



From climate crisis *to climate action*

10 principles for future climate leadership

03

Foreword

Dear Leader, this is why the climate crisis is your biggest challenge
by Bodil Nordestgaard Ismiris and Thomas Thune Andersen

06

Climate leadership needed

08

The eight burning platforms of climate leadership

10

10 principles for future climate leadership

12

Climatology

Sebastian Mernild

"Understand what climate targets and the climate crisis will require of you"

16

Biology

Katherine Richardson

"Calculate your overall resource consumption. It determines your future"

20

Disasters

Kristian Lautu

"See climate disasters as new cohesive learning opportunities"

Content
Content

| | |
|----|--------------------------------------------------------------------------------------------------------------|
| 24 | Economy <i>Peter Birch Sørensen</i> "We can't avoid more regulation and taxes" |
| 28 | Behaviour <i>Michael Bang Petersen</i> "If no one dares to lead the way, nothing will happen" |
| 32 | Geopolitics <i>Karen Lund Petersen</i> "Businesses also carry out politics" |
| 36 | Climate policy <i>Connie Hedegaard</i> "We need to rethink political decision-making processes" |
| 40 | Information <i>Rebecca Adler-Nissen</i> "Who and what should you trust?" |
| 44 | Ethics <i>Mickey Gjerris</i> "Be aware of your great responsibility" |
| 48 | Glossary of terms |

Dear leader, *this is why the climate crisis is your biggest challenge*

A woman from South Sudan was recently featured on the Danish radio programme P1. South Sudan has been deeply affected by climate change and flooding, leaving the population facing overwhelming misery. The interviewee we heard from on the radio is living near badly polluted water from which she has contracted river blindness. The dirty water has taken her sight. She can no longer see where the water stops, and the land begins. Nor can she see that her surroundings have been transformed into one big pile of brownish mud. But she experiences the effects of this change constantly, as both her daily life and her livelihood have been washed away by the floods. She is but one example of the scores of people whose lives have already been directly affected by climate change.

South Sudan is an example of the challenges we, as leaders, are now forced to deal with. Not in the near future, but right now. Yet time and time again, we see that so-called climate action only ends up as flowery words, declarations of intent and politically correct statements. Where individual pioneering countries are more the exception than the rule. We have seen this pattern repeating itself during the recent COP27, where it descended once again into no more than just a green tug-of-war on the path to the lowest common denominator.

We cannot wash our hands of our responsibility; just sit back and relax – leave it to the world's politicians. Things are simply moving too slow. These challenges may seem overwhelming, and that

temptation to just leave it for others to deal with, well that's just human nature. But it simply won't cut it when our entire planet is gasping for breath.

If we are to effectively address the climate crisis, we need action – we need leadership!

In this report, Danish Association of Managers & Executives (Lederne) and the Navigating 360 research network asked nine of Denmark's leading climate and social scientists for their honest and accurate diagnosis of the climate crisis and its consequences for leaders and companies. Sadly, the conclusion is not particularly uplifting. Things are worse than expected and they are happening faster than most people probably realise. And according to the researchers, leadership is an important prerequisite for solving the climate crisis we are facing.

So, we have used the researchers' insights to come up with 10 principles for future climate leadership. These are the principles that we as leaders can use to develop our leadership. Because we can, and we must buck the trend. The alternative, as the researchers say, is simply unthinkable.

As global warming spirals out of control, we will see climate wars, devastation, and refugee flows on a scale that we could never have imagined.

Right now, leaders are facing many challenges in the aftermath of the pandemic, the war in Ukraine, inflation and the energy and supply crisis.



These are big – and for many of us – unmanageable crises. But the climate crisis is quite simply existential, and solving it is a prerequisite for our very existence.

At the same time, the crisis will only accelerate if we continue to treat the symptoms instead of the causes.

Activist leadership is needed in all sectors and industries across all of society.

In practice, this means that leaders face a future where mitigating the consequences of the climate crisis by reducing CO2 emissions and minimising the negative impact on nature will not be their only task. They will also need to seek influence where new market conditions are created and ensure ambitious and fair framework conditions without compromising any individual leader's room for manoeuvre. As a result of the climate crisis, companies will face increased demands, and the activist leader must seek to mould these demands to ensure that they are ambitious enough, that they create value and that they best serve the company's green transition.

Finally, activist leadership must be based on the virtues of humility, courage, honesty, and generosity.

Humility, because it depends on us as leaders to recognise that we are but a small part of something much bigger; we must possess a global consciousness. Courage, because the world needs activist leaders with clear, strong opinions who take responsibility and seek influence. Honesty, because leadership privilege must never be abused for power. And generosity, because we must dwell on our power to and not our power over – our power to make a difference to the society of which we are all a part.

In other words, as a leader, you need an internal sustainability compass – both professionally and as a human being.

Bodil Nordestgaard Ismiris,

Managing Director, Danish Association of Managers & Executives (Lederne)

Thomas Thune Andersen,

Chairman of Ørsted and VKR Holding

Climate

leadership needed

The climate crisis is a leadership crisis. The lack of global leadership has been a major cause of the acceleration of climate change, which has now reached such a level that we will no longer be able to avoid severe consequences for both current and future generations. To a large extent, we already have the technology and the financial resources needed to transform our society and our businesses, but leadership at all levels is still sorely lacking. Leadership may yet prove to be the most crucial, but so far most overlooked, resource at our disposal when it comes to solving the climate crisis.

This is just one of the startling messages given by nine of Denmark's leading social scientists and climate experts. According to the researchers, the climate crisis overshadows any of the other urgent crises we face today, even the energy and inflation crisis. Their conclusion is that the climate crisis is much bigger and much more acute than we thought, and it requires many more far-reaching interventions

This raises key questions about the future of leadership:

- What kind of future are we looking at?
- What new conditions do leaders need to adapt to?
- What kind of leadership does it take to tackle this new future?
- How will the requirements be met?

In collaboration with the Navigating 360 research network, Danish Association of Managers & Executives (Lederne) sent these questions to a group of researchers. Through in-depth interviews, they have uncovered the significantly changed conditions that Danish companies must navigate, as well as the role and responsibility they see companies and their leaders having to fulfil.

But just as importantly, they explain how leaders can anticipate crises, adapt, and find new solutions.

The result is a very powerful and challenging depiction of the climate crisis and the demands it places on leadership: we will face unprecedented upheavals and adaptations in societies that will significantly challenge the ability of democracy to act. According to several researchers, it will be as much a question of adapting to violent climate change as fighting it. We may have already passed several tipping points in natural systems meaning we can no longer avoid extensive consequences in the coming decades.

What the climate crisis has in common with the coronavirus epidemic is that it must be solved both globally and nationally, and that the efforts of individual countries will be crucial. It is especially so because of the difficulties in achieving globally-binding agreements. This makes the need for the development of national role models all the more important.

For business leaders, it's either about taking on new roles and responsibilities and leading the transition or risking extensive government regulation. In other words, the new climate reality will be the greatest leadership challenge yet.



Photo: Gettyimages

The 8 burning platforms *of climate leadership*

The findings of the contributing researchers can be summarised in terms of eight burning platforms describing the landscape that leaders must navigate and that will challenge their current competencies.

1. Scope

Few decision-makers understand the scale of the crisis and how much it will require from politicians and businesses to address it, both in terms of adaptation and CO2 reduction. We are unlikely to avoid a 3°C temperature rise by the end of the 21st century - and thus in the lifetime of our children and grandchildren. Already with the current 1.1°C rise, we may have passed critical tipping points where we can no longer avoid severe consequences that will place great demands on climate adaptation.

Therefore, all countries will be confronted with demands for landmark transformations of their social systems and supporting structures. According to researchers, this situation may well challenge the democratic capacity to act and require new political decision-making processes.

2. Resources

Regardless of the scale and impact of accelerating climate change, the biodiversity crisis could actually prove to be the biggest threat to our way of life. We are depleting the natural resources on which we have built our wealth and prosperity. This includes rare metals, soils, plants, animal species and more. There are no substitutes for these resources. Their depletion may seriously slow down economic growth and undermine our civilisation. Therefore, companies must prepare themselves to understand and address their resource use throughout the supply chain to a much greater extent and, in principle, aim for 100% reuse, i.e., resources must circulate.

If everyone lived like Danes, that would require the resources of four whole Earths, and this is the case for many wealthy countries.

3. Conflicts

Climate change will create conflicts in many countries, partly due to widespread scarcity of resources, especially water. Drought is historically the most common cause of war. Migration pressure is therefore expected to increase significantly in the coming decades, affecting many countries. There will also be a risk of significant polarisation, tensions, and conflicts in society, both in the event of a lack of climate action, or as a result of drastically introduced climate measures that will be keenly felt by the population. It is imperative to prepare the population ahead of time for these extensive changes to their way of life, and this will require leadership.

