland, which has a vast surface area but a very small population; therefore, the capacity to manage everything can become a bottleneck. Another question is how to attract foreign investment and whom they should allow in to help with the work, without causing too many adverse effects on traditional Greenlandic society and nature. The rapporteur believes that Greenland's interests align well with those of the EU. Close cooperation with Greenland could help the EU diversify its access to green energy and critical raw materials. For Greenland, the EU would be a like-minded partner, with whom there is already good cooperation in the fields of fishing and education. Additionally, the EU could possibly finance Greenland's infrastructure projects through its Global Gateway initiative.

STARS

CHARLES JOS BIVIANO

STRAIT

LAWSON W. BRIGHAM

The word strait summons images of the most famous waterways on the globe – such as the narrow passage of the Strait of Gibraltar between the Atlantic Ocean and the Mediterranean Sea, and the Strait of Malacca linking the Andaman Sea (Indian Ocean) with the South China Sea (Pacific Ocean), the most important shipping corridor in the 21st century. When applied to the Arctic Ocean, strait defines a seasonally ice-covered waterway connecting two bodies of water, with transit passage rights provided to ships under the United Nations Convention on the Law of the Sea.

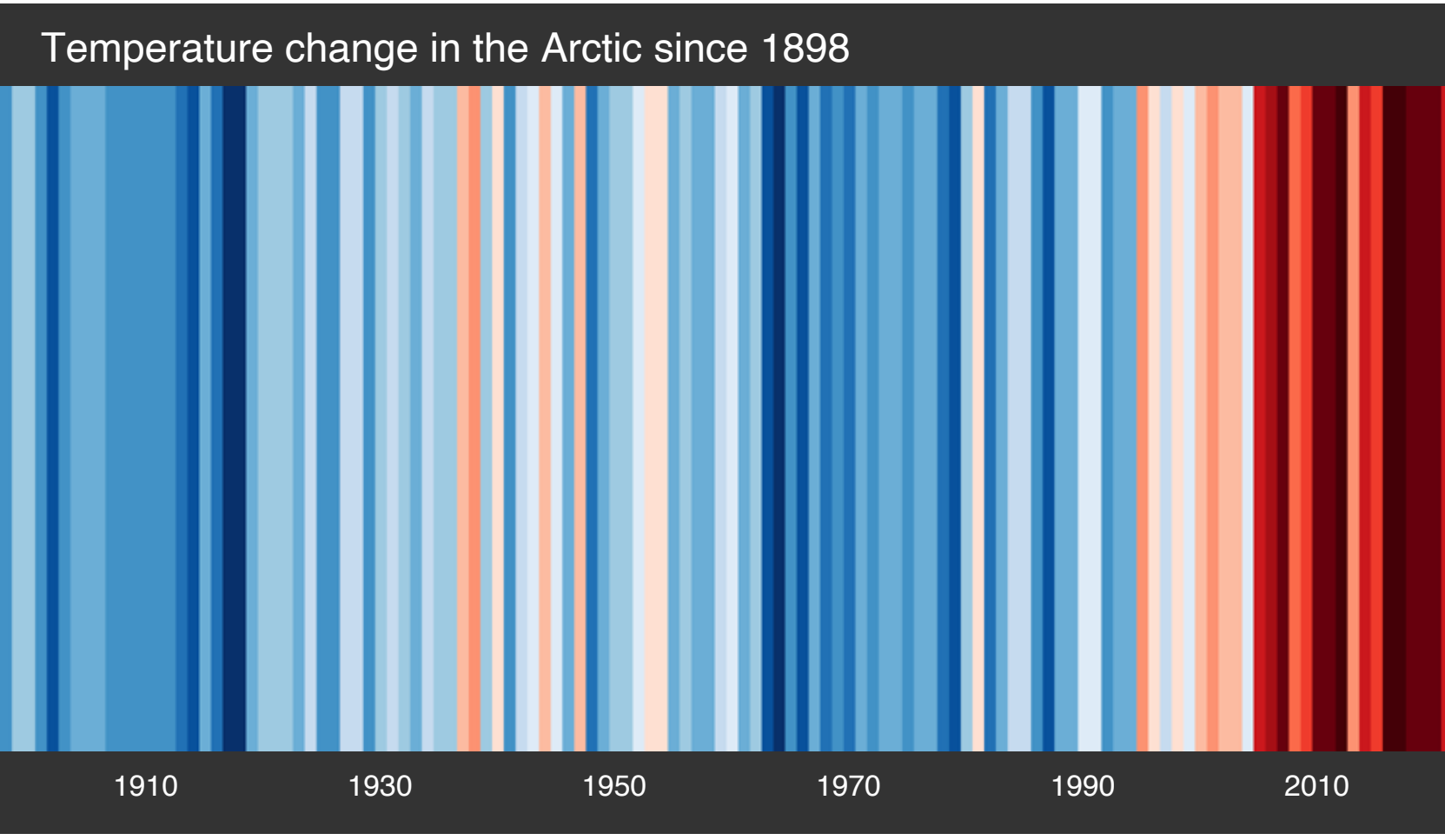
Two Arctic straits of geographic and climatic significance include the Bering Strait, which separates North America from Asia in the North Pacific, and the Fram Strait (an unofficial geographic name), which separates northern Greenland from Svalbard. Both names hold notable historic relevance in the polar world. Vitus Bering, a Danish-born Russian Navy explorer, was the first to sail this sea and strait in 1729, now bearing his name. Fram is among the most famous ships, having carried the Norwegian Fridtjof Nansen and his crew on a scientific drift across the Arctic Ocean from 1893 to 1896.

Bering and Fram straits are geographically and hydrographically quite different. The Bering Strait is a narrow passage, approximately 44.3 nautical miles wide, separating Alaska from Russia's Chukotka, with an average depth of only 90 meters. Russia and the U.S. share sovereignty over this international strait. The Fram Strait, shared by Denmark and Norway, is much wider and deeper – 243 nautical miles across and with an average depth of 2,545 meters. Only warmer surface waters flow from the North Pacific through the Bering Strait into the Arctic Ocean. The Fram Strait is the primary connection of deep waters between the Arctic Ocean and the global oceans.

The governance (navigation rights) regarding straits in the Canadian and Russian Arctic maritime regions is more complicated and controversial. Straight baselines enclose the entire Canadian Arctic Archipelago and its more than 36,000 islands; complete control was declared in 1996 over this vast expanse (islands, waters, and airspace). Soviet law in 1985 declared select navigation straits along the Russian maritime Arctic to be internal waters. Both declarations remain contested.

STRIPES

ED HAWKINS



No words. No numbers. No graphs. Just a series of vertical colored stripes, showing the progressive heating of the Arctic in a single, striking image.

SUMMIT

SIMON ARMITAGE

The Summit
When I met the glacier face to face,
there was no coming together
of skin and ice,
just washy clouds and a weepy sky
floating upside down
in a silver lake, and the eyes
looking up from the water were mine.

It was a hard slog
in a valley more like a Scottish glen,
along hillsides more at home
in the English Lakes.
A day's trek up a narrow track
between harebell and birch
and to do what:

to say the Arctic looks like this
or looks like that, to breathe
its cool breath, then scratch a name
in the visitors' book
and give the glacier a human form:
tongue, body, mouth, and heart…
In any event,

I was too late.
Looking up from the milky pool,
I saw the whiteness in retreat,
the bedraggled hem of the bridal train
heading into the heights
towards deeper winter and truer north,
trailing a stony path.

When I met the glacier face to face,
there was no close encounter
of ancient snow and body heat,
just weepy clouds and a washy sky
hanging upside down
in a zinc-colored lake, and the eyes
staring out of the water were mine.

