

# Book Proposal

Title:

## Plan B

Subtitle:

### How Not to Lose Hope in the Time of Climate Crisis

Author:

Boštjan Videmšek

*“We already have all the facts and solutions. All we have to do is to wake up and change.”*

-Greta Thunberg, climate activist

On a number of occasions, I have promised both my closest ones and myself that my war-reporting boots were hung up for good. I was among the youngest when I started out. When I started feeling that enough was enough, I was one of the oldest. I had been stripped of all comforting illusions and comprehensively addled by recurring pointless tragedy. I was at my wits' end. Along with my illusions, the wars I covered cost me a number of friends. It was also glaringly clear that I had already used up all of my ‘get-out-of-jail-free cards’, and then some.

Enough is enough, I kept repeating, especially given my mounting disillusionment with the power of my vocation.

For me, journalism was never merely a job. From when I started as a sixteen-year-old, it was more of a lifestyle, or even life itself. This made it so much harder for me to accept that my work had swiftly and irreparably lost most of its value to a society that was apparently content to drown in its own madness.

The post-fact order that we have dreamed up overnight is a place where cranks like me and my colleagues are tolerated at best. The rise of the (anti-) social networks with their echo chambers of pre-chewed opinion based on zero

expertise has ushered in a new age, one that is not yet named but is getting more powerful with every millisecond. The best description that I, personally, have come up with for this current and possibly final stage in our species' evolution is "The Dictatorship of Nothingness."

In this new and increasingly powerful realm, there is little place for journalists. Or even, for that matter, scientists.

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Many of the wars I used to cover never ended. They just smouldered on. Most of them keep smouldering to this day, their embers regularly fanned into new explosions of previously unimaginable violence. In the still-resplendent citadels of the West, the refugees, who these wars leave behind have been increasingly seen and treated as nuclear waste.

The open and free society we have been programmed to expect is now comprehensively riddled with walls, watchtowers, barbed wire and paramilitary insignias that exude the wholesale resurgence of racism, xenophobia and hard-core fascism. All of the old ideological divisions have been strengthened. Brand-new ones are rearing their revolting heads with each passing day. Our capacity for historic recall seems to have withered on the vine again. Our capacity for shame seems to have been euthanised somewhere in the foxholes of internet-guaranteed anonymity. Others' pain is now a business category at best.

If one's work has little to no effect on the world, it amounts to little more than participant observation. You may be quite good at it and even deemed a success by your peers; however this usually only hastens the realisation that one's line of work is just another *ego safari*.

The autumn of 2016 saw my return from Mosul where I covered the savage clashes between the Iraqi government forces and the self-proclaimed Islamic State. At that particular moment, I was all but certain I would have to take up another line of work. I was so tired and fed up with the darkness descending from all sides that I knew I would have to become my own cult-deprogrammer, slowly but surely extricating myself from my old and defeated religion of journalism.

So what could I do? How could I reinvent myself in this world where sheer reflexes were now king, where nothing that mattered was of any consequence, and where many of our planet's most august members were acting as if it wouldn't be a problem if the sun never rose again?

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“Listen, it's about time we did something together! Let's meet up for a cup of coffee. Come on, don't just fucking tell me you haven't got a free minute, like you always do! All I need is ten minutes to pitch an idea to you. Trust me, you'll like it!”

This was the call I got on an especially grey autumn morning from my friend and colleague, photographer Matjaž Krivic. Out of genuine regard for the reader, I have omitted most of his trademark invective.

My gut reaction was a profound sigh. Yet another project, yet one more time-draining obligation. Hadn't I just promised myself a sorely needed time-out, a chance to step off the ball and afford myself some time to reflect?

But repeat it as I might, the *mantra* didn't work; it never has.

“Let's hear it,” I replied somewhat brusquely. Back then, I had not quite realized what a master petitioner Matjaž was and what a smasher of both physical and metaphysical barriers he could be. In all my times as a global traveller, I have never met anyone as childishly innocent of the meaning of the word “No!”

“I'm just fresh from Bolivia,” he beamed at me over the cup of coffee that we had arranged. “Salar de Uyuni, high up in the Andes. The world's largest salt flat – and one of its most magically beautiful places to boot! Anywhere up to 70 percent of the world's lithium reserves can be found there. This place will be powering our electric vehicles and virtually all our electronic devices for decades to come! So let's do it; let's do a story on lithium! What do you say? Let's cover it properly, in-depth, from the extraction phase to electric car manufacturing.”

That was pretty much all I needed to be sold. Especially since I knew Matjaž was something of a hellion, a one-man assault team of old-school photo-journalism whose unconventional approach and unique aesthetic have already bagged him all of the relevant prizes in his highly competitive field.

“You've got it. When do we start?” I nodded, without needing as much as three seconds to ponder the implications.

“Oh yeah?” Matjaž looked more shocked than he would have been if I had just brutally insulted his mother. For a few seconds, he just stared at me appraisingly.

Then he purred, “As soon as possible.”

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From the beginning, we both realised that the story of lithium, the driving force of the 21st century, was just our entry point into a much larger story, the kind of story that both of us had been seeking for quite a while. We had both travelled far and wide, and had faced the horrendous wages of climate change with every step.

Without realising it, we had both been searching for a format to tell this story – a story that should be on the tip of everyone’s tongues all the time.

With Matjaž's help, I managed to find my new front line. The climate crisis, you see, is nothing less than a global, total and all-encompassing war. It is humanity’s war against itself – a war against future generations, against entire ecosystems and against the natural order itself. It is a brutal frontal assault on the very planet that so generously provides our sustenance. It is a war against balance and co-existence. It is, in short, a war on the very concept of the future.

The climate crisis is the key front line of our times. Our prospects are far from good.

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The Earth is heating up faster than even the most pessimistic experts have predicted. Even the habitually conservative IPCC estimates bear this out.

The target set by the Parisian climate summit of 2015 – to limit the temperature increase to 1.5 °C by 2050 – now seems like a unrequited prayer. The summer of 2019 recorded the two hottest months in the history of temperature measurement. It was little wonder, then, that Matjaž and I could observe the glaciers melt in an Iceland, when the island country got shocked by a summer with evening temperatures that easily reached 25 °C. This was an increasingly iceless Iceland, where farmers had to switch to working at night when the heat dropped to a point where the toilers could actually catch their breath – all of this in the immediate vicinity of the Arctic Circle.

At the Akureyri port in the north of Iceland, we could observe ship after ship returning from the Arctic – all of them filled with the shocked, soot-streaked faces of researchers who were witnessing fires when they should have been freezing half to death. Alaska, Greenland and Siberia were burning – all at the same time. The permafrost was irretrievably melting; it continues to do so as we speak. Yet pundits and policy makers seem to have almost completely missed this stark fact.

Methane, a greenhouse gas far more devastating to the climate than carbon dioxide, keeps seeping up into the atmosphere. Small lakes are sprouting all over

the no-longer-permanent frost. When, inevitably, oxygen gets introduced to the equation, violent detonations are the natural result.

Reality has gone to hell. Yet this is a mere glimpse of what our common future has in store.