4. Regulations

Leaders and businesses will face increased regulation in the form of taxes, but possibly also bans and rationing. The current regulatory regime has been deemed insufficient to meet our targeted reductions. Several of the researchers warn against political statements declaring that climate solutions must not be felt by the population. Substantial behavioural changes will be inevitable.

5. Political processes

Experts point to the problem of sluggish political decision-making processes that slow down progress. Setting ambitious goals is one thing, implementing them is quite another. There is an urgent need to rethink systems, and reference is made to the experience of the operational staff brought together during the coronavirus epidemic. Similarly, a stronger involvement of the business community and their leaders, and the establishment of new partnerships between the public and private sectors is what is needed within the context of this crisis.

6. Misinformation

The climate crisis increases the risk of misinformation, conspiracy theories and polarisation, especially due to the demand for large and rapid behavioural changes. This is especially true of anti-systemic forces that always direct attention to where the political focus is - in this case, the climate crisis. This problem is compounded by increasingly poor access to quality information and the presence of misinformation on social media, which many people now use as a news source. The extent of misinformation can therefore have a decisive impact on public support for climate solutions and, not least, impair the business community's basis for decision-making.

7. Reputation

Researchers agree on the major role and responsibility of organisations and leaders in adapting to the new landscape of climate change. This means that leaders face major challenges, including new demands for extensive transparency and greater public scrutiny. This increases the risk of PR disasters and loss of reputation, not least caused by attempted greenwashing. Stricter requirements and consequences for this are predicted.

8. Speed

The biggest challenge of the climate crisis is the speed at which it is developing. The acceleration has surprised even those scientists who follow climate change closely.

This is especially true of the dramatic impact of the current 1.1°C temperature rise. But this acceleration is predicted to continue, which will only serve to amplify the consequences of climate change.

This situation will require an unprecedented level of adaptability, confronting both political and business leaders with difficult dilemmas: if the transition is too slow, all control and influence will be lost. If it happens too quickly, the transition may trigger immense public resistance.



10 principles for *future climate leadership*

Succeeding in our new reality will require every leader to rethink the principles on which they base their leadership – and this applies to leadership at all levels, in all parts of society. Based on the researchers' assessments, here are 10 principles for ways in which leaders can potentially convert the crisis into new opportunities.

1. **Goal: Who do you want to be as a leader?**

In order to create positive change and future-proof your organisation, it's essential to have the higher purpose of contributing to a better world. It's important to have a vision for both your business and the society you're a part of. This means re-evaluating your success criteria for the business: how can the company become part of the solution to the climate crisis? What new position should it establish and what new markets should it pursue in a world that requires new solutions? In short, what do you want the company to be known for? And what would the world be missing out on if the company no longer existed?

2. **Business: The company is part of nature**

The companies of the future must radically minimise their impact on nature. Therefore, understanding the total footprint on nature and climate and being able to provide visible data on the consumption of natural resources will become a competitive factor. The goal is an approach where all materials and resources are renewable and can be recycled. Growth must not be at the expense of the climate and natural resources.

3. **Knowledge: Expand your horizons**

A turbulent and constantly changing landscape requires leaders to have a well-developed "GPS tool". In other words, a strategic radar that continuously detects changes in the terrain as well as the changes that the climate crisis is constantly triggering. This places increased demands on the individual leader to seek out knowledge. Quite simply, the curriculum has expanded, and it is no longer enough to simply be an expert in your own field. You risk getting stuck with solutions that were defined as green yesterday, but in all likelihood won't be in a few years' time.

4. **Risk scenario: Crisis management is a condition**

Climate change is hitting harder and harder, and at shorter intervals. This means that leaders must deal with a constant crisis situation where one extreme follows another. There is a need to react even faster than we have done before, and the company that adapts to this new reality the fastest will win. To succeed you need to have an understanding of the risks posed by climate change, something which is crucial when deciding where to invest. Risks may come in the form of changes within markets, disrupted supply chains or geopolitical conflicts.

5. **Organisation: Shared values is a superpower**

In order to respond to crises and create positive change, the entire organisation needs to be pulling in the same direction. This is a management task that calls for cross-collaboration and a corporate culture based on transparency, flexible processes, and cohesion. Key factors will be a workplace where responsibility is shared and where there is a strong community of values and sense of purpose across the organisation. Psychological safety will be essential.

6. Partnerships: No one can change the world alone
Partnerships, knowledge sharing and innovation across disciplines, companies and industries will be crucial to achieving sustainable change. The climate crisis will have a wide impact and will require a breakdown of familiar structures, silos, and sectors. Solutions must be developed between new partners - both between the public and private sectors and across industries. It's about new relationships - and also about seeing former competitors as new partners.

7. Responsibility: Become an activist leader
A political vacuum requires increased social responsibility from business leaders. Responsibility for society will become an integral and important part of a company's position and reputation. There will be increased expectations of businesses to participate in solving society's great challenges. Navigating this will increasingly require activist leaders who dare to lead the way. The activist leader is built on strong value-based leadership.

8. Influence: Get involved in the climate agenda
The climate crisis will bring a host of new demands on the organisation, much of it in the form of legislation. The activist leader therefore seeks political influence to ensure that the demands are ambitious enough and create value, while still retaining his/her operating space to develop new solutions. The competition for talent, investment and markets will be fierce, requiring individual companies to engage and position themselves in the green agenda.

9. Terms: Green DNA becomes the most important capital
The green transition must be part of a company's DNA. That is simply a matter of survival, because access to favourable loans, customers, and new markets will be determined by a company's green profile. At the same time, every company will be under far more scrutiny than ever before - an accusation of greenwashing and subsequent PR disasters could spell the end for a business.

10. Role modelling: Become a frontrunner
Someone has to lead the way. All leaders should be on a mission to become a national or international role model or a green frontrunner in their industry, and they must help demonstrate the benefits of acting innovatively and first - attracting investors and talent. The leader of the future sees opportunities rather than limitations and understands that the sustainable transition is the most important market.

These 10 principles are general and must be adapted and prioritised according to the individual company's situation and conditions. However, adhering to them will be crucial to the competitiveness and conditions of existence for businesses in the coming years. Each company must foster a culture of preparedness ensuring optimal resilience to significantly changed conditions that will come as a result of the climate crisis.



Erik Rasmussen
Founder of Navigating 360, Mandag Morgen and Sustainia



Anders Nolting Magelund
Chief Climate Policy Advisor, Danish Association of Managers & Executives (Lederne)

A man with short, light-colored hair and glasses, wearing a dark jacket over a black t-shirt, is shown from the chest up. He is looking slightly to the right of the camera with a neutral expression. The background is a bright blue sky with scattered white clouds. In the bottom right corner, the silhouette of a church spire is visible against the sky.

Understand what climate goals and the climate crisis *require of you*

Climatology

Sebastian Mernild

Sebastian Mernild is Professor of Climate Change and Glaciology. His research focuses on climate change, polar and mountain ice, hydrology, and sea level change. He is a former pro-rector at the University of Southern Denmark, as well as one of the authors of the IPCC climate report from 2013 and 2021, most recently as lead author. In addition to his career as a researcher, Sebastian Mernild has a long leadership education from the Danish Armed Forces and is a trained officer in the army.

When I look into the future, I see a world that is significantly hotter than today - significantly more extreme and with many more climate disasters. A world unprecedented in human history. A world where climate change is happening much faster than we thought. Politicians want us to limit ourselves to a 1.5-2°C temperature rise; but in my world, we are already at the point where we will inevitably pass 3°C. A target of 2.8°C has been mentioned, but this is a subjective judgement and depends on what political agreements are negotiated.

To me, it's downright idiotic to talk about staying below a 1.5°C rise. It's not realistic and can only exist in theory. Previous plans have underestimated climate change, so there is no doubt that we need to up our ambitions. We will already see a 1.5°C increase in the early 2030s, a 2°C increase is expected in the latter half of the 2040s - in other words, within the next 10-25 years. The development is accelerating. If we are to keep up with such rapid changes and their consequences, we need to accelerate the pace of action and create much greater awareness and understanding of the development.

A scary example

The floods in Pakistan during the summer of 2022 are a terrifying example of the extremes we now need to adapt to. It's bad enough that the monsoon was heavier and more intense than ever before, and that a glacier melted. What's even worse is the disastrous aftermath. When Pakistan's farmlands were flooded, that removed the food base and access to drinking water for a lot of Pakistanis. It also led to a significant increase in the spread of diseases due to the invasion of mosquitoes and other vectors. On top of that, their infrastructure was destroyed.