SUPERNATURAL

ARNE PETERS

Circumpolar oral traditions have abundant descriptions of the supernatural world. Stories, myths, proverbs, and other verbal performances of the various cultural groups of the Arctic reference supernatural beings that are part of people's shared cultural knowledge, engaging with the members of the respective communities in one way or another. The Inuit tupilak and qallupilluit/qalupalik in Greenland and Nunavut/Alaska, respectively; the Sámi stallo/stállu in the northern parts of Norway, Sweden, Finland, and Russia; as well as the Germanic kópakona in Iceland (and the Faroe Islands) are the result of humans' interactions with their natural and social environment.

As classifications rooted in worldviews, they are a way of making sense of reality by personifying it, transferring observations into beings that share human and (super)natural properties alike. They walk, swim, and float; they hide, lurk, and haunt; in some cases, they enchant, abduct, or kill. They move between land and sea, between the world of the living and the extended otherworld, between that which can be seen and that which cannot, and between yesterday's mistakes and today's warnings for tomorrow.

In showing these transcendental behaviors, supernatural beings are windows into the emotional responses of human beings to the complexities of the social and natural world in which they navigate. As a result of cognitive processing, supernatural descriptions are both psychologically intuitive, i.e., they follow universal cognitive processes shared by all human beings in the world, and culturally constructed, i.e., they are expressed in culture-specific ways as spelled out throughout the Arctic.

By using language, members of Arctic communities share their knowledge of the supernatural world with one another and with all those who listen. They perpetuate, negotiate, and modernize their enregistered and emergent cultural knowledge. Hence, the cultural-cognitive systems of Inuit, Sámi, and Germanic origins will keep evolving, interacting, and being heterogeneously shared among the members of the respective cultural groups.

For the future of tupilak, qallupilluit/qalupalik, stállo/stallú, kópakona, and further supernatural beings, this may mean conceptual survival and/or change, semantic split or blending, or eventual loss due to the vanishing of a natural and socio-cultural world as a result of climate change.

SUSHI

SAORI ICHIHARA

Sushi is often described as rice flavored with vinegar, sugar, and salt, topped with fresh raw fish or rolled in seaweed along with raw fish or other fillings.

This description reflects the authentic style of sushi, which traditionally originates from Japan. However, sushi is also one of the most well-known dishes in the world and is widely interpreted, taking on very different characteristics depending on where it is served.

The preferred tastes, visuals, and toppings of each culture influence and create new combinations and flavors of sushi. Trends even emerge from time to time.

In northern countries, sushi has evolved into a creative and innovative style that diverges somewhat from traditional Japanese sushi, which is very minimalistic and emphasizes high-quality rice, top-notch fish, and precise technique. As Nordic gastronomy has developed to a world-leading level, there seems to be an increasing acceptance of a wider range of raw cuisine, recognition of a greater variety of fish, and a desire to appreciate the beauty of authentic sushi. There are now more authentic sushi restaurants in northern countries than there were in previous decades. This is a great pleasure for those who have experienced and love "Japanese sushi." However, the cultural variations of sushi in each country continue to evolve, resulting in changing combinations and styles. Sushi is a dish that showcases different stages of its evolution when you're outside of Japan.

SVALBARD

RONNY BRUNVOLL

The Duality of Svalbard:
Majestic and beautiful, yet brutal.
Endless horizons, yet rapid changes.
Familiar, close, and dear, yet frightening.
Cold, yet warm.
Love.

Each of these paradoxes encapsulates different elements of Svalbard: the closeness to other people, the experiences in nature, global warming, geopolitics, and an increasingly unstable world that feels ever more threatening, and so on. But above all, there is love – for the place, for the nature, for the people. That love never falters. Let it be the constant amidst all the change, the source of hope for the Arctic.

T

TABOO

ASII CHEMNITZ NARUP

For over 40 years, we have been dismantling taboos. We have brought them into the public sphere, named them, listened to heartbreaking accounts of what abuse does to people, and tried to understand the scale of the problem to enable prevention and treatment.

This takes courage. I know this as a social worker and therapist because someone has to reveal secrets, step forward, and speak out. No family has been spared.

In Nuuk, we spoke out in the 1980s. Several women subjected to violence cried out for help – and their cries resonated. We organized ourselves, brought domestic violence out of the private sphere, and turned it into a collective struggle. We demanded a crisis center, and the municipal council listened, allocated funds for volunteer support work, and found a small yellow house in the middle of the city.

The fact that fighting violence made a difference gave us courage. No more turning a blind eye to children and young people wandering the streets at night until their parents passed out or being left alone at home because their parents went on drinking binges.

In the early 1990s, we held the first seminars on suicide. The organizer was the Greenlandic Children's Association. There was consensus on breaking the silence, but despite breaking the taboo, the number of suicides has not decreased – the numbers are at record levels. Grief and shock strike again and again.

Many children have lived with the aftermath of sexual abuse – traumas that are passed down from generation to generation in the form of low self-esteem, shame, and anxiety. These traumas hinder people's ability to fully live and experience joy.

We continue to work on finding the language to express suffering and to speak, speak, speak, share stories, and elevate awareness to a level where abuse is not tolerated.

We reject inhumane behavior, break the silence, and open up dialogue. This requires extraordinary courage because of close relationships that create vibrant patterns but also social dependencies. The risk of being ostracized from the community is high when you break the silence.

Over decades, we have laid important tracks. We know there are faces and lives behind violence, neglect, sexual abuse, and suicide.

A crucial healing process is underway. It will take years. Now we must go all the way.

If you need help, remember to reach out to professionals in your community.