You'd better believe that this is a front line. You had better believe that this is war.

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As I am writing this introduction, we have just lived through the warmest January and February in recorded history. On a global level, winter seems to have been cancelled. As ski-resort managers in Europe were finally figuring out they were through, vast swathes of Australia got burnt to the ground. A billion animals were killed in just a few weeks. This was dismissed as mere collateral damage, if that at all.

Australia, it bears to keep in mind, is the continent that is most exposed to climate change.

These apocalyptic scenes have come on the heels of the recent Amazon forest fires. In the blink of an eye, we have become accustomed to these devastating images, not believing them to be any more real than the reality show climaxes and the dime-store spectacles that much of the population has retreated into.

The list of damage goes on and on.

There is the sixth mass extinction, directly traceable to mankind's effects on the planet. As of right now, the planet supports only half as much wildlife as it did in 1970. The human race makes up for 30 percent of the combined mass of all existing vertebrates. 67 percent is accounted for by farm animals, while vertebrates living in the wild take up a measly 3bpercent.

Or how about the demise of Australia's Great Barrier Reef, or the vanishing of anywhere up to 80 percent of the planet's insect life? How about our lethally warm oceans? According to a 2015 study published in *The Journal of Mathematical Biology*, the current warming rate means that by 2100, oxygen production by phytoplankton could stop because the hotter temperatures will disturb the process of photosynthesis. This would likely result in the mass death of animals and humans.

How about 'the black holocaust' perpetrated around the globe by fossil-fuel lobbies, whose thirst for profit remains the biggest driving force behind our

imminent demise? Or how about the rapidly shifting marine currents, or the ever increasing emissions of carbon dioxide into the atmosphere? (At the time of writing, the tally stands at 417 pp) How about the polar bears, who have to swim for 200 kilometres without pause as their natural habitat keeps vanishing around them? They must hunt belugas to survive.

Or, for the more cold-blooded among us: how about the cost to the global economy, estimated at 1.2 trillion dollars in 2018? How about this January's flourishing springtime flowers high up in the Alps? How about Donald Trump? How about the hordes of climate-related refugees, human *and* non-human, who are absolutely certain to dramatically influence our near future? According to 2018 World Bank estimates, the effects of climate change are set to drive 143 million people from their homes in Asia, Africa and Latin America alone.

This is also a tale of a world rapidly drying up: a world whose fate is increasingly determined by a series of water wars. The world that we thought we knew is now rapidly disintegrating as we nod off in front of the television.

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I could go on *ad nauseam*, quoting scores and scores of scientists, listing hundreds of figures, cementing the facts, explaining what should be clear to any third grader by now (and we live in a time when many third graders are indeed much more savvy about these dangers than their parents). But I have grown to fear that any such roll call of evidence would be largely in vain.

Everything, after all, has been said: endlessly, ceaselessly, while the average attention span, the paramount casualty of our age, has shrunk to almost nothing.

The science is clear. Yet in most of the first world, the effects of climate change are still filed under the category of 'something that happens to other people'. It is considered something far from an actual, existential, threat which, therefore, merits a forceful response.

Let us put it even more bluntly. This rapidly advancing crisis is something our evolution has left us deeply unprepared for. Even worse, our survival mechanisms seem to keep dividing us, when we should be sparing no cost to join together.

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And so, instead of reciting figures and spewing forth yet more apocalyptic projections, Matjaž and I decided to highlight the communities and individuals who are bravely taking on the calamity. It is high time to add them all up: the

members of the *homo sapiens*' true elite who have chosen not to be swept away by the tide of indifference and arrogance, the visionary women and men who are not banking on miraculous salvation from elsewhere.

Our ambition has been to turn this book into a monument for these intrepid foot-soldiers on humanity's key front line, the ones who are amassing the knowledge, experience and technology that we will need if we are to have a prayer at all.

From Tilos, the first energy self-sufficient island in the Mediterranean, to the geothermal and thoroughly future-oriented Iceland. From the promising sea-power developments on the Orkney Islands in the north-east of Scotland, where surplus energy is already being converted into 'green' hydrogen, to the biomass-centred Austrian townlet of Güssing, whose inhabitants have taken the progressive route as far back as a quarter of a century ago, and who have by now managed to reinvent themselves as a key hub for the development and production of renewable-energy technology.

So here they all are, humbly requesting your consideration. From the Swiss-based Climeworks company, capturing carbon dioxide directly from the air to inject it into Iceland's underworld, to a number of self-sufficient Scandinavian villages and Iceland's holistic transformation. From the lithium constantly travelling between Bolivian salt flats and Chinese electric-car factories to the electric-mobility revolution in Norway. From the waste-incineration plant in Norway that plans to store the captured CO<sub>2</sub> in underwater caves, to all of the individuals and communities who are standing behind these projects, raising their voices to remind us that we must hold on to our hopes at all costs.

Theirs – and ours – is an exceptionally difficult task. But if we all don't rise to the occasion, this is sure be our last chance.

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I truly get how hard it must be for some to believe that the impending cataclysm can still be prevented – or, failing that, that its effects can at least be mitigated.

Humanity is a species marked by, among other things, wars, genocide, ecocide, racism, greed and every imaginable form of violence. After more than two decades covering the globe's countless flashpoints, I have been afforded a succession of ghastly insights into the workings of the global economy. Such a rallying cry for hope, as presented here, sometimes strikes me as a form of cognitive dissonance; I often have trouble mustering up the optimism that, realistically, something can still be done.

“A writer doesn't owe a reader hope,” writes the legendary environmental activist Bill McKibben in his new book *Falter*. “The only obligation is honesty – but I want those who pick up this volume to know that its author lives in a state of engagement, not despair. If I didn't, I wouldn't have bothered writing what follows.”

I couldn't agree more.

If Matjaž and I have struck out to impart one message, it would be that there are people and communities out there, who are able to keep curbing their cynicism and fear. They are able to use the energy thus saved to actively search for solutions. Even if we may already be in overtime and losing 4:0, these brave centre-backs and defensive midfielders keep sliding, tackling and leaving their heart on the pitch. This is how they shall remain until the final whistle.

This is a book about such communities. This is a book about the heroic individuals that form them. Should they fail, hope will not be the last to die. The last to die will be our children and grandchildren.

## **Chapter Summaries**

### **Introduction: Humanity's Key Front Line**

I have spent last 25 years reporting from all major wars and conflicts around the world. The experience has been extremely valuable and humbling. It has also been deeply frustrating. Most of the wars I've covered, are still ongoing (Afghanistan, Iraq, Syria, DR Congo, Somalia, Darfur, ...). The situation on the ground – and also in our profession – has only gotten worse.

I've decided to make a career change. A change, not an about-face. Together with an award-winning photographer, Matjaž Krivic, I have decided to focus on the climate crisis. However, my focus is not on reporting about polar bears and shrinking glaciers – we don't have time for that.

The fight against the horrible consequences of the human-made climate crisis is the most important, crucial frontline of humanity and of our time.