Climate change creates unmanageable conditions for developing nations that have neither the energy, the know-how nor the money to recover

when they are affected. And there were many other examples of climate extremes in 2022: China had an extreme drought, Europe experienced the worst drought in 500 years, the US suffered from both drought and heavy rainfall, including in the state of Kentucky, where floods caused severe damage. These are all clear early warning signs of what to expect in the future.

The great uncertainty: Tipping points

At some point, we will pass critical tipping points, if we haven't already. That is to say, climate damage will be done that cannot be restored. Tipping points typically fall like dominoes. Once the first tipping point is passed, we see knock-on effects with catastrophic consequences elsewhere. Tipping points are part of the great uncertainty around climate change. We cannot know the threshold for each tipping point, or how quickly they will develop and with what consequences. We know they are coming, but we can't yet know their full impact.

For example, there are tipping points around sea ice in the Arctic and around the Greenland ice sheet. One of my studies shows that around 2042 we will pass a tipping point in terms of the ice sheet melting, when the global mean temperature rise is 1.6°C. This will trigger a number of self-reinforcing processes and is expected to further affect the Gulf Stream and, among other things, mean that we can expect a regional cold zone in Northern Europe, while the rest of the globe warms up rapidly. A weakening of the Gulf Stream also means that rainfall patterns over the rainforest - the Amazon - will change, with fatal consequences for forest and tree production. It will also accelerate the melting of ice in Antarctica because there is a connection between what happens in the north and south when it comes to the Atlantic Ocean. These are just some examples.

To me, it's downright idiotic to talk about staying below a 1.5°C rise. It only exists in theory.

Sebastian Mernild

We are living in two realities

Right now, I see a huge gap between what we say we want politically - the big plans for climate neutrality and CO2 reduction - and what we actually do. The disparity has never been bigger. As a result, the situation has accelerated, and climate change has started to outrun us. We need to recognise that our societal model and political setup - our bureaucratic way of solving problems - may be too slow and not adapted to the scale and speed of the challenges ahead. If that gap continues to widen in the coming years, we will no longer be able to avoid major disasters.

When you listen to politicians, it's as if we are living in two realities: the political reality and the climate reality. They are developing at two speeds, with climate change by far the faster of the two. If politicians don't understand this dynamic, they will face much bigger problems in the next election. While the challenge is global, it's important that every nation realises that they each have an independent responsibility. This is especially true for a rich country like Denmark, which per capita is among the countries with the largest climate footprint from private consumption.

I really don't think that many of our politicians and leaders understand the consequences of this lack of action. They don't know the scale that we need to reduce by. When the politicians sat down in Paris in 2015 and agreed on a maximum temperature increase of 1.5-2.0°C, they

didn't even know how much we would need to reduce globally to reach those targets. We have to be open and honest and recognise that we will probably end up with 2.5°C - 3°C or maybe even 3.5°C. We need to work on that basis, instead of talking about 1.5-2°C all the time.

Time and time again, we rely on the COP meetings. I just have doubts about whether it is the right place to solve the climate problems. With all the COP meetings we've had, we've only reached five agreements so far: Kyoto, Copenhagen, Paris, Katowice, and Glasgow. Perhaps it's time to rethink the entire governance structure surrounding the COP process. These meetings often end up with everyone pulling in different directions to get their piece of the pie, leaving us struggling with the lowest common denominator. Therefore, only the basics are ever agreed upon. I don't have the answer, but I can see that the existing system just doesn't work.

Most leaders don't even realise what we're up against

In May 2022, I had an experience that, for me, clearly illustrates part of the reason behind the climate problem. I was invited to speak to 50 climate ministers from around the world at a summit in Copenhagen. I showed them some figures on the scale of the crisis, and many of the participants were almost shocked. They had probably never been confronted with this reality before. It ama-



zes me that climate ministers could be surprised by such basic knowledge about how quickly our climate system is changing when we look back at what has happened since industrialisation going back around 22,000 years. Afterwards, several people said that the figures I showed them were indeed worrying (and that they would like to receive a copy). But what was most worrying, for me, was the lack of knowledge that should have already been widely known - especially by the ministers, politicians, and decision-makers responsible for finding the solutions.

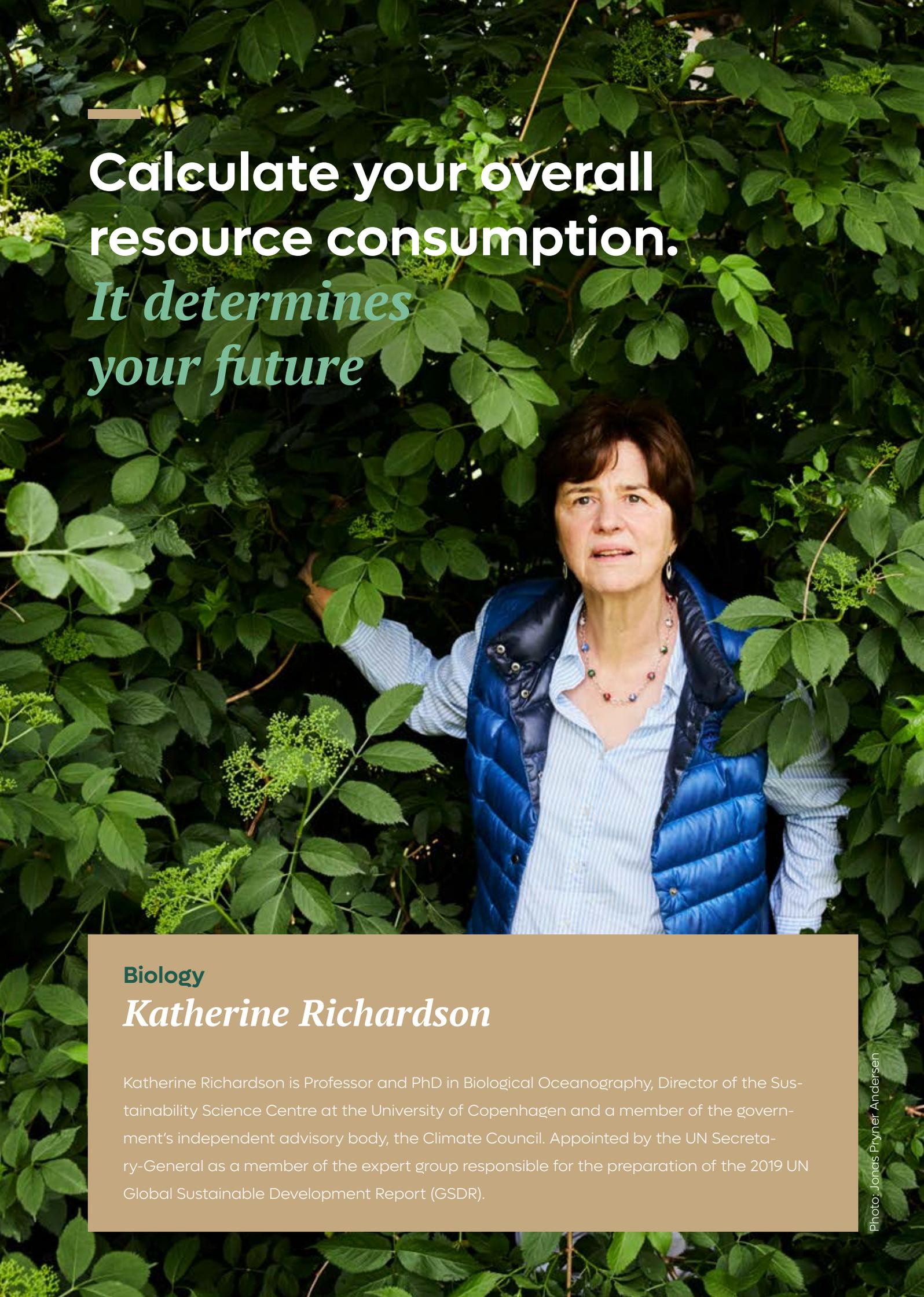
But quite apart from the matter of whether or not politicians read and understand climate science, there's a more general question: how do you get across complex messages such as climate change in the everyday world where people are busy with practical tasks? People go to work, pick up their children, go shopping, go on holiday or travel to the US, Thailand, or Southern Europe. Most people probably don't even think about the climate or climate change. It is an abstract concept with timeframes such as 2030, 2050 or 2100. It is a huge communication task to connect climate change to people's everyday lives and make it real for them, so that they understand the seriousness of the situation. Sadly, we're just not good enough at it yet.