SEE WORD MENTAL ⊖

TENACIOUS

ODD EMIL INGEBRIGTSEN

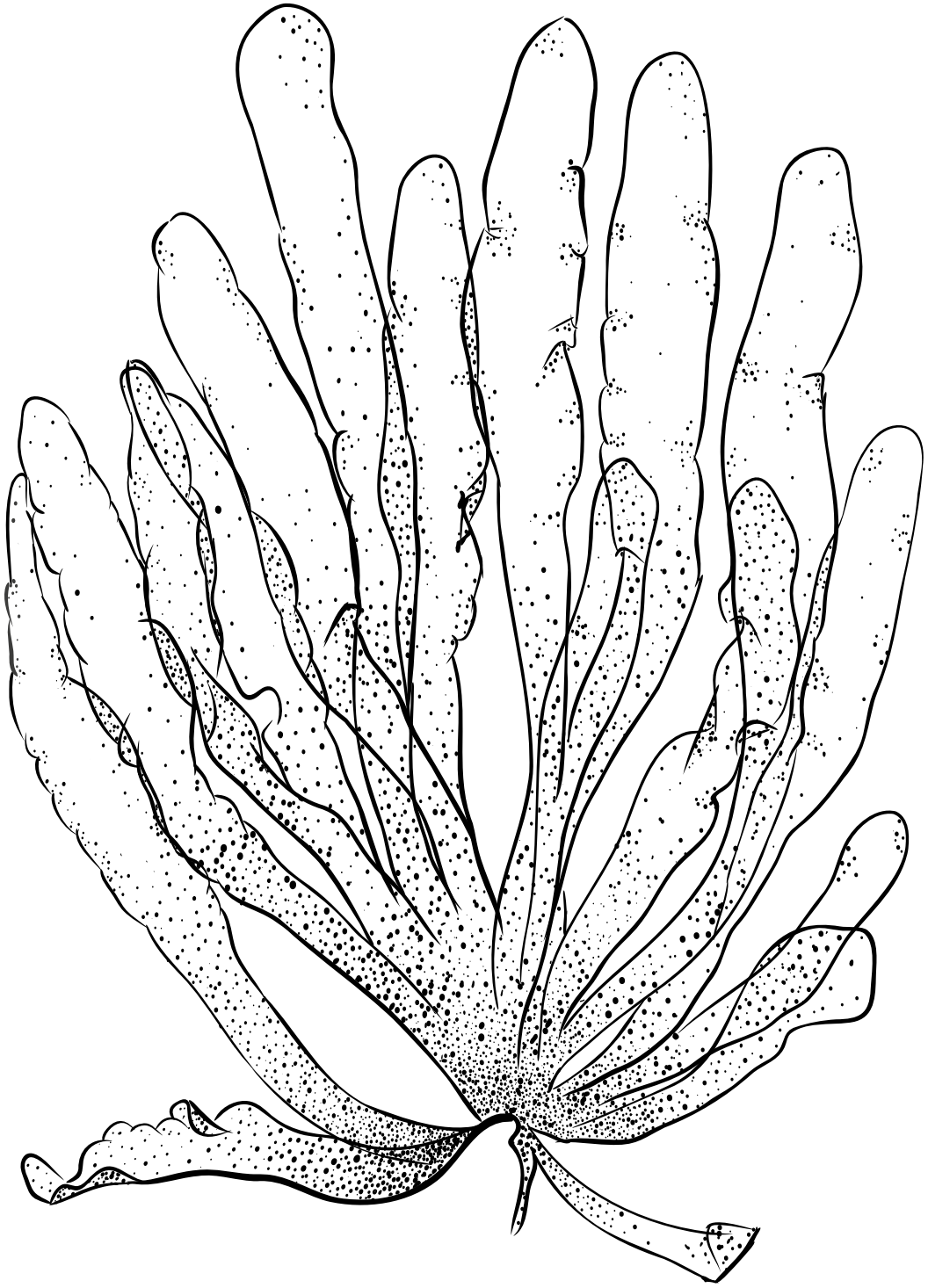
Tenacious is the word for my municipality, Bodø. Bodø is on a mission to develop a whole new city over the next 100 years. We will face many challenges as we work to build our future. We need to support and encourage new businesses and individuals striving to achieve their goals. We must be attractive to newcomers who want to live and do business here. Our mindset must be tenacious – committed to achieving our dreams and never giving up.

THAW

PONATHAN PARNHAM

TARI

EYÐBJØRG SIGURDSDÓTTIR ANDREASEN



TILAK

ARVIND GUPTA

Bal Gangadhar Tilak, also known as Lokmanya Tilak, was a leading Indian nationalist, mathematician, teacher, political activist, and scholar who propounded an exciting and unique theory that the original Aryans lived in the Arctic polar regions before they migrated southwards to Central Asia, Persia, and India with the onset of the glacial period during which the polar region became inhabitable for humans. He published his findings in two books: Orion (1893) and The Arctic Home in the Vedas (1903).

Tilak was primarily interested in researching the antiquity of the Vedas, the most ancient literature of humankind. In Orion, he used astronomical arguments to date the antiquity of the Vedas to at least 4500 BCE. In The Arctic Home, he held that the Vedic goddess of dawn – the Ushas – was polar in origin. He argued that the description of the 30-day-long dawn in numerous Vedic hymns resembles the actual dawn that can exist only in the polar regions. This could not have been possible unless the Vedic poets lived around the North Pole and witnessed the actual phenomenon of the long period before the rising of the sun and the beginning of the six-month-long day. In the book, Tilak presents corroborative evidence from an assortment of Vedic myths, such as the legends of Indra and Vritra, of the Ashvins, and many more. Tilak also found direct evidence of the Arctic home of the Aryas in the ancient Iranian Avestic traditions, where there is a mention of the Aryan Paradise in the north, where a year was equal to a day and which was destroyed with the onset of snow and long winters.

Tilak's theories could be called radical, but he puts forth a logical argument that the Vedic and Avestic traditions retain memories of climates and regions similar to today's Arctic regions, which were once habitable. With the recent revival of interest in the Arctic region, Tilak's theory, neglected for a century, needs to be revisited in light of modern scientific findings.

TIPPING

STEPHEN DOUGHTY

This photograph shows the UK's Royal Research Ship *Sir David Attenborough* on her first Arctic research cruise in southeast Greenland in the summer of 2024.

On a mission to understand more about past climate 'tipping points' in the Arctic, the team's research will contribute vital knowledge to international collaborations aimed at better understanding and predicting future climate change and potential tipping points, as well as their impacts on both the people who call the Arctic home and the rest of the planet. Already suffering unprecedented wildfires, permafrost melt, and ice loss, this picture illustrates the Arctic's fragility in a time of unprecedented change.

Chris Gray, British Antarctic Survey

TRACTION

PENNY GAGE

For a growing startup company, traction is not just the grip or friction of the road; it represents the measurable progress and momentum a technology gains as it moves from ideation to real-world deployments with customers in a target market.

I work to support entrepreneurs behind innovative, game-changing 'climate technologies.' These technologies reduce greenhouse gas emissions, lower energy costs, and increase energy efficiency. In my home state of Alaska, we need these technologies today.

In the Alaska context, 'market traction' takes on additional significance due to our region's unique challenges: extreme weather, remote communities, limited infrastructure, and high energy costs all point to the urgent need for climate solutions. Achieving traction against the odds in our state shows a company's investors and future clients that the product or service can:

- Provide reliability and resilience in harsh conditions.
- Gain acceptance and collaboration with local communities and Indigenous peoples, which is vital to ensure culturally and environmentally respectful solutions.
- Secure the partnerships, investments, and regulatory approvals needed to demonstrate confidence in the solution's potential.
- Deliver real benefits, such as reduced emissions, improved access to energy, and economic development.

For me, traction represents both progress toward market adoption and the ability to create meaningful positive change in a complex environment full of opportunities like the Arctic.

TRADE

PASCAL LAMY

Trade in the Arctic represents a dynamic force and the historical cornerstone for both circumpolar and global interactions. Trade has driven the exchange of goods, knowledge, and culture, while also serving as a critical conduit for economic growth and connectivity in one of the world's most remote areas. However, the history of trade in the Arctic is marked by centuries of imperialistic colonial expansion, fueled by the exploitation of natural resources and the marginalization of Indigenous communities.

This dual legacy calls for a more thoughtful, intentional approach, ensuring that trade now functions as a tool for sustainable development, cultural respect, and environmental stewardship. Perhaps even more than elsewhere, Arctic trade must evolve into a bridge for peaceful cooperation, supporting resilient, self-determined communities and fostering a respectful, reciprocal engagement with the environment. By embracing this transformative approach, trade can connect Arctic peoples to the world in ways that honor their heritage and protect the future of both their communities and the broader Arctic region.

TRANSITION

HELEN YOUNG

TRUST

THOMAS HJORT

In the Arctic, trust is not just a corporate word on the wall – it is a necessity.

The breathtaking beauty and power of nature in the region, the vast distances, extreme weather, and tightly connected communities demand honesty.

And with honesty comes trust.

Arctic business relationships are built on mutual reliability, long-term cooperation, and personal integrity. Like the towering ice mountains, relationships in the Arctic are shaped over years – solid, unyielding, and built to last. Long-term commitment opens the way to new heights, built on the honesty of a handshake or a promise – both of which, in the Arctic, can carry as much, if not more, weight than a written contract.

Trust requires consistency, transparency, and a deep respect for local cultures. Many Indigenous communities and long-established businesses operate within a framework of mutual respect, and those looking to form relationships in the Arctic must recognize this and engage with sincerity and commitment.

In an environment where dependability is vital, those who earn trust understand that their success is intertwined with the region's well-being and actively contribute to its sustainable growth.