That is why we decided to start a solution-based project. After doing our due diligence, we started on a long journey, looking for the best community-driven solutions around the world.

In the introduction, I try to explain what has happened – and what is happening – to field reporting based journalism and why I have made a decision to change



my ‘frontline’. It is so important to have community-based and grass-roots’ projects in the fight against the climate crisis.

## **Part One:**

*Coming Clean: How Communities around the World are fighting the Climate Crisis.*

### **Chapter One**

*Greece: The First 100 percent Self-sustainable Island in the Mediterranean*

*Tilos, April 2019*

This is the tale of the first energy self-sufficient island in the Mediterranean. It is also the story of the individuals and communities who have brought an almost deserted island back to life. Among other things, Tilos was among the first part of Greece to prohibit hunting and allow same-sex marriages. At the height of the economic crisis, it saw the emergence of a highly successful solidarity movement, which strove to integrate incoming refugees into the community.

When the economic crisis struck, a few of the local enthusiasts decided to harness the island’s plentiful wind and solar power and start a revolution. Aided by the European Commission and a number of European universities, their aims proved a resounding success. Today, Tilos is exporting energy to the rest of the islands. Its unique brand of hybrid solar-wind power plant with the revolutionary Battery Storage System can be ‘copy-pasted’ onto most islands, and not only in the Mediterranean.

### **Chapter Two**

*Iceland: The Geothermal Future*

*Iceland, August 2019*

Up until the great oil crisis of the 1970s, Iceland was wholly dependent on (imported) oil. The small volcanic state only took to utilizing its vast geothermal potential when the economy crashed; there was no other choice. This marked the beginning of a remarkable success story.

Today, Iceland is the biggest per-capita electric-energy producer in the world. Virtually all its energy is derived from renewable sources. After the financial meltdown of 2008, the small island also managed to set up an entirely new

economic paradigm, which is heavily focused on eco-friendly projects. Countless start-ups are sprouting up all over the land. They are developing the next generation of renewable energy technology.

The dramatic consequences of climate change loom very heavily on this small island, given its proximity to the Arctic circle. This chapter is an homage to a society which has already embraced a completely different future.

### **Chapter Three**

*Norway: Carbon Capture and Storage*

*Oslo, March 2019*

The CCS (Carbon Capture and Storage) system was long considered a ‘fossil-fuel technology,’ because of how it was invented by oil and gas companies to reduce the costs of production. Yet, for the past several years, the CCS has been at the heart of the debate about the best methods for tackling the climate crisis.

The new system has been enthusiastically embraced by oil-rich Norway, which can well afford the development of such technologies. In this chapter we profile a pilot CCS factory, built right next to Norway’s largest waste incineration plant.

The captured CO<sub>2</sub> is liquified and stored into special cisterns, then it is transported to the nearest port. From there, it travels to the abandoned oil boreholes along the Western Norwegian coast, to be injected into the sea floor through the existing oil-gas infrastructure. Its final resting place? The geological caves previously used for oil drilling. One might easily say that the captured CO<sub>2</sub> is thus returning home. The future potential is mind-boggling.

### **Chapter Four**

*Switzerland: Direct Air Capture*

*Hinwill, July 2019*

A Swiss start-up called *Climeworks* recently proved something was possible that wasn’t five years ago. It demonstrated that carbon dioxide can be captured directly from the air. To this end, the company’s two German owners collaborated with the ETH Zürich University. They developed a very simple, efficient and cheap set of technologies.

Apart from the above-mentioned CCS, Direct Air Capture currently represents the sole realistic method of capturing greenhouse gasses. For *Climeworks*, Iceland provided the ideal storage opportunity: direct injection of the CO<sub>2</sub> into the basalt rocks of the island's volcanic underground.

*Climeworks* is a fast-growing company currently also developing the production of synthetic renewable biofuels like kerosene and green hydrogen.

## **Chapter Five**

*Scotland: The Orkneys' Marine-Energy Revolution*

*Orkney Islands, September 2019*

The Orkney Islands have long been known as Europe's windiest corner. Surrounded by the Mediterranean Sea [do you possibly mean the North Sea here?] and the Atlantic Ocean, they are subject to some of the continent's most forceful waves and tides. This is the main reason that the EMEC (European Marine Energy Centre) selected the remote Scottish islands as its seat.

For the past decade, dozens of international companies have come to the Orkneys to develop different technologies for marine energy extraction. Some of these technologies are now right on the brink of mass production.

To top it all off, the Orkney Islands are now producing more energy than they can consume – all of it from renewable resources. The surpluses are channelled toward the production of green-hydrogen, which already powers the local ferries, buses and cars. Our visit to the island offers a glimpse into the future as it should be.

## **Chapter Six**

*Austria: A Model Community*

*Güssing, February 2020*

During the iron-curtain years, this small Austrian town near the Hungarian border was one of the poorest in the country. It was nearly cut off from the rest of Austria. Güssing seemed to be turning into a ghost town ... until, at the start of the nineties, the mayor and a local businessman set out to break the cycle of hopelessness.

They started collecting waste-grade wood from the nearby forests and tapping into national and European funding programs. In a few years, Güssing was transformed. It was the nexus of the Austrian green revolution – steadily branching out into sustainable energy resources like biomass, biofuels and green hydrogen.

Its cheap renewable energy was part of the reason that forward-looking companies from all over the world started flocking to Güssing. Eventually, the small town became the official seat of the European Centre for Renewable Energy. On the heels of a number of understandable victories and setbacks, this is what it remains today.

## **Part Two:**

### *The Lithium Road: The Future of Mobility*

#### **Chapter Seven**

*Bolivia: Lithium, the Driving Force of the 21st Century*  
*Salar de Uyuni, April 2017*

Matjaž Krivic and I tackled the story of lithium, the driving force of the 21<sup>st</sup> century, before it became the focus of frenzied international media coverage. We set out to follow a single gram of lithium from Bolivia's Salar de Uyuni – high up in the Andes, where up to 70 percent of the entire world reserves are located – to the electric car factories in China.

The Bolivian chapter is a story of political friction, environmental devastation, the vagaries of global supply chains, the spectacular incompetence of authorities and boundless corporate greed.

#### **Chapter Eight**

*China: The Future is Now*  
*China, December 2017*

Over the course of a month, the photographer and I visited – both legally and illegally – a dozen different Chinese electric-car and lithium-battery factories.

In this totalitarian land, which resorted to the green technologies on account of its crippling pollution, we were faced with an environmental and digital dystopia, exploited by the authorities to push through a neo-colonial agenda. We plumbed the depths of the local and global lithium markets and met various key figures in the Chinese electric car industry.

The Chinese produce and purchase more than half of the planet's electric vehicles. At the same time, they have pulled off an extraordinary coup: total control over the entire lithium supply chain. The developments in this dynamic field have come breath-takingly fast. An irreversible monopoly is being created.

## **Chapter Nine**

*USA: The Lithium Rush*  
*Nevada, May 2018*

Under Donald Trump, the US opted to 'return to its roots' – meaning a wholesale fall-back on fossil fuels. Coal is being furiously extracted and burnt, while the oil and gas companies are making out like bandits, racking up record profits mostly on account of fracking.