Our shared responsibility

We all have a responsibility for development; as citizens, as politicians and as businesses. As citi-

zens, we need to push our politicians to increase ambitions faster. But unfortunately, to date, politicians have not taken this challenge seriously enough - in Denmark and even more so around the globe. For various reasons, they have chosen to prioritise all sorts of other agendas around growth, economy, inflation, security of supply, unemployment, and local challenges - all at the expense of the climate. It's only since the problems have really accelerated and become visible that more people have realised the seriousness of the issue - despite the fact that science has been sounding the alarm for many years.

Businesses and leaders are just as responsible as politicians on this issue. Politicians set the direction and framework for how businesses can operate within a complex legal landscape. But businesses must fulfil these ambitions. Many of them do, but not enough of them. We also need to make the necessary breakthroughs faster. The reality is that driving these efforts will not only make a necessary contribution to solving the crisis, but may even create new sustainable growth opportunities for businesses. For business leaders, it's about quickly recognising this potential and acting on it. Climate solutions are predicted to be one of the biggest market opportunities in the coming years, and without doubt the best opportunities will go to the frontrunners.



Calculate your overall
resource consumption.

*It determines
your future*

Biology

Katherine Richardson

Katherine Richardson is Professor and PhD in Biological Oceanography, Director of the Sustainability Science Centre at the University of Copenhagen and a member of the government's independent advisory body, the Climate Council. Appointed by the UN Secretary-General as a member of the expert group responsible for the preparation of the 2019 UN Global Sustainable Development Report (GSDR).

The crisis surrounding climate change and biodiversity confronts us with enormous existential challenges. We face two types of urgent crises in two of our natural systems - a geophysical system (nature's energy budgets) and a biological system (animals and plants), which we humans are disrupting in unprecedented ways. We're in a big "deficit" in both areas, and yet we carry on spending. If everyone lived like Danes, we would need over four Earths. You can't party forever; especially not if you're overdrawn on your account.

Perhaps the biggest challenge is everything we don't yet know. We know a lot about what might happen in the coming decades, but not much about what happens after that. We may have already set processes in motion that will have enormous ramifications. But we can't yet know what those might be. That's why it's so hard to prepare. We have already been surprised by just how serious the effects have been with the current 1.1°C temperature increases. Just ten years ago, we could not have foreseen the extreme weather conditions and widespread droughts that 1.1°C has caused today. We had very little understanding of the importance of small temperature increases and the risk of tipping points - irreversible damage to natural systems.

The risk: Total meltdown

One potential risk we face is that we will experience a total meltdown of society as we know it. This means, among other things, that the areas where we can grow our crops will be limited, that many of the plants and animals that we know and depend on will have disappeared, and that there will be large areas where people cannot live. With the current heatwaves we are seeing, we have experienced just how lethal extreme heat can be. Add to this the ice that will melt if we reach a 4°C, 5°C or even 6°C warmer climate, which will lead to dramatic rises in sea levels. In the worst-case scenario, this could mean that our societies' infrastructure, our trade agreements, and relationships between countries will break down, masses of people will flee or die, and climate wars will lead to widespread destruction.

I expect politicians to take responsibility for this situation and recognise that we need to act because we don't know which scenario will actually come to pass. With the prospect of existential crises, we need to change both the way we talk about the situation and the way we act. It's not hard to see that we can't feed 10 billion people the way our food system is organised today. If we were to simply scale up our current food production, we would increase greenhouse gas emissions by about 90% and we would need 50% more land. This is clearly not an option. Likewise, scaling up the energy system we have today is just not an option either.

Even if the worst-case climate scenarios don't ever materialise, what will we have lost by simply making our society resilient to a future with limited resources?

We have lost control of Earth's resources

The burden doesn't just fall to politicians. Companies - and therefore business leaders - have a significant responsibility here. The main problem is not just climate change, but the way in which we currently live off Earth's scarce resources. They are limited and under heavy strain. After all, a great deal of companies are dependent on extracting minerals from Earth. Right now, many of these companies have targets such as 20% recycling of minerals or materials. But when those minerals are no longer there, there are no minerals to recycle, and that 20% will be simply irrelevant. We should be aiming for 100% recycling!

And on this matter, we cannot afford to just wait for the politicians. Businesses need to start incorporating the consumption of natural resources into their budgeting, planning, construction work, etc. They need to set price signals and calculate shadow prices for the natural resources they depend on. They need to factor in expected higher prices for the resources they will depend on in the future, because taxes will inevitably be introduced, or resources will become scarce.

We lack economic incentives to set the price of using natural resources. If we go all the way back in human history, we see that we started using money as a substitute for Earth's resources because our ancestors bought and sold from each other in kind. For a very long time, we had gold standards for our money and thus still had the connection with nature and resources, something that we lack today.

Businesses' most important capital: Nature

Now, in our "wisdom" we have completely removed money from our interactions with natural resources. But that doesn't change the fact that we can't eat money, we can't wear money to stay warm, and we can't live in money - money doesn't make us rich, but Earth's resources do. And unfortunately, they are very limited. This is a concept we just can't see in our economic models. Those models assume that we will always be able to find replacements for depleted resources. I've heard economists ask: "When will scientists find a replacement for phosphorus?". To which I reply: "Phosphorus? Phosphorus is one of the building blocks of life. It's like trying to find a replacement for air!" This is where the main problem lies. The economic models - our behaviour and our way of life - do not recognise that Earth's resources are finite.

In the future, this sensitivity will be uncovered through the use of big data and greater transparency in resource flows, making it possible to follow the entire supply chain of a company and understand the overall impact on climate and natural resources. The concept of maximising value creation will no longer be solely about financial capital, but about minimising the draw on resources for the benefit of both the company and society at large. Nature may prove to be the most important capital asset for companies yet.

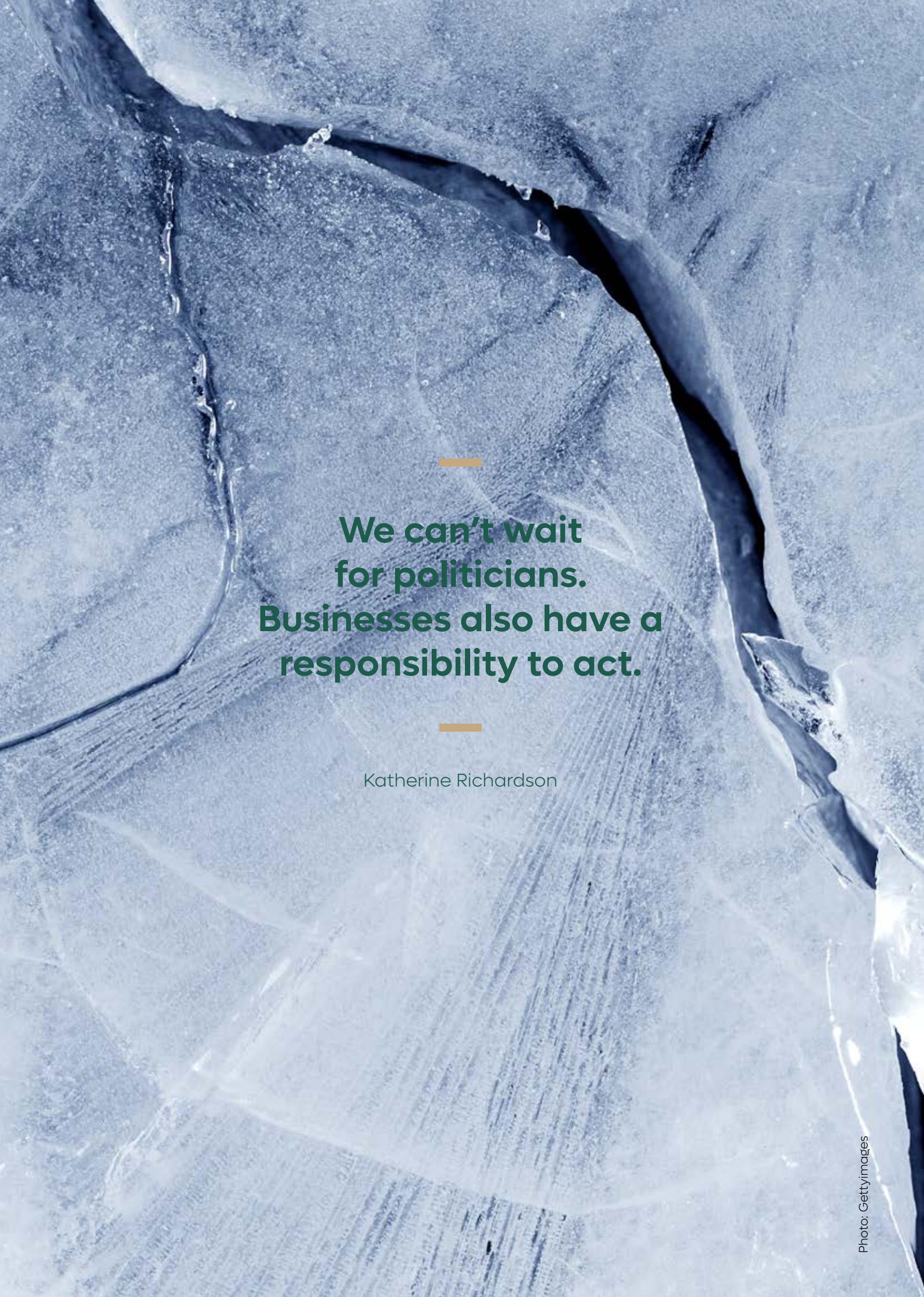
All the resources that create our wealth - that give us our energy, our food, our water, or mate-

rials for infrastructure and consumption - we get from nature. And these resources are primarily in private hands. As such, companies do have the ability to regulate their use. But right now, business leaders are waiting for politicians to set the rules. They are being reactive, even though most of them realise that this can't go on forever. I believe that companies have a responsibility to act now.