In the Arctic, trust is more than just a business principle – it is the foundation of lasting partnerships and shared prosperity.

In the Arctic, trust is a must.

U

UNANGAX̂

HALIEHANA STEPETIN

Being Unangax̂ means eating the first harvest of salmonberries as cereal in summer. It means cooking the first salmon of the year for your family. It's about picking the net to freeze, smoke, pickle, and dry salmon for the year. It's having seagull eggs for breakfast, putchki [cow parsnip] stalks dipped in seal oil for lunch, and sea lion steaks for dinner. It's cardboard and tea on the table for a lastax̂ [fermented seal flipper] feast. It's halibut fish pie just because, for birthdays, funerals, holidays, and gatherings. It's waking up with the sun to drink coffee on the beach.

Being Unangax̂ involves predicting the weather each morning and knowing each phase of the moon and the affected tides. It's hiking the hills, shotgun in hand, scouting ptarmigan on windy snow days. It's laaqudax̂ [fur seal] hunting in the Pass in winter. It's always being prepared.

Being Unangax̂ is about abundance. It's knowing that wealth lies in what we share and what we give to others. It's picking a bucket of sea eggs and bidarkis [gum boots] for our Elders. Wealth is an action, measured in what we give back: to the land, water, plants, animals, and community.

Unangax̂ signifies belonging to a fabric of people shaped by more than colonial legacies of trauma and a deep connection to island life dictated by wind, fog, sideways rain, hail, sleet, flat calm days, hot spring soaks, and earthquakes that remind us of our ever-changing experience here.

Unangax̂ symbolizes survival, strength, adaptability, and perpetuity. It means we survived genocides, fur trade enslavement, forced removals, boarding schools, attempted linguicide, Russian Orthodoxy, nuclear testing, extraction, overfishing, ecosystem imbalances, climate change, and the separation of Unangax̂ Peoples from our places.

Being Unangax̂ is weaving a future of grass basket wefts from our shared stories of overcoming. It's adapting to the only constant of change as an iqyax̂ [kayak] flexes to the onslaught of currents. It's knowing how to weather the storm and remain steadfast in our values amidst change.

Being Unangax̂ is a sovereign right to sing, dance, thrive, and celebrate our Indigeneity in and from Unangam Tanangin [the Aleutian Islands].

UNCLOS

HANS CORELL

UNCLOS was adopted on 10 December 1982 and entered into force on 16 November 1994. With its 170 parties, UNCLOS is the overriding legal instrument that governs the order in the oceans of the world – about 70 percent of the surface of the globe. This means that UNCLOS also applies in the Arctic Ocean, which covers some 14 million square kilometers. All Arctic states except the USA are parties to UNCLOS.

The three main organs of UNCLOS are the International Seabed Authority in Kingston, Jamaica; the International Tribunal for the Law of the Sea in Hamburg, Germany; and the Commission on the Limits of the Continental Shelf (CLCS), which operates in New York.

UNCLOS governs the territorial sea, the exclusive economic zone, and the continental shelf of the five Arctic coastal states: Canada, Denmark (Greenland), Norway, the Russian Federation, and the USA (Alaska).

Submissions to the CLCS have been made by Canada with respect to the Arctic Ocean, Denmark with respect to the northern continental shelf of Greenland, and the Russian Federation with respect to the Arctic Ocean. The claims are overlapping. However, it is important to stress that the states do follow UNCLOS.

Coastal states share with the international community part of the revenue derived from exploiting resources from any part of their shelf beyond 200 nautical miles. Depending on developments in the Arctic Ocean, this may be of great importance in the future. As the ice sheet diminishes, parts of the Arctic Ocean will become navigable high seas. The regime will then be the same as in the Atlantic Ocean and the Pacific Ocean. It is important to mention that areas beyond national jurisdiction, which account for nearly two-thirds of the oceans, belong to all states. It is a global common.

This means that all states enjoy the traditional freedoms of navigation, overflight, scientific research, and fishing on the high seas, often referred to as "the common heritage of mankind." They are obliged to adopt or cooperate with other states in adopting measures to manage and conserve the living resources.

UNION

ANDREAS RASPOTNIK

The European Union is in the Arctic, and the Arctic is in the European Union. This is not some kind of catch-22 situation but the result of almost 20 years of EU Arctic policymaking – and geography.

As a matter of fact, EU policymakers have actively contributed to the ordering of the Arctic region over the past two decades. Ever since 2008, they have continuously developed the Union's Arctic policy, evaluated its progress, stepped on some regional stakeholders' toes, and brought a complex region into an even more complex EU regulatory orbit. Hence, the EU being in the Arctic is not a geographic anomaly but rather a political reality of the Brussels effect.

A reality, however, that is also a schizophrenic one. Today, EU policymakers can indeed and rather convincingly state that the EU is in the Arctic. But do they also fully comprehend such a statement given the complex apparatus they operate in? Given that the North constitutes one of three essential regional neighborhoods of direct geopolitical relevance to the Union (the East and the South being the two others), grasping its dynamics and complexities should obviously be a priority. However, to properly grasp its own Arcticness, it is not only essential to define or communicate its regional interests. It is also not about the use of popular catchphrases, fancy statements, or loosening the purse strings via funding and development programs. After almost 20 years of Arctic policymaking, it should eventually be about internalizing the Arctic and engaging with the feasibility of uni(on)fied anticipatory regional action.

Which Arctic futures are possible and plausible? Which actions prevent, mitigate, adapt, or prepare for specific futures? For the European Union, this means – first – delineating the regional problems that are deemed to be important for the Union in order to – second – outline solutions that only a powerful bloc of 27 Member States with a regulatory reach well beyond the European Arctic can provide. In order to do so, the EU needs to move away from catchy statements à la being in the Arctic to eventually put those words into action by bringing all Member States in/on the Arctic. How? Proactive leadership and the necessity to understand that EU-rope is as much Arctic as it is Atlantic or Mediterranean. The Arctic should not be an obligation for the EU but rather an opportunity to demonstrate the merits of the unique peace project that is the European Union.

UNLIMITED

CARINA SAMMELI

Under the Arctic skies, in the capital of northern Sweden, I perform my duties as Mayor of the vibrant city of Luleå.

Nothing is impossible – this is what I have learned while leading this city. This is the mindset and strong belief that I now teach my children, colleagues, and friends.

Luleå is in the Arctic, which means I live and work side by side with natural phenomena and conditions. The northern lights, the midnight sun, and a unique ecosystem adapted to the cold weather are all part of my experience.

In my heart, as the Mayor of Luleå, I have a strong vision and the will to develop our city into a beacon of innovation and sustainability, ensuring a prosperous and vibrant future for all our residents for generations to come.

My role is to lead the municipality and to improve the quality of life for the city's residents every day. This is my goal and promise.

Into a better future we head by contributing to a significant green transformation. My city is now taking the lead in sustainable industries and innovations.

The sky is NO limit! Luleå University of Technology is referred to as Sweden's space university, and I am now experiencing how my region is making significant strides in the field of space technology and becoming a hub for space activities in Europe.

Endless opportunities for everyone are offered here in my turf of Luleå. An Arctic high quality of life is realized here because the city provides excellent public services, including elderly care and education, and is known for its safety and clean environment. We are recognized as the number one out of 290 municipalities in Sweden to live and work in. We definitely plan to continue our top rating!

Diverse and fascinating are two words that can describe the progress of my work, the city of Luleå, and its nature. Luleå's frozen archipelago and our ice track have been recognized by CNN as one of the "50 awe-inspiring natural wonders for your bucket list". And this is in the middle of a young, growing, and vibrant city.