Yet, behind this lurid bonanza, a number of states like Nevada, California and North Carolina have been undergoing a green transformation. Matjaž and I visited a number of US lithium mines and ongoing lithium-based projects. Our road trip culminated in our visit to the 10<sup>th</sup> Lithium Supply & Markets conference in Las Vegas, where we met with some of this exploding industry's key players.

## **Chapter Ten**

*Norway: The Electric Revolution*  
*Norway, October 2018*

Eighteen months ago marked the first time that the Norwegians bought more electric cars than their gas and diesel counterparts. Furthermore, Oslo is now closed to private traffic. On the wings of a near unanimous political consensus and the sales from its traditionally strong oil production, Norway is speedily electrifying its roads, as well as its shipping and aviation industries.

We visited the shipyards, the politicians and the lithium-battery factories. We saw, with our own eyes, that the Norwegian electric revolution is comprehensively powered by renewable resources (95 percent by water).

## **Images**

This book would benefit immensely from the inclusion of professional images. Photos can be black & white, within the chapters. Or they could come in the possible inclusion of two 16 page colour inserts, if funding allows for that. The idea is to have a much more visual e-book, since the photo (and video) material provided by World Press Photo winner, Matjaž Krivic, is simply amazing. It is also available free of charge.

## **Audience & Marketing**

The exceptional access afforded by the first-hand nature of the coverage should help render the book a vital part of the climate change and crisis discourse. This is especially true in the Anglo-Saxon market, where the basic genres of first-hand reporting literature still retain presence. The book is also aimed at everyone who has been professionally following the climate change crisis over the past decade. (including journalists, academics, college professors, think tank associates, NGO workers ...) The author is able to draw on a rich international network of personal and institutional connections to help promote the book.

## **Multimedia Opportunities**

The author will leverage his personal connections in the global media, the think tank community and in NGOs all over the world. The author has a strong presence on social media, mostly Facebook and Twitter. The author also plans to launch a podcast on the theme of climate change to promote the book and some video material (short *docu* clips and extensive drone footage) filmed during his field work. There is also a planned multimedia project with the photographer. The author is ready to undertake a book tour, if the publishers wish. All of these initiatives will be used to support the release and continued success of the book.

## **About the Author**

Boštjan Videmšek, born in 1975, is a long-standing war reporter for *Delo*, Slovenia's largest daily newspaper. He has reported from all major war zones and conflicts over the last 25 years. His articles had been published in over a hundred international magazines, including *The New York Times*, *Le Figaro*,

*GEO, Aftenposten, Der Spiegel, The Sydney Morning Herald, The Guardian, The Atlantic Post, Politico, BBC World, Forbes, Revolve Magazine, El Periodico, The Caravan, Terra Mater, Periodismo Humano, El Semanal, El Diario, Ahora Semanal, The Age, The Brisbane Times, Globus, Jutarnji list, ...*

Over the last two decades Videmšek reported on most of the planet's major armed conflicts and natural disasters. He is also the author of the following five books:

1) *21<sup>st</sup> Century Conflicts: Remnants of War(s)*, 2011. A collection of his early war coverage.

([https://www.amazon.co.uk/21st-Century-Conflicts-Remnants-War-ebook/dp/B0093DAX0M/ref=sr\\_1\\_2?s=books&ie=UTF8&qid=1516643160&sr=1-2&keywords=videm%C5%A1ek](https://www.amazon.co.uk/21st-Century-Conflicts-Remnants-War-ebook/dp/B0093DAX0M/ref=sr_1_2?s=books&ie=UTF8&qid=1516643160&sr=1-2&keywords=videm%C5%A1ek)).

2) *Revolt: the Arab Spring and the European Fall, 2013*, published in Slovenia to great critical acclaim. Not published in English.

3) *Ultrablues*, 2014 – a bestseller in his native Slovenia.

4) *On the Run: Modern Exodus*, 2016. Depicting the ten years the author had spent traveling with refugees and migrants. Already translated into German, the book will shortly be published in Egypt. No English translation available.

([https://www.amazon.co.uk/Auf-Flucht-Moderner-gelobte-Reportagen/dp/3943767701/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1516643160&sr=1-1&keywords=videm%C5%A1ek](https://www.amazon.co.uk/Auf-Flucht-Moderner-gelobte-Reportagen/dp/3943767701/ref=sr_1_1?s=books&ie=UTF8&qid=1516643160&sr=1-1&keywords=videm%C5%A1ek))

5) *Dispatches from the Frontlines of Humanity: A Book of Reportage*, 2019 (by Cambridge Scholars Publishing) This is a book of in-depth reportage about some of the most defining issues of our time, namely the global refugee crisis, the conflicts that have uprooted masses human beings, and their underlying causes. It is also an ode to the vanishing art of the long-form feature or reportage, which is disappearing; many media organisations can no longer afford it, or are unwilling to pay for this kind of time consuming, on-the-ground journalism.

Videmšek is the recipient of numerous national and international awards. In 2016, he was nominated for the *European Press Prize*. In, 2018 he won the prestigious Siemens international award for tech journalism. In 2015, he was declared one of the “European Young Leaders.” He is a member of the *TFAS alumni* (Euro-Mediterranean University) in Athens and Washington. Videmšek is also the author of two theatre plays.

In recent years, his journalistic focus has shifted to the effects of climate change and the green energy development boom across the globe.

### **About the Author:**

Boštjan Videmšek is much more than one of the leading journalists and reporters of his generation: in his texts, he artfully combines direct witnessing to today's conflicts (mixing with refugees, etc.) with the profound reflection on the global context of such events. The deep engagement of his writing makes Videmšek a kind of living fossil: they simply do not produce journalists and non-fiction writers like him anymore. Read his books and you will not only see new unknown aspects of our reality, you will also see the reality you thought you know well in a new way."

Slavoj Žižek, philosopher

"Only very few of us has the courage and the talent to look human kind straight in the eye and tell the story of real people when human kind is reducing its own story to statistics and figures. And even fewer tell the stories of tragedies in the way that celebrates the resilience and the joy of being a human. Boštjan does exactly that in this book and creates a symphony of pain and hope."

Ece Temelkuran, author of *How to Lose a Country*

"Boštjan Videmšek combines the courage of the front line reporter with the eye of the astute political analyst." John Carlin, author of *Incivtus* and *Rafa*

"In all the years I have known Boštjan, this is what I most admire about his work: his unfailing commitment to stand up for those in need and to try and compel those who refuse to listen to prick up their ears and to kickstart their hearts." Khaled Diab, author of *Islam for the Politically Incorrect*

### **Other Relevant Publications:**

Paul Hawken: *Drawdown*

I would say that this is the only comprehensive solution-based book on the market. There are some similarities with my book. Mostly, they both profile solution-oriented communities, individuals and companies. But Hawken's (great) book is more or less a collection of best-practice examples – nearly a 'dictionary'. It is a briefing. In his book, an international coalition of leading researchers, scientists and policymakers come together to offer a set of realistic and practical solutions to climate change.