Companies' best response

We must acknowledge that we have brought this existential crisis on ourselves. And we must acknowledge that we are not above nature, but a part of it. We must abandon the idea of solving one crisis at a time. We are under the misguided impression that we have to solve a financial crisis, then a pandemic, then a war, then an energy crisis. But the true existential crisis we face is the sum of multiple crises, and it only accelerates as we keep changing focus and treating symptoms rather than causes. The current energy crisis is partly created by the climate crisis and its consequences. Among other things, we experienced energy shortages due to widespread drought, because nuclear power plants could not be cooled and had to shut down, or because there were problems producing hydroelectric power in Norway. Thus, climate problems have already had a number of serious knock-on effects. COVID-19 was caused by the biodiversity crisis, among other things, and resulted in widespread consequences that are still disrupting our supply lines.

This is just one example of the need to understand the context of crises. The best answer for companies is to build resilience and resistance to the various crises, including knowing how much they are drawing on the natural capital stock. It's not just a question of access to financial resources, but of making sure that the necessary natural resources are always available, this is what basically determines a company's survivability.

An aerial photograph of a dry, cracked riverbed in a desert landscape. The riverbed is a deep, dark blue-grey color, contrasting with the lighter, sandy and rocky terrain. The cracks in the riverbed are irregular and jagged, following the path of the dried-up water. The overall scene is one of aridity and environmental stress.

**We can't wait
for politicians.
Businesses also have a
responsibility to act.**

Katherine Richardson



See climate
disasters as new
*coherent learning
opportunities*

Disasters

Kristian Laut

Kristian Cedervall Laut is Professor of Law, expert in disaster law and pro-rector for Education at the University of Copenhagen. His research focuses on disasters, climate, and risks, and both how these are regulated and affect the law, and how we as people and societies react when they occur. In addition, he is affiliated with the inter-institutional research centre COPE and is part of the management of the University of Copenhagen's Sustainability Science Centre.

We need to talk less about what we can do about climate change and more about the need to fundamentally change the systems on which our societies are based. This is the widespread realisation in the research environments I work in. In reality, we have created a societal structure based on a notion of stability - a structure that was about distributing resources in a stable society.

However, climate change is predicted to trigger significant resource struggles. The first thing I'm worried about is war. We know from history that when harvests fail, wars start. International analyses document that the best indicator of war was a failed harvest. And harvests are going to fail in many places due to climate change. We will see food crises and thus more wars, especially in countries in sub-Saharan Africa, Asia, and South America. This will trigger huge refugee flows towards Europe. If I were to forecast the coming years, I would predict a militarisation on the border between north and south, i.e., around the Mediterranean, and a rearmament in an Asia that recognises that the future is about military muscle.

These crises will be compounded by two other challenges: firstly, an increasing instability in our governance structure. The hope that the climate crisis can be solved through global consensus will crumble and it will be replaced by global fragmentation. Secondly, many of the countries that need to reduce their CO2 emissions the most will start a race to favour their own solutions. Since they don't expect the climate crisis to be solved through global agreements, it will be all about going it alone.

We need to prepare ourselves for a cascade of crises that succeed and reinforce each other. We mistakenly believe that they must be solved separately, but the reality is that they are interconnected and require collective solutions. Right now, we're dealing with four major crises. A global epidemic like COVID-19, a widespread recession that will dominate political and economic life for a long period of time, accelerating climate change and an equally rapidly escalating biodiversity crisis. The problem is that while we are trying to contain the recession, both the climate and biodiversity crises are becoming increasingly unsolvable. This is why we need radical changes in our societal structures.

Three barriers to climate solutions

I see three huge problems occurring at the same time that are preventing us from taking action.

1. Science is just not equipped to deal with our new reality. It is not suited to predict the complex phenomena we are now facing. We have fragmented science into "single pillars" and as such we lack a unified science that can uncover the systemic challenges we face. And while climate science has been instrumental in moving policy forward, it has for many years been suspected of being politicised, and lobbyists have tried to fight it. This means that climate scientists are actually overly cautious about any messages they dare to send out. They tend to rely on an overly solid scientific basis just to avoid being accused of taking a political position.

2. There is a lack of a common narrative or understanding that can connect media, scientists, and politicians. That is, the unifying narrative that can balance fear and hope while emphasising the need to transform both society and lifestyles. This framework must be created in order to move forward.

3. We have a fundamental democratic problem because we have organised our society to solve other problems. We see this when our democracy runs in maximum 4-year circles. It's known as the "NIMTOO effect" ("Not in my turn of office"), implying that this won't affect the politician for the next three years, so it's better to invest in something that appeals more to voters, such as kindergartens. We can also see this in the so-called politician's dilemma: as a politician, you don't get value for money by investing in something that doesn't manifest itself and isn't visible to everyone. For example, if you build a dyke because you think the water is rising, and the water is actually rising, then no one ever sees any flooding due to the new dyke, all they see is that it has been very expensive. The "politician's dilemma" is a classic disaster dilemma, which means that in the politician's eyes it's better to let the disaster happen - and then step into the leadership role and position themselves as the big hero - even if it's more costly for society than preventing the disaster in the first place.

Leaders must prepare for extensive legislation

Leaders will have to adapt to legislation introduced on a large scale sooner or later. Coronavirus was a good example of this - never before has so much legislation been implemented in such a short time. We suddenly found ourselves in a new situation that needed to be regulated with the tools we had available to us at the time.

To those people who imagine it is possible to elect governments that can de-bureaucratise and de-regulate business, all I have to say to them is 'forget about it' - the complexity we are facing will mean a gigantic increase in common requirements for business.

I think few people have realised the fundamental societal shifts that will be demanded of us. Every company must assess these new conditions and decide how they will fit into this new world. There will be a shift in the relationship between public and private. That divide will no longer be able to be maintained in the same way because private actors will have to work for a public purpose if we are to effectively address climate change and its impacts. If businesses don't catch on quickly, the only option left will be to regulate them. The advice for leaders is to work on drastically reducing your company's footprint on nature and to figure out what the climate crisis will mean for your business, broaching matters such as which disruptions to global supply chains need to be addressed.

We have entered the century of disasters

No matter how you look at it, we are facing a century of disasters. We will move from crisis to crisis from now on, over the next few decades. These crises cannot be handled by concrete contingency plans such as "What do we do if there's a war in Ukraine?" Or "what do we do if there's a power cut?" It's about creating an organisation and a workplace where people work in an interdisciplinary way, a place where you want to work for the overall purpose, and there are meaningful activities. It's about being open, caring, and adaptive. All of this goes against the way LEAN and streamlined organisations have been operating in a certain reality over the last 20 years in particular. There will be a showdown between the new way of doing things and classic management ideals or models.

I was involved in an exercise in Greenland a few years ago to find out who in an organisation were the most important "network points" when the military in Canada had to communicate with the police in Denmark, who then had to communicate with politicians in Greenland. It turned out that these key network points were the smokers! That's not to say that we're all going to start smoking, but those people were the glue in those organisations in a crisis situation - the ones who managed to make quick inroads and get the finance department to work with someone else, to get the job done. It's the employees who go out for drinks on Friday night after work. You actually need an organisation with people who are open to each other, you need to create somewhere people actually want to go to work and where there's a good relationship with your boss and colleagues. This will provide a huge competitive advantage in an unpredictable world.

Coronavirus was just the litmus test - and in fact, almost all Danish companies passed: why? Because we had adaptive teams that could scale and employees who actually bothered to work together across organisations. They weren't successful because there were leaders giving orders and controlling them, but because they worked as units that could take responsibility and adapt to a new reality.