This is my part of the Arctic, my Luleå, and my responsibility to lead to an unlimited future.

UP

LLOYD PIKOK 'PIKOK' JR.

URBAN

GUNNAR WILHELMSEN

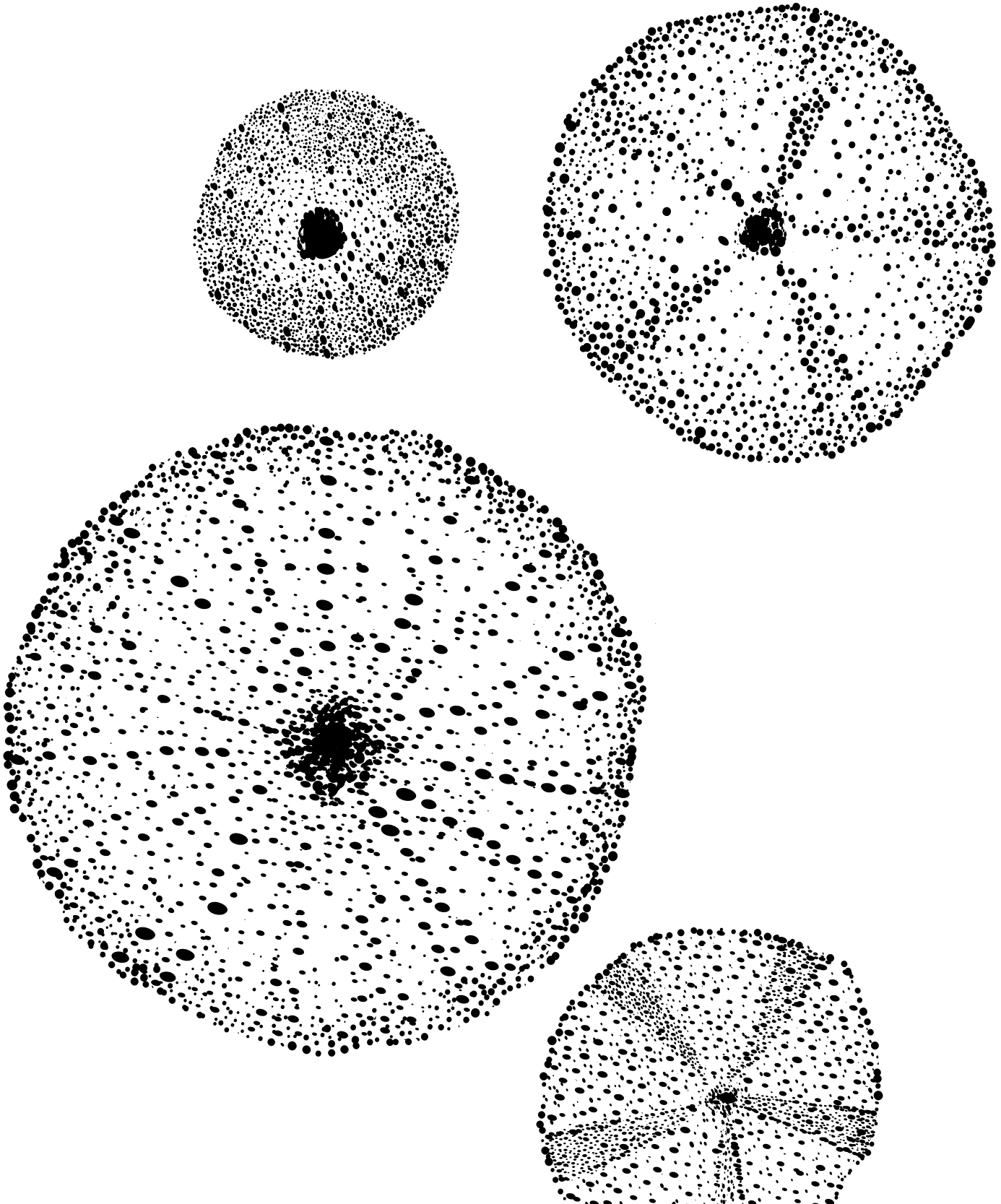
Arctic and urban might sound contradictory, but even at 69 degrees north, you can find a buzzing city life. In the Arctic capital, international institutions such as the Arctic Council, Arctic Economic Council, and Arctic Mayors' Forum reside. Spectacular islands, fjords, and mountains surround this vibrant city. Tromsø offers not only the northern lights and the midnight sun, but these natural wonders can also be enjoyed alongside a top-notch cocktail or during one of the many music festivals. The cultural scene, restaurants, and nightlife far exceed what one might expect from a city of 80,000 people.

Fishery and trade along the coast have always been the foundation of the city. As early as the 19th century, fashionable people in fancy clothes from Europe gave Tromsø the nickname "Paris of the North."

Whether it's Roald Amundsen and Helmer Hanssen in port before their polar expeditions or one of the city's 13,000 students, Tromsø has, for more than two hundred years, been an urban metropolis of the Arctic.

URCHIN

EYÐBJØRG SIGURDSDÓTTIR ANDREASEN



V

VENTURE

SARA BRAN

VESSEL

CAMILLA BREKKE

VISIT

JUAN GABRIEL MADRIGAL CUBERO

W

WARSAW

RADOSŁAW SIKORSKI

Non-Arctic city with a truly Arctic spirit. Capital and biggest city of Poland. Its exceptional resilience and unique ability to raise from ashes has been emphatically demonstrated throughout the history. It offers a combination of cultural richness, beautiful nature, soaring skyscrapers as well as strive for innovation and prosperity. Warsaw embraces its inhabitants and visitors with hospitality that often creates lifetime bonds with the city. It is a place that promises a glowing vision of the future despite witnessing very difficult past.

Warsaw's connection to the Arctic is far beyond symbolic, as it is the starting point of many Polish polar expeditions and the centre of command for the main Polish Arctic station – Hornsund in Svalbard. The station serves as crucial part of international research in numerous areas including seismology, meteorology, geology and solar activity.

Moreover, since 2010 the capital of Poland has been hosting Warsaw Format Meetings that gather chairships of the Arctic Council together with the observer states and organizations. The meetings are convened on an annual basis by Poland in cooperation with chairships and the Arctic Council Secretariat. Discussions focus on all issues related to the Arctic such as changes of climate and natural environment, pollution and emissions, social problems as well as other emerging threats.

Warsaw Format Meetings serve as a visible sign that obtaining an observer status in the Arctic Council entails obligation to address all challenges faced by northern polar regions. Activities undertaken by the observers are conducted with respect for the primary role of the Members of the Council but at the same time with a strong desire to engage in efforts aimed at protection of the Arctic environment and keeping the region away from geopolitical tensions.

People of Warsaw have always known that failure is never an option when they struggled to safeguard freedom, security and independence for future generations. The same applies to the Arctic – letting its ice melt and societies collapse would inevitably bring devastating effects to the entire world. Arctic Council observers stay strong with Member States and entire international community to never let that happen. We keep Warsaw as mesmerizing example – once doomed to destruction it is now a jewel in the crown of the Polish and European cities.

WASTE

ANNA TERVONEN

Arctic waste refers to strategic resource materials located in regions within the Arctic Circle that are characterized by limited volumes, long transport distances for processing, low decomposition rates due to cold temperatures, and permafrost. As a result of globalization, global warming, and a geopolitically unstable world, Arctic waste requires international collaboration and sustainable management strategies to preserve the vulnerable Arctic ecosystem, as well as to create self-sufficient circular streams.