My book is in-depth field research. It is written in a completely different style. Both books could be very complementary and, as such, user friendly.

Bill McKibben: *Has the Human Game Begun to Play Itself Out?*

McKibben's book is important because of the context and his sharp unforgiving observations. It's not direct competition. It is mostly descriptive and opens the mind's horizons. It is a different book with the same message.

Mike Berners-Lee: *There is no Planet B*

After explaining what went wrong, Berners-Lee focuses on solutions. He has crunched the numbers and plotted a course of action that is practical and even enjoyable. Do we all need to become vegetarian? How can we fly in a low carbon world? Should we frack? How can we take control of technology? Does it all come down to population? What can any of us do?

There are not many books offering such ready-made climate crisis solutions right now.

## **Writing Sample:**

### **Norway: The Electric (R)evolution**

*October 2018/March 2019*

While a large part of Europe and the world keeps debating the merits of electric mobility as if it were still science fiction, the future has already arrived in Norway: on the roads, at sea, and in the skies as well. The Norwegian state, after having built a resounding success story on the strength of the country's vast oil and natural gas reserves, is now leading the field in traffic electrification -- and not just because of being able to afford the switch.

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For both Norway and the world's automobile industry, September 2018 marked a tectonic shift. For the first time, the number of electric cars bought by Norwegians exceeded the number of the internal-combustion vehicles. As recently as a few years ago, this seemed like the wildest of fantasies – even for Norway. Now it is a reality.

A few prudent government incentives proved instrumental in achieving the historic shift. Norway's mobility electrification is a study in foresight and strategic planning. Steep taxation of CO<sub>2</sub> emissions has put a hefty premium on petrol and diesel vehicle prices – a tax the electric car purchasers find

themselves totally exempt from. 'Hefty', in this context, means anywhere up to twenty percent of the price.

The owners of electric cars in Oslo – or, say, Bergen – are furthermore exempt from having to pay for a 'carbon pass' to gain access to the city. (For everyone else, the daily price stands at 6 euros.) To sweeten the pot, the electric vehicle purchasers are also not required to pay a whopping 25 percent VAT. This alone brings down the prices of electric cars much closer to the level of their petrol and diesel counterparts. Then there is the fact that the properly electrified driver is exempt from tolls, parking fees and ferry tickets, while also being free to use the special city lanes normally reserved for buses and taxis.

To top even that, the users are allowed to recharge their cars' lithium batteries for free. The basic infrastructure grows better each month. In 2019, downtown Oslo was liberated from all 'civilian' traffic. 2025 is the year when the last new gas-guzzler is to be sold.

In marked contrast with the rest of the world and especially China, Norway's electrification is powered by renewable energy sources, with water topping the list. There is more than enough 'clean' electricity to go around, making up for approximately 98 percent of the country's entire electric usage.

In a climate as amazingly pro-electric as this, the mere purchase of a diesel vehicle is increasingly seen as an act of open treason.

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“All of us are in quite a hurry. Or at least we should be!” opines Petter Haugneland, talking to us at the seat of the *Norwegian EV Association* NGO in Oslo.

The recent environmental reports, proving that the global temperatures are rising even faster than previously thought, came as no surprise to Haugneland. For a number of years, he has been monitoring global developments, and repeatedly found not nearly enough will for making the necessary leap.

“In Norway, it is just the opposite,” he says. “Seeing how we have built our prosperity on oil and natural gas, we have a moral obligation to do everything in our power to protect the environment. Fortunately, unlike a number of other oil-rich countries, we haven't allowed ourselves to become a monoculture economy. We quickly started looking for alternatives. The electrification of traffic is just one of them – though a very important one.”

*The Norwegian EV Association* – helmed by Petter Haugneland – currently has 34 employees and about 75,000 members (Spring 2020). Every single one of them drives an electric car, and the association is there to protect their collective interests.

An NGO looking after the owners of the still rather pricey electric vehicles? At first glance, it may seem rather extraordinary – seeing how non-governmental organisations usually protect the human rights of the underprivileged.

“I can understand your amazement, but we are indeed fighting for human rights, a healthy clean environment being the most basic one of all. This was our basic objective from the word ‘go’. It is also true that in non-democratic societies, oil and gas have proved a curse for the local population, while over here, pretty much everyone has benefitted, which means we now have a greater responsibility,” Haugneland clarifies, summarizing the protestant ethos underpinning the Norwegian electric surge.

As already stated, the swift expansion of the national electric-vehicle market was driven by government incentives. In 2012, the entire spectrum of national politics ratified the plan for gradual traffic electrification. “The consensus was highly important, ensuring no later deviations from the plan. The initial target was 100,000 electric cars on our roads by 2020. Yet the actual boom surprised everyone, us at the Association included. By the end of the 2019, approximately 250,000 cars were populating the Norwegian roads.”

Haugneland can barely contain his enthusiasm. He is convinced that the transition will prove swifter than previously imaginable around the world. He believes the global electric vehicle market will experience a decisive boost over the next two years, when a number of new and financially more accessible models are set to arrive.

“Until now, our electric car market was something out of the Soviet Union. The wait period is two years, at least up here, and there is only a very limited range of models to choose from.”

In 2019, the electric cars represented 44 percent of the Norwegian car market. 2020 will surely be the first year for lithium-driven cars to dominate the market - and then the roads.

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There is no doubt in Haugneland's mind that by 2025, the global market will be unrecognizable. Major brands that are clinging to diesel and thus failing to adapt to electrification's demands will be consigned to the ash heap of history. “If

Europe doesn't stir from its slumber, the global market will be dominated by China. The Chinese are already producing and purchasing more electric vehicles than the rest of the world combined. This is an irreversible process.”

Haugneland is perfectly aware of the sluggishness inherent in changing most human habits. He understands we are all victims of certain established patterns, but believes this also means we can become the 'victims' of positive examples. And Norway, despite the oily tint of its green revolution, is being transformed into one of those. Even the local oil industry seems to have accepted the electrification paradigm as its own.

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“Norway is an independent player. We make our own decisions,” expounds Haugneland's colleague Christina Bo. “We are not condemned to dated regulation and compromise. We are looking toward the future. We are shaping it together. We try not to be impatient to anyone's views. Our path is one of cooperation and inclusion. We have already proved how much can be achieved in a short period of time. If we don't act, it will soon be too late!”

Over the past year Bo has met with all the major car manufacturers in the EU. They sent their representatives north to verify the miracle and Norway supplied them with all the proof they might possibly need.

“Up until now, they were living in denial. They were trying to keep diesel alive for as long as possible. They have now realised they will have to adapt or vanish. Consumers can change their ways in a heartbeat. All they need is to experience a working new reality. Our research has shown that only four percent of electric car owners are prepared to return to the gas or diesel models. It is quite simple: the electric vehicles are cleaner and better, and very soon they will be cheaper as well. The Norwegian authorities have taxed all that we have chosen to steer clear of, and subsidized what we do want.”