We can learn a lot from disasters

The reality is that leaders will have to navigate a world with more and more frequent disasters. Therefore, we must learn to think about disasters in a new way, for example, as a sort of 'developer fluid' that reveals how organisations function under pressure - whether we can think outside the box and collaborate across the organisation. We should use the lessons that were learned from the coronavirus crisis on how to make decisions under pressure, how to communicate and how to organise society during a prolonged crisis. Instead of seeing disasters as external disruptive crises, we can start to see disasters for what they are: cohesive, organised learning opportunities.

A photograph of a flooded park. In the foreground, a black metal park bench with a wooden backrest is partially submerged in murky, rippling water. In the middle ground, a single green tree stands isolated in the water. The background is a dense line of trees under a grey, overcast sky. The overall mood is somber and desolate.

**We have organised our
society to solve problems
other than the climate crisis.**

Kristian Lautu

A photograph of a man with glasses and a beard, wearing a light blue button-down shirt and dark trousers, standing in a lush garden. He is looking off to the side. The garden is filled with green foliage and pink flowers. A brick building is visible on the right side of the frame. The overall scene is bright and sunny.

We can't avoid more *regulation and taxes*

Finance

Peter Birch Sørensen

Peter Birch Sørensen is a professor of economics at the University of Copenhagen and former chief advisor to the Danish Economic Council and former chairman of the Danish Council on Climate Change. His research focuses on issues within environmental, resource and climate economics. In addition, Peter Birch Sørensen is vice chairman of the green think-tank CONCITO.

UN experts expect the global average temperature to rise by 2.4°C if all countries implement all the climate action plans they have promised. However, the high uncertainty surrounding this estimate means there is a significant risk that we could end up at 3°C. And then we end up in a situation that the planet hasn't been in for the last 50 million years. Anyone in a leadership position would be wise to think about the risks such a climate would pose to the world.

My own biggest fear is that we will see much more economic and political instability. Global warming may lead to wars, conflicts, and mass migrations, meaning Europe will face much greater migration pressure than we see now. It is also a valid concern that our democratic institutions may not be able to cope. In any case, our children and grandchildren will live in a more unstable world. We're already seeing the tensions that the current energy crisis is triggering - there could be other regional shocks and extreme weather events affecting energy production and other critical infrastructure. Then there will undoubtedly be severe social reactions.

The window of opportunity to keep global warming below 1.5°C has realistically already passed, so while we continue the much-needed fight to reduce greenhouse gas emissions, we must adapt to the climate change we cannot prevent.

We in the West have a special responsibility in this respect, due to our historically large contribution to the concentration of greenhouse gases in the atmosphere. Therefore, we must take on greater reduction commitments than poorer countries. Countries such as China, India, South Africa, Brazil, Indonesia, and Russia point out that the West has historically contributed the most to global warming, however those countries themselves will also have a great responsibility to face if they do not tighten their own climate policy. China is now by far the largest emitter and aspires to become the leading global power - and if it wants that role, it must take responsibility for how the world as a whole is faring - and this includes climate change.

I believe that we in Denmark will reach our target of 70% reductions by 2030, but based on our historical responsibility for emissions, it could be argued that an Indian citizen, for example, should

have a larger future CO2 budget than a Dane. This means that in practice Denmark would have to reduce far more CO2 than we are targeted.

We need to factor in the risk of a 3°C warmer climate

So far, we have focused heavily on reducing emissions, and we will soon be looking more closely at how we can adapt to a climate-changed world with a significantly higher average temperature. Unfortunately, there is a significant risk that we will have to adapt to a world that is up to 3°C warmer. Of course, we need to get emissions down as quickly as possible, but we can already see that some very significant changes have taken place in our climate systems which cannot be reversed regardless of what we do now or in the future.

The EU can play a role as a pioneering region when it comes to climate policy, but it is crucial that EU countries maintain political cooperation instead of pursuing their own narrow national interests first. The risk factors are piling up. How long will the war in Ukraine last? What will be the consequences of a prolonged energy crisis and a possible food crisis? Will we have new wars as a result of climate change? Will a new pandemic be triggered?

It is striking and worrying that many of the poor countries that will be hit the hardest by climate change are already politically fragile and at risk of heightened internal conflicts. This makes them less attractive to invest in, which in turn will exacerbate global inequality and trigger other crises. This is an example of just one of the vicious circles we can get ourselves into.

All of this means that business leaders and investors will need to think more about the political and environmental risks associated with investing in different parts of the world.

Tougher regulation ahead

A world with a more unstable climate will likely lead to more extensive government regulation. We economists would prefer to use price and market mechanisms to drive the green transition. But it is well known that in many places there is strong political opposition to, for example, a high CO2 tax.

There is also the perpetual problem of carbon leakage, the risk that if a country takes the lead on introducing a carbon tax, it may lose competitiveness because parts of its production move abroad.

A carbon tax is actually a more cost-effective tool than direct regulation such as orders and bans. Unfortunately, the costs of direct regulation are far less visible making it a politically tempting choice of regulation, even though it is in fact less effective. As a result of this, we are likely to end up with a regulatory regime that is more rigid and costly than it needs to be.

There may also be situations where problems become so acute that direct rationing is necessary, for example in the event of an acute energy supply crisis.

However, if you do what economists always recommend, and put a price on the environment and climate by introducing taxes that reflect the cost of emissions, people would then be able to choose between different goods and services based on prices that actually incorporate environmental considerations. In this scenario you would still have the freedom to choose, and taxes would be increased until we reach the climate and environmental goals we need to achieve. It would not be an encroachment on personal freedom. It would confront consumers directly with the environmental consequences of their choices. That would be my preferred solution.

I do recognise, however, that it is politically difficult to impose taxes that are actually high enough to achieve this. And it can also be administratively difficult to impose a tax in some places. So, we may end up living with a more rigid regulatory regime with orders and bans or even, in extreme situations, with rationing. This will feel like a direct encroachment on personal freedom, but that may be where we end up if voters and politicians don't go the economists' preferred route.

We need new economic models

From an economics perspective, it has long been a problem that environmental economics, and more recently climate economics, have remained marginalised disciplines. The economics profession has been dominated by some excellent

American researchers; but, unfortunately, they have just not been very interested in the environment and climate. This has affected the way we teach, with the consequence that environmental economics has not had the focus it should have had. I'm working to rectify this as head of a project on Denmark's green GDP. I'm also involved in leading a project on the development of a climate economic model for the Danish economy - called GrønREFORM (green reform) - which will be ready soon. It will help us calculate the effects on different economic activities from emissions of greenhouse gases and other pollutants.

In the project on Denmark's green GDP, we are adjusting the traditional GDP to account for a wide range of environmental effects. This allows us to assess whether economic growth is occurring at the expense of the environment, and we can also gain a better understanding of which ecosystem services - i.e., services from nature - are important to supporting our economic system. There is still work to be done to map the importance of biodiversity, for example, but we have now developed the relevant theoretical tools. Our task going forward is to incorporate them more systematically into existing models as we get more and better data. This is good progress, but we must also recognise that economic activity will continue to have environmental and climate impacts that are difficult to capture and measure.

The new green calculation methods will hopefully lead to a greater integration of general economic policy with environmental, energy and climate policy. But in any case, we need to consider the risk of a world where the average temperature is 2-3°C above pre-industrial levels. Therefore, I think future reports from the IPCC should focus more on describing the consequences of exceeding the Paris Agreement's warming targets. I also believe it should be mandatory that each new IPCC report and each annual progress report from the Danish Council on Climate Change should trigger a debate or hearing in the Danish Parliament among leading politicians on how they relate to the report and what Denmark and Danish business can do.

A helicopter is shown in silhouette, flying over a dense forest and spraying a thick stream of water downwards. The scene is set against a warm, golden-orange sky, suggesting a sunset or sunrise. The forest below is dark and silhouetted against the bright sky. The overall mood is one of environmental action and urgency.

**A world with a more
unstable climate will
likely lead to more extensive
government regulation.**

Peter Birch Sørensen

If no one dares
to lead the way,
*nothing will
happen*



Behaviour

Michael Bang Petersen

Michael Bang Petersen is Professor at the Department of Political Science at Aarhus University. His research interests include political psychology and human behaviour, including its importance for a well-functioning preparedness, e.g., for handling the climate crisis. In 2020, he became head of the large research project Hope, which studied and analysed the behaviour of Danes during the COVID-19 pandemic.

The biggest problem regarding the climate crisis is that it is a so-called "collective action problem". This means that the only way to solve it is for everyone to take action at the same time. Which also means that we can quickly become paralysed and not achieve anything. Everyone is waiting for everyone else; we don't want to contribute ourselves for fear that others won't do their bit. This makes the climate crisis a huge psychological, behavioural and leadership crisis.