WATER

MERETE N. KRISTIANSEN

Water is essential for all life forms, including humans, animals, and plants. Historically, humans have polluted waterways and oceans, treating them as waste disposal sites. Norwegian historian Terje Tvedt describes this as being "water blind," a term that highlights our failure to recognize the importance of water. This negligence has led to the degradation of freshwater, brackish water, and saltwater ecosystems, impairing their ability to sustain life.

Fortunately, there is growing awareness among governments about the critical importance of maintaining good water quality. Many regions, including the Arctic, now have international and national legislation, regulations, and monitoring programs in place. These measures are crucial for ensuring healthy living conditions for humans, plants, and animals, supporting thriving societies, and maintaining environmental quality and biodiversity in aquatic ecosystems.

Monitoring water quality is vital for identifying environmental sustainability thresholds for Arctic industries such as aquaculture, fisheries, energy, and nature-based tourism. Long-term monitoring efforts are underway in various Arctic regions to track changes in water chemistry and assess ecosystem health.

To continue improving water management practices, the scientific community needs to contribute to the development of new and innovative data collection methods, which should include a wide range of approaches, from autonomous vessels equipped with advanced sensors to citizen science programs. Cross-institutional and international data sharing is also critical; as the saying goes, "sharing is caring" – even when it comes to water. We must move from neglecting water quality to becoming "water guardians." By doing so, we can protect everything we love in the Arctic that depends on good water quality – for our shared Arctic future.

WAVES

SOHVI KANGASLUOMA & VESA VÄÄTÄNEN

No wave is similar, they each have their unique shape and nature. However, they often emerge in packs, forming their shape and size together with the wind, currents, and geological features of the body of water in which they reside. Waves form precarious, ever-mutating constellations of energy on the move. They carry the traces of each other as they continuously interfere and combine to make new trajectories from previous ones. An ocean wave therefore cannot be thought of in isolation from its peers.

Waves don't care whether they are above the polar circle or below it, however, in the very cold environment their movement stops, as the sea becomes still and quiet, frozen.

Thinking with waves helps to blur the dividing line between the singular and the plural, and the inside and the outside. It is the flow of energy that matters, and that flow is continuously becoming otherwise. Arctic politics can also be considered as waves, moving from militarization to environmental cooperation, always moving, yet in a rhythm only known to the northern seas. As issues from Indigenous rights to economic opportunities connected to the "green transition" and from biodiversity to infrastructure insert their energy into the churning sea of Arctic politics, they come into contact with one another, interfering and combining in unpredictable ways. While the most recent swell in Arctic politics is perhaps that of militarization, its trajectory cannot be comprehended in the absence of the waves that came before it, or the ones with which it comes into contact as it travels.

Waves, like politics, have memory. Past storms and winds are present in the swell of the ocean, similar to the events of history present in today's Arctic societies.

Waves remind us that one doesn't have to fixate on the idea of oneself. As fast as the steep storm waves may rise, they can also calm down. Like politics, waves have the power to change, evolve and calm themselves. By immersing ourselves in waves we can realize that we have become (with) them all along.

WILDFIRES

REBECCA ALTY

An uncontrolled fire that spreads rapidly in natural areas like forests. Wildfires can be caused by natural phenomena like lightning or by human activities. They're complex in many ways.

They can create feelings of stress and anxiety in the moment, and the impact can last for many years. After the burn, stress and anxiety can continue to linger or be triggered by smoke or the next wildfire season.

While wildfires can be dangerous and destructive, there are many important benefits to wildfires, and they are part of a complex ecosystem.

If wildfires occur too often, they can change the ecosystem of the area and turn a forest into grasslands. If they happen too infrequently, they can build up the 'fuel' (more dead and living vegetation) and create an even bigger fire in the future, which can threaten more communities, homes, humans, and wildlife.

After the burn, the area regrows with fireweed, morel mushrooms, and new trees. Some plants, like certain types of pine, actually depend on fire to release seeds or to remove competing vegetation, enabling their seeds to grow. The fireweed and morels can positively impact the economy by creating jobs in harvesting and selling these products, and they can be transformed into delicious food, medicine, or beauty products.

By conducting controlled or prescribed burns, we can help reduce the danger and stress for local residents while enhancing the natural benefits of fire.

In Yellowknife, during the summer of 2023, we experienced one of the most difficult wildfires on record, which led to the evacuation of the entire community for three weeks. It was a challenging and stressful time for residents and everyone involved.

Leading up to the evacuation and throughout the evacuation, many steps were taken to reduce the threat, including fuel/fire breaks, controlled burns, and fire retardant lines. Even with the number of steps taken, unfortunately, based on forecasts, it appeared that the fire was going to reach and surpass the community boundary, which is why the evacuation was issued. Since the wildfire and the evacuation, after-action assessments and reports have been completed to determine what went well and what needs improvement for the future, and the necessary actions have been implemented or are in progress. As the climate changes, we will need to continue to monitor, adjust, and be prepared for wildfires and their impacts and benefits.

WIND TURBINE

SEMMING SEMMINGSEN

A wind turbine – / wɪnd tɜːbaɪn/ – is a device that converts energy from the wind into electricity.

Throughout history, humanity has harnessed the power of the wind in a variety of ways. For centuries, we wielded the wind to sail ships across vast oceans, bridging distant lands and cultures. Windmills quickly became important tools in transforming agriculture and industry. Later, portable windmills powered radios, enabling communication for sailors, merchants, and remote fishing villages. Today, we capture the wind through wind turbines to generate electricity for homes and businesses, power the transportation of goods and people, and enable seamless communication.

The wind turbine, both as a term and a physical structure, evokes contrasting associations. For some, it symbolizes the loss of nature and wildlife, visual intrusions, and the disruption of local communities. For others, it embodies opportunities for regional development and serves as a crucial solution to the pressing energy challenges of today and the future.

Wind turbines stand at the intersection of challenges and opportunities. While they provoke differing perspectives, they also highlight a shared goal – combating climate change and ensuring a transition to renewable energy sources. Regardless of how we view them, wind turbines remind us of our collective responsibility to balance progress with preservation – and the courage and moderation needed to do so.

From ancient sails to modern wind turbines, the wind represents humanity's enduring drive to harness energy.

WOMEN

KATRÍN JAKOBSDÓTTIR

Caring is one of those words sometimes associated with women. The majority of the people who kept most of the world's health systems going during the pandemic were women. Some might say that if we had more caring in the world, it would be a better place: fewer conflicts, different approaches, and a more holistic view of our challenges.

When you meet Arctic women, you truly experience the meaning of caring. Women in the Arctic have survived in extreme circumstances. They have given birth and cared for their children in the harsh environment of the Arctic. To care when the challenges are grave, when nature can be quite ruthless and the main goal is to survive, is perhaps the deepest degree of caring. Because caring should not be something extra; it should be the basis for everything one does.

There are many lessons to be drawn from the women of the Arctic. One is their knowledge and experience in being one with nature. Another is their way of caring for humans, animals, rivers, rocks, trees, and moss. They have a holistic view of the world, realizing that without nature, humans are nothing. Therefore, they need to care for nature and the environment and treat it with respect and love.

All around the globe, humanity is now experiencing natural disasters that are ruining homes, taking lives, destroying crops, and changing the natural habitat of humans and animals. When confronted with a climate crisis that is radically changing our world, a different prioritization is needed. What humanity needs now is leadership that cares for both humans and nature and understands that caring about one's environment is possible even when circumstances are harsh.

It has long been my firm belief that having more women in various leadership roles would make the world a better place. They can bring a new perspective to leadership, different experiences, and a unique worldview. I sincerely believe that there is much to be learned from the women of the Arctic, their knowledge, and their experience. Because we need more love and more caring in our world.