Like Haugneland, Bo makes no bones about being quite the enthusiast. After our meeting, she was to team up with a major governmental delegation, flanked by the queen, for a trip to China. They were headed for the first official state meeting after the relations between Beijing and Oslo had significantly cooled in the wake of the Nobel peace prize being awarded to the Chinese dissident Liu Xiaobo. In the long run, of course, business reigns supreme: Norway and China share a number of common interests.

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If across the other European capitals electric cars are still more of an exception than a rule, Oslo is a different matter altogether. It is far from uncommon to see a traffic light turn red and have only a succession of shiny, silent *Teslas*, *E-Golfs* and *Nissan Leafs* pull up in front of it. The latter model is the most widely purchased electric vehicle in Norway.

The city is interspersed with electric charging stations. Queues have already been known to form. The infrastructure developments are simply unable to keep up with the market demand.

Over the short term, this will doubtlessly entail some unpleasantness. But Norway's cities have decided that this is a good problem to have. At the time of writing, almost 20 percent of cars on the streets of Bergen are already powered by electricity. The number of electric buses is also expanding. According to the authorities' plans, Oslo's entire public transport service is set to make the switch by 2025.

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“In 2020, 100 out of Oslo's 600 electric buses will be of the electric variety,” says Jon Stenslet, the head of electric mobility at the *Ruter* public company, co-owned by Oslo and the nearby town of Akershus. “Mind you, we already had electric buses and trams in use a hundred years ago. It was the same all over Europe, but the electricity was too costly, so it was replaced by diesel fuel. This means we are now only returning to where we've already been.”

Stenslet's company does not own the actual buses, only the bus services. Yet, when it comes to planning Oslo's public transport system – from the buses to the trams to the subway facilities – *Ruter's* word comes first. Electrification is at the very crux of local development, with both efficiency and easy access topping the priority list. Closing downtown Oslo to all 'normal' traffic while increasingly powering the public transport system by lithium batteries is certain to make things ever-more efficient and accessible.

When the company set down its long-term plan in 2008, *Ruter's* main objective was to contain the expanding number of cars on Oslo's roads. The aim was to create an appealing public transport system. Hydrogen-powered buses were also being considered. The future thus came as something of a surprise, especially the swiftness of its pace. All of a sudden, the buses had become a success story. Each year, the fleet expanded by about five percent.

Then electrification entered the picture, and with it, the vision of zero emissions came into the atmosphere.

“By 2030, Oslo will be emission-free. Two years before that, the electrification of public transport will start turning a profit. Our great investment is sure to pay off under every possible scenario. We are fortunate enough to have sufficiently enlightened politicians and enough funds, and the market has started reacting favourably as well. The majority of the world's great bus-making companies have already introduced electric models of their own. It is a very new technology, developing as we go along. We are picking up many things on the fly. All of the electric buses currently on Oslo's roads are prototypes. Along with China, the Netherlands is now starting to lead the field in bus electrification. Yet, our progress here in Norway is also swift,” Stenslet describes the conditions in the bus market.

He is quick to add that *Ruter's* sub-contractors have recently signed a contract for the use of 42 buses, made by China's biggest car manufacturer *BYD*. It is worth remembering that *Volvo*, thus far Oslo's main supplier of city buses, is owned by the Chinese company *Geely*.

The vast process of globalisation is no longer a one-way street and is certain to get only less so in the upcoming years.

The stakes are rapidly getting higher, which may be part of the reason why *Mercedes* gave its electric bus a premiere spin along the streets of Oslo. “The next step, of course, will be the introduction of autonomous vehicles, buses included. This will be quite a turning point, and it is not that far off. The psychological switch will be a huge one, but the people will adapt. I would like to stress that everything we do, we do in cooperation with the public. We are, after all, operating on public funding. There is also a constant dialogue with the industry,” Stenslet informs us, infused with a passion and dedication far from uncommon in Norway when it comes to the topic of electrification.

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“31 percent of all emissions in Norway are caused by traffic. We have no coal mines anymore, so there was no progress to be made in that area. Reforming our fisheries and livestock industry would prove a far lengthier process. So we, as a society, were forced to tackle changing the traffic and the speed of the transition surprised everyone – even me, the eternal activist and optimist!” enthuses Sture Portvik, who talked to us in a garage equipped with free charging stations at the very heart of downtown Oslo.

Portvik is the City hall's go-to man for all questions pertaining to electric mobility. He was quick to remind us of the length of Norway's electric-car

tradition. After all, the country was the birthplace of *Buddy*, one of the first modern models manufactured as far back as 1995.

Due to the circumstances at the time, the small city car was not a success. However, it still played an important role in leading up to the current revolution, in no small part due to the ecologically enlightened pop stars, *AHA*, who used their clunky *Buddy* to commute to downtown Oslo from the suburbs, dodging both the tolls and parking fees, not to mention potential parking tickets.

The initiative displayed by the global pop superstars certainly helped bring this particular debate to the fore. It may have been *Europe* who sang 'The Final Countdown', but it was *AHA* who set the timer, ticking down oil's ultimate demise.

“I realise that the oil was extremely important for our development, for our wonderful quality of life. We are the only democratic country with so much oil. We knew how to use that to our advantage,” Portvik goes on.

In his estimate, the electrification of traffic will lead to an even more egalitarian society, turning Oslo into the most pleasant and user-friendly of the world's capitals. As a representative of the civic authorities, Portvik is less concerned by the booming pace of technology development and more by legislation hardly being able to keep up.

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“We still have a long way ahead of us,” agrees Alte Hamar, Norway's deputy minister of environment and climate. “But the transition is proceeding swiftly. The infrastructure will have to follow the market. This is the next big step. The electrification is of course not only limited to the cars and the buses, it also involves maritime traffic. And here as well our country is way ahead of everyone else.”

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In spite of the floods and landslides striking the Voss area and the nearby fjords in October, Flåm, one of Norway's most beloved tourist destinations, was teeming with visitors. As wild waters tumbled down from the mountains, Chinese, Indian and Russian tourists waited for the signal they were free to board the *Future of the Fjords*, currently the world's most modern passenger ship and entirely powered by lithium batteries.

The resplendently new vessel, distinguished by a fantastic modernistic design that blends in seamlessly with the awe-inspiring natural backdrop, eventually

left the port and struck out for a four-hour sightseeing cruise around the fjords. There was no stench normally associated with oil. There was no rumbling of engines. There was also no backlash for the environment.

From 2026 on, naval access to the tourist-saturated and oil polluted fjord areas will only be permitted for zero-emission boats and ferries. The Norwegian authorities made the decision official three years ago. Back then, not many believed the plan was feasible. Today, with more than two hundred electric or hybrid ships navigating the country's waters, there are very few non-believers to be found.

In the picturesque town of Flåm no one seemed that bothered by the rain. The symbolism was rather perfect: the electric batteries powering the wondrous ship are themselves powered by water-based energy. Norway certainly doesn't lack for water. Most of the larger cities' apartments, for example, are heated by electricity obtained from numerous hydroelectric power plants.