But we don't have the time or money to stay paralysed by this collective action problem. Research shows that such crises are best handled if some individuals take the initiative and move ahead with solutions that then trigger movements in the collective. Someone has to take the lead. This applies to citizens, businesses, and nations alike. If Denmark takes the lead, we will have a far greater impact on the climate than simply the ensuing reduction of our own emissions, which would have a rather limited impact in a global perspective. It's about leadership at all levels and understanding how to break the collective action problem.

This is why value-based communication is crucial. It is basically about having to accept costs that, in isolation, do not alleviate the climate crisis, but where we take a stand to show that we do not want to just silently and passively watch the climate crisis accelerate. I could draw a parallel with Doctors Without Borders, where I have spoken to representatives who have been in situations where they invested blood, sweat and tears, knowing that it did not solve the real problems. The main motivation behind their action was that, as doctors, they couldn't just stand by while children were dying. Taking action was an ethical imperative. It is essentially the same value-based leadership that should motivate Denmark to take the lead. We will not solve the climate crisis by doing so, but for ethical and moral reasons, it is unacceptable to do otherwise.

But we also have a special obligation because we in Denmark and the West have benefited from the growth that is one of the underlying causes of the climate issues we are facing. Therefore, we in the West should bear a significantly greater burden. And we must recognise that it

is necessary and in our own interest that we go much further and take on much greater costs in the part of the world where we live.

Disaster communication must empower us to act

Leadership is important in a crisis. My research shows that this was the case during the coronavirus crisis. It was a serious crisis that depended on people's behaviour. What we saw was that you can – maybe not threaten people - but speak to them in very clear terms. In communicating disaster preparedness, it's crucial to focus on the possibility that the disaster can be averted. This is where people's motivation can be found - not just by describing the nature of the disaster. Where is the potential for action and opportunities? With an accelerating climate crisis, it's about continuously communicating the opportunities, even though the world will be a very different place in which to live.

The vast majority of the population is worried about this situation, but they lack answers as to what they, as an individual citizen, can do to help. The most important lesson from research on the coronavirus crisis is the crucial belief that your behaviour can also affect others and contribute to solving the crisis. That belief supersedes any fears you may have. There is a clear need for leadership that can describe a strategy where you as a citizen can see yourself as a part of a bigger, more comprehensive plan. In that situation, I think people would be willing to do quite a lot. The key is to display very concrete leadership that says: "this is what you need to do, and if you do that you will be helping to solve the problem".

My concern is that there is a lot of talk about the consequences of climate change. But very little concrete leadership when it comes to politics. Besides eating less meat and cutting back on consumption, we are met with very general recommendations – and those recommendations are left open to individual interpretation.

Someone has to lead the way. This applies to citizens, businesses, and nations alike.

Michael Bang Petersen

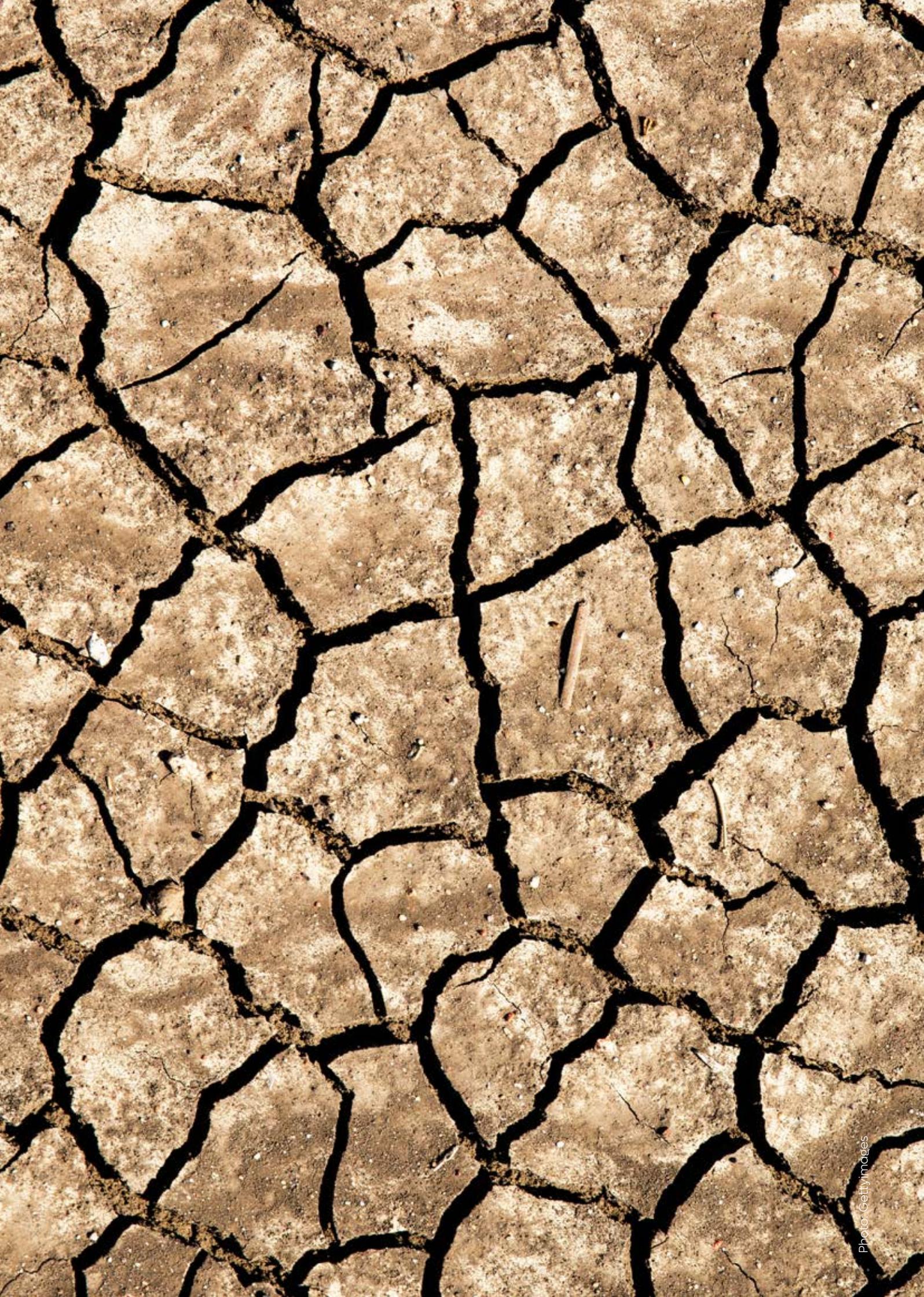
Leadership must also mitigate panic and polarisation

The climate crisis is, however, a different type of crisis that is not as obviously immediate as coronavirus. It places special demands on leadership. We need more of the kind of leadership that Danish Prime Minister Mette Frederiksen showed at the press conference on 11 March 2020, when the government shut down large parts of Denmark due to the rising coronavirus infection. And communication needs to be even clearer when it comes to the climate crisis. Because this crisis is more complex and more severe.

There is a need to assess disaster scenarios and use them as a starting point to get people in power to sit down together and commit to taking action. This requires both private and public actors. The private actors must put pressure on politicians because it is largely those private actors who will have to incur the costs involved. They must be willing to do so. But if the project is to have the necessary democratic legitimacy, it is the politicians who must ultimately outline the project. In this way, it requires everyone who has power in a society to come together.

We will come to see climate as a new polarisation risk, because anti-systemic forces always direct their attention towards the political system. The sheer intensity of the political focus on climate means that anti-systemic forces and conspiracy theorists will surely take to the streets in demonstrations. That's exactly why leadership needs to establish the basic understanding in the population. It is now that the basic support for taking action must be established, rather than waiting for the state to be forced to use more heavy-handed methods, which are far more likely to result in a harsh backlash. We will probably see polarisation in countries like the US and France, but we do not necessarily have to in Denmark, provided politicians are able to explain precisely what is necessary and why.

It is crucial that there is consensus at the elite level. If you can establish consensus among the political and business elites, the vast majority will essentially follow that consensus - just like with coronavirus, where there were ultimately only scattered pockets of resistance among populations.



A woman with dark hair, wearing a black long-sleeved top with a grey mesh detail at the neckline, stands in profile against a dark brick wall. She is looking towards the right. The lighting is dramatic, with strong shadows and highlights. A small horizontal bar is visible above the main title.

Businesses *also carry out politics*

Geopolitics

Karen Lund Petersen

Karen Lund Petersen is Professor II at the University of Stavanger, Norway. Her research interests include global risk and security, climate change, the organisation of preparedness, intelligence, resilience, and political risk analysis.