WORKFORCE

CHRISTIAN KELDSEN

The Arctic is often described with words like pristine, harsh, vulnerable, and mystical – adjectives that paint a vivid picture of the land itself. Yet, these words rarely capture the essence of its people. For the people of the Arctic, more fitting descriptors would be diverse, resilient, steadfast, rooted in tradition, and quietly strong.

It is the people who truly define the Arctic, and they are the lifeblood of its workforce. A workforce is more than just individuals holding jobs – it is a collective of dreamers, builders, and providers, striving to create better lives for themselves and their families. In the Arctic, this workforce is as varied as the land itself, spanning from modern industrial roles to deeply traditional ways of life embedded in culture and heritage.

The Arctic is home to people from all corners of the world, and it is this diversity that provides strength and opportunity. This melting pot of cultures, skills, and perspectives lays the foundation for sustainable growth, prosperity, and a workforce capable of meeting the unique challenges of the Arctic.

At the heart of the Arctic – whether in its industries, its communities, or its traditions – are its people. They are the region's most precious and enduring resource. So, whether you call us individuals, a community, or a workforce, remember this: We are the Arctic.

WOOL

GUÐRUN LUDVIG

X

X-RAY

SARA BRAN

Y

YACHT

ERIC JAMES RYAN

An Arctic yacht transcends notions of luxury and leisure, evolving into a vessel of exploration, survival, and self-reliance. Here, a yacht is not a symbol of affluence but a comforting lifeline to navigate one of the planet's most remote and unforgiving environments.

The Arctic yacht ventures into pristine landscapes of icebergs, fjords, and vast tundras. It enables access to remote archipelagos, glacial inlets, and seldom-visited communities, creating a unique blend of discovery and cultural immersion that quenches our thirst for adventure.

An Arctic yacht must respect the natural world. Wildlife, from polar bears and seals to migratory seabirds, thrives in these untouched environments. A yacht provides a discreet platform for scientific research, eco-tourism, and sustainable exploration, leaving only a wake behind.

In the far North, a yacht becomes a sanctuary amidst an otherwise inhospitable wilderness. The Arctic yacht embodies robust engineering and seaworthiness, tailored to withstand extreme weather, including sub-zero temperatures, ice-laden seas, and sudden gales. It serves as a cocoon for its passengers, moving through the Northern world, where safety and self-sufficiency are paramount.

Ultimately, a yacht in the Arctic is not just a vessel but a gateway to a world few have seen. It is born out of our desire to connect with Earth's wildest frontiers, blending adventure and discovery amidst one of the most awe-inspiring landscapes on the planet – a symbol of human ingenuity floating amidst the last frontier.

YOUTH

STUDENTS ON ICE FOUNDATION

In the vast expanse of the circumpolar Arctic, youth often stand as living bridges between ancient traditions and an uncertain future. They are the ones who scroll through TikTok while learning to skin a seal from their grandparents, who text in English but speak their Indigenous languages at home, and who understand both the rhythms of the land and the urgency of climate action. These young people embody the resilience that has always characterized Arctic communities.

Today's Arctic youth face unprecedented challenges. Rising temperatures transform their homelands faster than anywhere else on Earth, threatening traditional ways of life. Many grapple with limited educational and employment opportunities in their remote communities, often facing the difficult choice between staying close to their cultural roots or seeking opportunities in urban centers. Mental health challenges and the lingering impacts of historical trauma create additional burdens that many young Arctic residents must navigate.

Yet within these challenges lie remarkable opportunities. Arctic youth are increasingly emerging as powerful voices in climate activism, forming alliances with young people worldwide who see the Arctic as a harbinger of global climate impacts. Through social media and digital platforms, Arctic youth share their stories with peers across the globe, inspiring a new generation of environmental stewards. Young people from Bangkok to Buenos Aires now understand that their own futures are inextricably linked to the Arctic's fate.

In healthy Arctic communities, youth play multiple vital roles. They serve as technology mentors to elders, helping them stay connected in an increasingly digital world. They lead cultural revitalization efforts, organizing language camps and traditional skills workshops. Their energy and innovation drive new solutions to community challenges, from developing renewable energy projects to creating mental health support networks that blend traditional and contemporary approaches.

These young leaders, both within and beyond the Arctic, are forging a new path of global cooperation and understanding. Their success in bridging cultures, traditions, and urgent contemporary challenges will largely determine not just the future of the circumpolar north, but the health of our entire planet.

YUKON

RANJ PILLAI

The Yukon is where natural beauty, ingenuity, and deep cultural connections come together. It is the land of the midnight sun and home to 14 Yukon First Nations. Spanning almost 500,000 square kilometers, the Yukon is larger than life.

The Yukon's magic is undeniable. People from around the world come here to witness the breathtaking northern lights, explore our vast wilderness, and immerse themselves in our rich cultures and vibrant arts scenes.

For those of us lucky enough to call the Yukon home, this territory is more than a bucket-list destination. From the northernmost community of Old Crow to the vibrant capital city of Whitehorse, from funky Dawson City down the Alaska Highway to Watson Lake – and everywhere in between – Yukoners embody a spirit of resilience, hospitality, and collaboration. No matter where you go, you will experience a truly northern welcome.

The Yukon stands as a shining example of what is possible when a community works together to ensure everyone has a voice. Our territory leads Canada in progress toward reconciliation, walking in true partnership with Yukon First Nations to build a future where mutual respect and collaboration guide every decision. We are proving that the values of inclusion and equity create a foundation for progress and innovation.

Entrepreneurs and business owners thrive here, driving innovation to new heights. Our long, harsh winters and unique landscapes challenge Yukoners to think differently, inspiring solutions that connect communities and push technological boundaries. From renewable energy projects to cutting-edge applications in telecommunications, the Yukon has become a hub of creative problem-solving and sustainable development.

On a global stage, the Yukon plays a critical role in Arctic security and ensuring Canada's sovereignty. Despite our small population, we demonstrate what cross-border collaboration can achieve. As stewards of some of the world's most unique and fragile ecosystems, Yukoners lead by example, prioritizing the connection to and care for the land. We uphold these values to ensure future generations inherit the natural beauty and resources that define our territory.

The Yukon is a testament to what can be achieved when we embrace innovation, reconciliation, and community. It is a place where diversity thrives and where the land itself inspires us to dream bigger.

As Premier of the Yukon, I am honored to celebrate the remarkable territory that we call home. Together, we respect and celebrate the Yukon's immense power, potential, and the promise it holds for generations to come.

Z

ZERO

MADS QVIST FREDERIKSEN

Zero means nothingness. The Arctic is full of it. Zero did not reach Europe before the 12th century, even though the Indian mathematician Brahmagupta had defined it centuries earlier. Through trade and global exchanges, zero moved from the Far East to the Far North.

Zero Celsius marks the freezing point of water under standard atmospheric pressure. With Fahrenheit, water freezes at 32 degrees – so zero Fahrenheit is very cold.

John Kerry once called the Arctic "Ground Zero" for climate change. It was here that it all began, and here we see the end first. The fear is that one day we will have zero ice coverage on the ocean, zero glaciers, and zero areas with permafrost.

Crossing zero and going into the positive can often be seen as positive. But in the Arctic, it can have severe effects. That's also why you often hear about "net zero" as a central point of global climate action, emphasizing the need for zero net carbon emissions to mitigate the impact of climate change.

I sometimes feel that many people globally have zero understanding of the Arctic region. Some people talk about zero people living there, about zero governance structures, and zero opportunities – all of which is wrong. Yes, you can talk about zero, zero, zero, zero, zero, zero, but put a one in front, and it shows the millions of opportunities in the Arctic.