Dams have long become a beloved staple of the country's landscape. For over a century, most of Norway's economic and even family life has been powered by its rivers. On the other hand, the ship-making industry and everything else pertaining to the sea have formed a vital pillar of the local economy, ever since the time of the Vikings. It is thus hardly surprising that Norway is also leading the way in maritime electrification.

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“The political support was key for our fast development of electric ships. The state laid down the rules, and we, the ship-makers, had to follow. At first, there was a lot of scepticism, but it soon turned out the concept of naval electrification was all too feasible!” beams Edmund Tolo, the head of sales and the long-time technical director of *Fjellstrand*, a family business seated in the peaceful seaside village of Omastrand.

“Even before the authorities had made the decision that the oil-powered vessels will soon be made unwelcome, we had already christened our first electric ship. The *Ampere* ferry, managed by the *Norled AS company*, has been operating on the Lavik-Oppendal line for the past four years. It's a rock-solid proof of the general viability of the electrification process, demonstrating both the potential in cost reduction and the safety of the lithium batteries, which used to have more than their fair share of doubters,” adds Tolo, the visionary behind the world's first electric ferry(tale), whose production also involved the German company *Siemens*.



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During early morning, the fjord south of Bergen, which hosts the much-beloved church in Krokeidet village, sees the sun refracting off the dramatically low rainclouds. The varicoloured houses by the seaside collaborate marvellously in the new dawn's interplay of light. A pair of brand new electric ferries, managed by the *Fjord1* shipping company, cover their routes along the salmon-farm-dotted archipelago. One of them – *Horgefjord*, currently headed for the Austevoll island – has an official inauguration that afternoon to look forward to.

“This is a great day for me. The ideas have become reality,” said Omm Moen, the head of development at the Trondheim-seated *Siemens Marine AS* company. Moen, the engineering father of the twin electric ships, was also involved in the design of the first electric ferry, *Ampere*. He speaks of his creations in a tone of boyish glee.

“At the moment, there are about 2,300 ferries on the globe. 1,500 of them are a quarter of a century old or more. The entire fleet is in need of renewal. The opportunities for the holistic electrification along the shorter routes are now pretty much ideal,” Moen goes on.

“Five years ago,” he reports, “we did an analysis of all the Norway's ferry lanes. We established that at least a hundred of the regular lines can be electrified. If we pull it off – and it certainly looks like it's going to happen – we will drastically reduce the emissions into the atmosphere, while also significantly lowering the costs of ship maintenance and operation. The state, understandably enough, is having a hard time keeping up with the technological development. But so far, things are looking good. The industry and the politics are operating in accord. This is a very important thing. All of us here know why we're doing what we're doing.”

The Norwegian engineer and inventor goes on to add: “The electrification of maritime traffic is soon to become very big business and there is no guarantee its initiators will be the ones to reap most of the profits.”

'The Chinese syndrome' certainly extends all the way up to the fjords as well. The twin electric ferries were manufactured in Turkey, where the labour costs are incomparably lower than in wholesomely opulent Norway. The lithium factories being built here (*Siemens* in Trondheim, *Corvus* near Bergen) will provide very little scope for a human workforce. Both facilities will be fully automated.

Automation is also on the cards for the ferrying companies. Guttorm Sivertsen Jr., the captain of the virgin ferry *Horgefjord*, seems well aware of the fact.

“It's a fantastic thing, commanding an electric ship. Everything from navigation to manoeuvring is much more smooth and fluid. I only have one problem with electrification, but it's a big one. What is to happen with my crew?” the moustachioed seaman asks, while attending to the levers and computer screens on the hi-tech bridge, more reminiscent of *Star Trek* than any control room of yore.

“I was raised on diesel,” he explains. “I come from a fishing family. My grandfather made his fortune during World War II, when he started selling fish to the Germans. Our family then went on to open a number of fisheries, and our business is still thriving. I myself used to command a number of ships supplying the oil-drilling platforms. Now I am here and enjoying it very much. I can only hope I remain surrounded by my colleagues. You see, all this digitalisation and electrification has its dark sides as well.”

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“To tell it as plainly as possible: we took a few concepts from the railway business, a few from the electric car, and what remained was a matter of sheer common sense. All of the basic components were ready and available. All we needed was to put them together and see how it turned out. Fortunately, it turned out great,” Edmund Tolo beams at the both sunny and rainy village of Omastrand.

Mr. Tolo, who has been working for the *Fjellstrand* company since 1985, helped to design a number of ships currently in operation all over the world. The village's small shipyard, which specialises in the use of lighter but costlier aluminium, has thus far produced 91 vessels. Among them were smaller passenger models, speedboats, fast passenger ships, supply vessels for off-shore oil rigs and wind turbines, fishing boats – and also ferries, the aforementioned *Ampere* included. The company's back catalogue thus covers just about the whole range of vessels sure to become powered by electric batteries or hydrogen.

The electric vessel market is poised on the cusp of a great explosion. “Well, that's a word us battery makers really don't like, ha ha!” grins Halvard Hauso, who spoke with us at the October maritime traffic electrification conference in Bergen.

Hauso is the Executive Vice-President of sales and marketing at the Norwegian branch of the *Corvus Energy* company. This means he is an extremely busy man. Business is thriving and the company is expanding at near light-speed. All that Hauso has to say on the matter is that the boom will only keep on booming.

“We are currently supplying batteries to circa 200 ships. Just today we landed a pair of new clients. Over the next two years, the electrification process will spread all over the globe. I can only hope there will be enough lithium to go around. Fortunately, our suppliers are very reliable. Before long, all the short-range ships will be powered by electricity. The future is already here,” the Canadian company representative is convinced.

Up until 2018, *Corvus'* batteries were produced in Vancouver. In 2019, some of the production was transferred to the fully automated factory that is about to open in the vicinity of Bergen.

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“The future belongs to the zero-emission paradigm. Europe needs to react. The Chinese companies are dominating a large chunk of the lithium battery market. There is a pressing need to secure the suppliers while still possible. I repeat, the market is headed for an explosion. The demand for both lithium and lithium batteries is about to skyrocket,” Hauso assures us at the Bergen conference, attended by all the key players in the Norwegian naval business and a number of prominent politicians to boot.

“I can only confirm that Norway has reached a consensus on the greenness of its future,” says Lars Haltbrekken, an MP for the socialist Green party. “The politics laid down the rules, and now it seems the industry is starting to overtake us.”

Haltbrekken's colleague, the Conservative Party MP Liv Kari Eskeland, feels the same way. “Our goal is the electrification of the entire transport system. On this subject there is no political division and we believe our unity can guide us toward a much cleaner future. There is still a lot of work to be done – you probably read the last environmental report. Yes, even here in Norway we have a great deal of catching up to do and the world has to follow our lead. There is no time to waste.”

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The ninetieth ship to be built in the *Fjellstrand* shipyard has yet to be given a name. But, the light and ultra-modern electric ferry (*Zero Cat*) was almost

complete and was set to sail on its maiden voyage before the new year of 2019. Three shifts of workers laid down insulation, while all the while polishing and re-polishing the ferry. Below decks, engineers installed huge packs of lithium batteries supplied by *Corvus Energy*.

The combined weight of the batteries will amount to almost twenty tons. Yet, the similarly sized regular ferries can soak up to fifty tons of oil at one go. Their diesel engines run all the time; the ferries along the Norwegian lines are kept in operation for seventeen hours a day. The gas consumption is enormous – as, of course, is the carbon footprint. With an electric engine, the story is very different. The average energy cost of one *Ampere* ferry voyage is five euros!

“The price of old ferries is plummeting much like the price of diesel automobiles. Very few companies in Norway are still interested in purchasing them. Even three years ago, people were still anxious about buying an electric car. Now the revolution is already sweeping across the shipping business!” Edmund Tolo marvels while walking us through the shipyard.

Tolo believes that the company he spent a large chunk of his life with is a poignant metaphor for his entire country. *Fjellstrand's* business started thriving in the wake of the sinking of the Titanic, when the great ship-making companies realised that many more lifeboats than previously thought were needed for emergencies. *Fjellstrand*, with its long tradition of large wooden paddling boats, started rapidly expanding its production.

In 1963 the company produced the world’s first aluminium ship. It is still in operation today, functioning as a travelling library that supplies the remotest island schools. By 1973, and onset of the first great oil crisis, the company's mainstay became producing swift fishing yachts for the American market, but that particular market crashed virtually overnight. *Fjellstrand* hit a rough patch, yet – much like the Norwegian state – it capitalised on its flair for innovation and protestant work ethic to quickly bounce back.

The solution was to switch its focus to manufacturing fast passenger boats. The nineties, when clients were interested only in speed and fuel efficiency was hardly an afterthought, were something of a golden age, both for the company and the country. Ten years ago, oil prices underwent another dramatic plunge and climate change’s effects became too obvious to ignore. *Fjellstrand* again found itself in a difficult position, though again not for very long.

Once more, the family business was quick to reinvent itself; electric mobility is the next big thing on the horizon. Even smaller shipyards can look forward to a handsome profit.

“When the *Ampere* first left the port, the passengers were afraid they'd be left stranded in the middle of the sea,” muses Tolo. “They thought the batteries might simply give out. As we now know, their fears were completely baseless. Let me remind you that fifty years after the switch to diesel, some yards were still outfitting their ships with masts. Why? Simply because the people were still used to them. On the other hand, we've had a great deal of trouble with the electric energy suppliers, who had long adopted a very simple business model. They've been supplying their product in the same way for decades now. We had to convince them to adapt to our needs, so that we could, for example, start using the grid for filling our batteries at the ports.”

Tolo grows ever more convinced that within a few years, virtually all maritime traffic in the fjords will be powered by electric batteries and hydrogen.

“The electric engines are also slowly finding their way onto the freight ships. In the future, the freighters will be fully autonomous,” he illustrates his point in layman's terms. “I predict a large part of the traffic shall be of the hybrid variety. On account of the lithium battery's limitations, the future of oceanic travel will not be a wholly electric one. But you never know: something new might pop up very soon!”

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Regardless of all this heady talk of the new, the old is still very much in place – even in Norway. The tale of the local economic miracle that started in the sixties, is predominantly a tale propelled by North Sea oil and natural gas revenues. Its enormous fossil-fuel reserves transformed a relatively poor land of fishers and farmers into one of the world's technological hubs and into an open and tolerant society to boot.

Norway has long been exporting most of its oil and natural gas, which means it has also been exporting the vast majority of its carbon footprint. For a number of decades, the Vikings turned a blind eye to this simple fact, buying various indulgences and facing their guilt from a near-perfect comfort zone. Practically all of the people we interviewed proved very forthright about this state of affairs.

Throughout that period, the Norwegian economy was dominated by the state-owned *Statoil* company. To harmonize itself with the ever more prevalent green paradigm, the company was renamed *Equinor* in 2018.

The regional seat of the gigantic and unimaginably rich firm, which employs 20,000 people all over the world, is located on the Fornebo peninsula in the western suburbs of Oslo. In the past, Fornebo's main function was hosting an

international airport. Today, the peninsula has been transformed into a sort of Norwegian Silicon Valley spliced with the splendour of, say, Abu Dhabi or Doha.

The Norwegian oil mega-corporation's futuristic new building looks as if one of the Guggenheim museums got rebuilt out of LEGO blocks. The usually prudent desire to hide one's wealth and the proverbial protestant modesty apparently didn't play a very notable role in its creation.

“We are the problem, but we are also the solution,” smiles Bjorn Ole Sverdrup, *Equinor's* Senior Vice-President of Sustainability. “We decided to rename the company because we no longer wish to be a purely oil-based company. Our future is in the wider energy business. The other great oil companies are thinking along the same lines. We understand the harm in relying on the old power sources. We also realise the weight of our responsibilities as far as climate change is concerned.”

This much is certainly true: the black gold still wields more than enough power to afford its owners the capacity to buy themselves all the green patina they need to remain on the top. Like the rest of the great oil corporations, the newly rebranded *Equinor* understands that fossil fuels will keep dominating the world markets for a number of years to come, and by no means only in the transport markets. There are also plastics, the chemical industry, clothes manufacturing and pharmaceuticals, to name but a few examples.

“Even in the field of transportation, the transition will be a lengthy one,” Sverdrup clarifies. “A large part of the naval freight industry will remain dependent on oil and earth gas for decades.”

Sverdrup assures us that the rising trend in electrification is not perceived as bad news by *Equinor's* policy-makers. The company's strategic shift – “It's fantastic! It is also quite a challenge. We here in the major oil companies have now made the switch to supporting the environment!” – was also influenced by the steep drop in oil prices a few years ago.

This was the reason why the Norwegian economy underwent a noticeable downturn for a while. “It became clear to us that something had to be done. We Norwegians are very fortunate – what with all our oil, natural gas, hydro energy and fish, and this enabled us to set up a strong welfare state while also becoming one of the world's wealthiest and most open societies. This is not something we can easily forget. All of us are bearing our share of the guilt. But I still believe we can halt, or at least significantly mitigate, the results of climate change.”

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The skies above Oslo are perfectly radiant, this being one of the last bright days before the long winter. The autumn sun is slowly descending into the Atlantic. In perfect silence, a veteran Norwegian pilot is flying us straight into the sunset. Below us lies the city, lodged between the fjords and the open ocean. Above us flies an ancient military *Cessna* airplane, which served a tour of duty in both the Korean and Vietnam wars.

Our pilot, overjoyed with our small electric light plane's (*Pipistrel*) capabilities, has no doubt about the shape of the future of aviation. He is convinced it belongs to electricity. The official plan co-formed by the Norwegian authorities and the leading air company *Avinor* states that the country's the entire internal air traffic is to be electrified.

“We're not quite there yet, but the expectations are far from utopic,” the veteran pilot promises after safely landing us at Kjeller, Norway's oldest airport. “Soon we will be flying on electric planes with the capacity to seat 25, 30 and maybe even 40 passengers. Make no mistake: the electric revolution will inevitably extend to air travel as well!”