Zero starts with Z, which is the last letter of the English alphabet, and with this Arctic Encyclopedia, I wanted to give people a greater understanding of the Arctic – from A to Z. So we can go from zero understanding to greater understanding. Because only with knowledge can we move forward and make a difference. Ignorance – zero knowledge – can only be combated by more dialogue and understanding.

ZOO

JOHANNA KOIVUNEN

Zoos are traditionally known as places where live animals are exhibited. Today, zoos still fulfill this role, but they also play an important part in maintaining biodiversity, educating the public about the environment, and protecting endangered species.

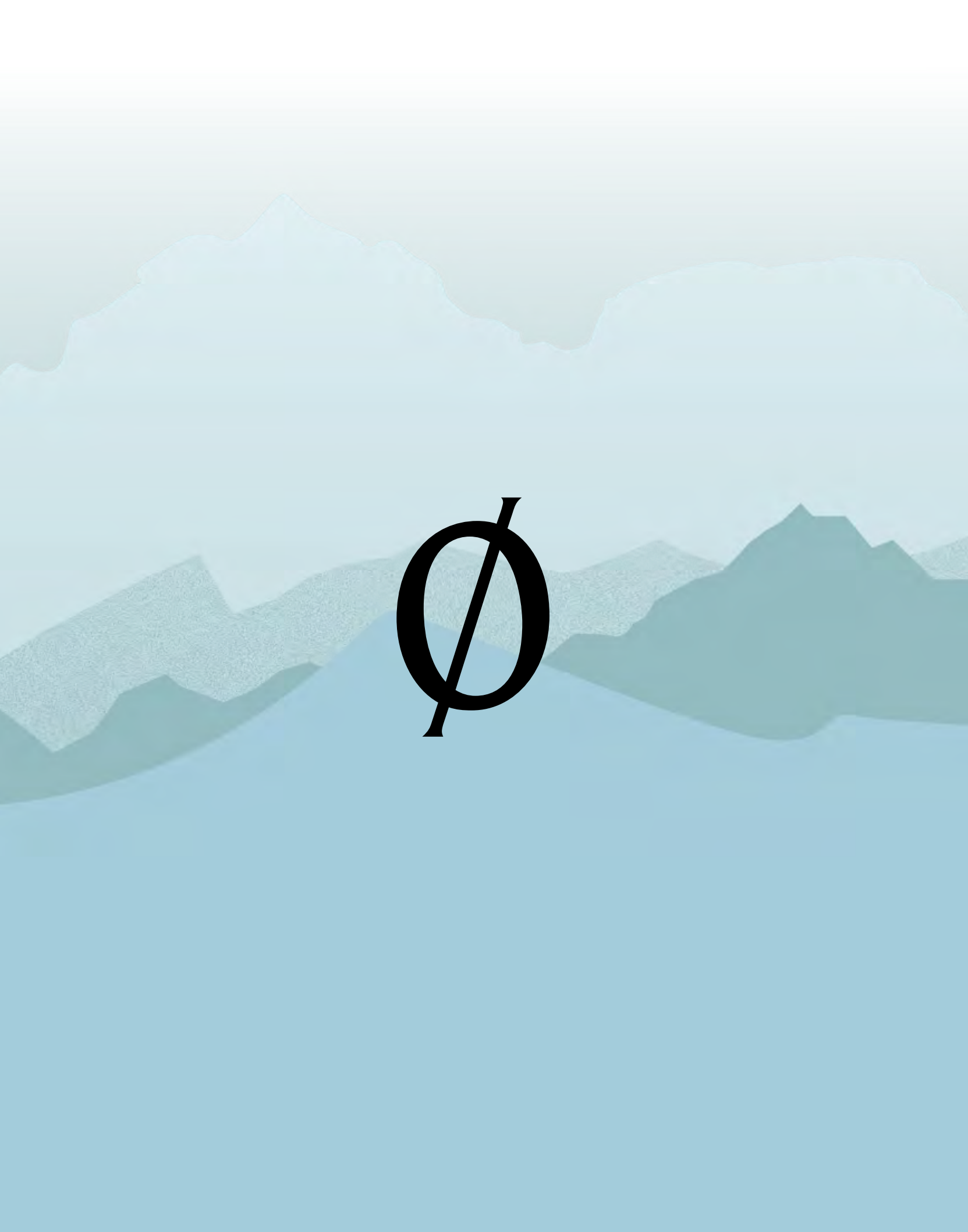
Currently, the climate is changing dramatically. Global warming is a reality, and the Arctic region, along with the rest of the world, is facing the consequences. As the climate warms, the habitats of vulnerable Arctic species are shrinking.

I believe that the role of an Arctic zoo and wildlife park – like the one we have in Ranua, Finland – will grow significantly. It is our main priority to preserve these precious species for future generations. Hopefully, each visit to the zoo to see Arctic animals could spark new ideas about what each of us can do to save the Arctic and the species living there. It is our collective responsibility.

Hear the Arctic whisper – it is a cry for diversity.

ZOOM

ODDUR HALLDÓRSSON



Ø (HANS)

MARTIN BREUM

The Inuit hunters have come here for centuries. Hans Ø, or Hans Island, lies exactly midway between Nunavut in Canada and the very north of Greenland. I once stood on the rough top of the island in wonderful and ludicrously bright sunshine, looking east across the ice to Greenland and to Nunavut in the west; both lands were so close that we had no trouble counting mountain peaks in either direction. I still wonder how two civilized nations like Canada and Denmark could quarrel for so many decades over Hans Ø, such a small, unpretentious, and windswept island, descending into folly so deep that their governments sent warships and helicopters, uniforms and flags to enforce their will until reason finally hit them.

The thirst for dominance and power over land is a mighty force and, still in 2025, occasionally at play in the Arctic. As I write this, the next president of the United States of America is voicing a demand for "ownership and control" over Greenland. I find solace in my memory of Hans Island, its unquestionably solid exuberance and its persistent, if silent, greetings from the very beginning of time.

I close my eyes and see the insistence of the ice all around the island, its vast whiteness and calm. I recall with respect the helicopter mechanic, born and raised in Greenland, who was with us on the island, wanting to plant Greenland's flag right there in the middle of the dispute between Canada and Denmark, the outsiders claiming to own this little piece of eternity. In the end, he didn't; we were not there to demonstrate or make a splash, but his desire to cut through the nonsense and help us see Hans Ø in a deeper light remains with me as a friend.

ÆTT

SANDRA SIEFERT STRØM

"Strøm? That's not a name commonly out of Kvívík?"

"No no, it's my maternal grandfather's name – but the Strøm family in Tvøroyri, not the one in Tórshavn."

Whether in a waiting room, at a bus stop or in line at the bakery, Faroese conversations follow a habitual choreography: weather first, family name second. An inquiry that seems casual but carries weight. Where are you from? Who do you belong to?

It's a kind of social cartography. A puzzle to be solved. And usually it is – in less than a minute.

Ætt – old Norse for kin, family line, ancestry. But it's not just about blood. It is about continuity – stories, inheritance and responsibilities tied to place. Like the hjallur (a traditional Faroese drying shed for fish and lamb) your grandfather built, the one you now paint every summer. It is the memorial stone standing in almost every village, with the names of sailors lost to the merciless North Atlantic – your forebears among them. It is the set of knitting needles made of whale bone that your great-grandmother used to knit woollen socks. Rough-spun but warm. Now guiding your own hands.

Legacy is passed in habits. In the soft dialect of your village, just different from the one spoken a few kilometers away. In the name someone calls you by and the version of your story they remember.

Still, there's comfort in being placed. Located. Identified as a piece of something much larger than you. To be recognized, not by achievement, but by belonging. Known in the old way.

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HSH PRINCE ALBERT II OF MONACO
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JAN-GUNNAR WINTHER
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