Who is responsible? This is the burning question when dealing with disasters like climate change. At first glance, it seems to be a political responsibility. Unfortunately, fewer and fewer people believe a political breakthrough will come. At the very least, there is a waning belief that it could ever happen under the auspices of the UN and thorough major international agreements. Therefore, more and more people believe that responsibility must be decentralised to individual communities, businesses and citizens.

This means, among other things, that companies should prepare for a new, larger political role in this crisis. As a consequence, the private sector will be held accountable for its political decisions and efforts to a much greater extent. And this is reasonable, as the private sector is responsible for most CO₂ emissions and must therefore also contribute to solutions. This will, however, require a better understanding of what political accountability actually entails for business leaders.

The challenge lies in the fact that we are then asking companies for private sector solutions to a problem that has basically been created by capitalism. This is a paradox that the private sector must address. Many people – even those within the private sector – are starting to talk about ‘de-growth’ (i.e., setting limits to endless growth) and thus offering a counter-response to capitalism, i.e., a rejection of the idea that solutions can be found within a traditional market economy logic. This raises fundamental questions about whether the market is capable of coming up with the necessary solutions and whether the climate crisis can be solved on market economy terms.

But if the market alone can’t do it, what can? We risk finding ourselves in a vacuum where no one really takes responsibility: who will be in charge of the grand masterplan? Who will ensure progress? It may turn out that the biggest challenge of the climate crisis is that everyone is expecting someone else to solve it.

Businesses also carry out politics

The starting point of my research is that companies also make policy. Climate policy is already being made in companies and this will become more so as the climate crisis accelerates. When politicians say that “private companies make technologies and we make policy”, I don’t think that’s necessarily true. Technology is politics. Management is politics. When it comes to climate change, it is very much politics when companies decide to – or not to – implement new business models or initiate new technological solutions.

The same is happening in the area of security policy, where we see that companies are increasingly having to follow security policy that is aligned with national interests. This is an indication that more and more political agendas may move into executive and boardrooms – almost whether they want to or not. Having said that, companies may also have a vested interest in exerting greater influence on political decisions.

It is natural to question the extent to which society can trust companies to have a responsible policy, for example in the area of climate. Let it not be forgotten that the new role and responsibility of companies does not relieve politicians of their responsibilities or of the task of defining the regulatory framework; they will just outsource solutions to a much greater extent.

Furthermore, companies’ involvement and participation in the management of major societal crises will be closely followed by a highly vigilant and critical public, which also includes politicians, investors, media, NGOs, activists, and others. Therefore, a different kind of transparency around corporate behaviour will become a strong self-regulating factor.

Three ways out of the climate crisis for leaders

One solution is to highlight the need for new forms of leadership in business. In my research, including a review of a large number of American business magazines, I have identified three paths that leaders can take today in terms of climate:

1. The conservative path:

Many leaders think they have to create a future in the image of the past. That is, to continue as before and work with ideas such as CO2 capture and storage, more nuclear power, securing coastlines, technological fixes to maintain the current economic order. This happens especially in American conservative circles but is also seen elsewhere.

2. The evolutionary path:

This is where company management gradually changes focus, for example, by reporting through standards, certifications, and compliance. This means streamlining internal processes and incrementally transforming the company. Sustainable goals are pursued, but within a clear market economy capitalist logic. It will push the world towards sustainable goals through incremental steps.

3. The activist path:

This path has become more pronounced - especially in media such as the Harvard Business Review - and is about radically changing the way we think about capitalism. It's a bottom-up movement and is based on the idea of de-growth and disruption, but with an activist logic. Examples of this type are CEO activists like Paul Polman, the former CEO of Unilever. The argument is that if we can get the company to think circularly, implement new business models and incorporate reputation into their risk practices, we can revolutionise capitalist market logic. This is the radical way of thinking and is more of a grassroots movement.

The revolutionary path requires a new kind of leadership. That's why we're increasingly talking about the activist CEO. That is, a CEO who recognises and actively pursues more visible leadership. As well as having its benefits, it also presents challenges - depending on how the role is played and how authentically and credibly CEOs express themselves.

Who do you want to be in the future?

Something that will be more likely to provide benefits, or indeed present challenges, is reputation. It will become a very important capital in the future and should be monetised with as much care and precision as financial capital. Analyses show that a significant part of a company's value is determined by its reputation. One single high profile PR disaster can quickly reduce a large part of a company's value.

We also saw this in Denmark with the war in Ukraine and the companies that faced a reputational PR disaster because of their economic activities in Russia. Just because you are a private player, does not mean you are spared from any political backlash. You have to consider your potential reputation. You can't assume that the climate crisis is not relevant to you because you don't produce anything that is harmful to the climate, or you are a large company, or you are otherwise highly visible. You have to constantly consider the "potential self". That is, who you want to be and how to become that. The idea of your "potential self" is here to stay. It is part of the logic of uncertainty that is particularly prevalent in security policy, where we don't know what the world will bring - whether it will be a pandemic, climate disaster, war, or terrorism. But the answer is about deciding for yourself what you want to be known for - what reputation you want to have.



**Businesses are expected
to play a new and much
larger political role.**

Karen Lund Petersen

A woman with short blonde hair, wearing a dark jacket and a brown scarf, is riding a bicycle on a paved path. The path is bordered by a metal railing. In the background, there is a body of water with several wooden posts or buoys. To the left, there is a modern building with a glass facade. The sky is clear and blue.

We have to rethink *political decision- making processes*

Climate policy

Connie Hedegaard

Connie Hedegaard is chair of the board of the green think-tank CONCITO and the climate fund KR Foundations. She is also a board member of the European Climate Foundation, Danfoss and the Sustainability Council at Volkswagen. Connie Hedegaard was first elected to the Danish Parliament in 1984 for the Conservative People's Party. In 2004 she was appointed Minister for the Environment and in 2007 Minister for Climate and Energy. From 2010-2014, she was also the first European Commissioner for Climate Action.

The climate crisis confronts us with a major paradox: while we are moving towards catastrophic scenarios, many politicians are trying to convince people that their lives will hardly change as we strive to solve the climate crisis. It will lead us into a dangerous cul-de-sac of division and polarisation if we don't correct this perception in time.

In the times we live in, it's just insanely difficult to predict where we're going. Much depends on how we deal with the crises we face right now. Unfortunately, this uncertainty can lock us into a path that is maddeningly hopeless in the belief that we can keep to a 1.5°C temperature rise target. I personally have never believed in that target. That target was set purely for political reasons and has therefore never been met. On the other hand, I believe that the current crises can push us in the right direction by motivating a number of important initiatives focusing on raw materials, developing new materials, new technologies and circular processes. In other words, completely different ways of producing.

We all have a responsibility to solve this problem - politicians, businesses, investors, researchers, and consumers. This is especially true for those of us in the affluent part of the world. We need to change our consumption and our mindset about what a good life actually is. That's why I think it's dangerous to maintain the notion that this can happen without requiring substantial behavioural changes.

The most serious and overlooked polarisation

There is a huge need for politicians to do more than just set targets and introduce regulation, such as a price on CO₂. We need to prepare ourselves to live in a completely different way and work with completely different pricing mechanisms. We need a complete overhaul of the way we tax consumption and production, with significant rewards for those who move in the right direction and the opposite for those who do not. This will require a joint dialogue on behavioural change and what a good life really is in the 21st century, what kind of notion of growth and values we should focus on.

If politicians and businesses don't succeed in this task, I fear that we will see a huge polarisation within society. When politicians argue that the transition must not cost anything in terms of way of life, it is usually because of the fear of the 'yellow vests' (demonstrations in France against climate taxes on petrol, ed.), increased polarisation and losing popular support. The paradox is that instead we risk another and far more dangerous polarisation: young people becoming not just more activist but more frustrated, some even radicalised, while others give up faith in the system and believe it needs to be completely reinvented. We could spend 10 years discussing this, but we don't have that long. Therefore, we must try to reach a broad consensus on where we want to go and not only set the goals, but also agree on how to get there.

Sluggish systems need to be challenged

We must also challenge the sluggish political systems and require a break with the zero-error culture that characterises administrations and means decision-making processes become bogged down. Setting an end date for the extraction of North Sea oil, planning energy islands and 150 GW of offshore wind, holding a Baltic Sea summit and investing in Power-to-X are all fine and dandy initiatives. But it's still a relatively small number of people sitting in public offices who will have to actually implement any changes.

When Ursula von der Leyen said at the offshore wind summit in Esbjerg in 2022 that permits must be granted for offshore wind development within certain zones within a year, it was left to a - let's say - 32-year-old administrator at the Danish Energy Agency to find out what this actually meant for the Birds Directive, the Habitats Directive and all those other bureaucratic considerations. Despite everyone saying what they wanted to do, it will just still take an incredibly long time for change to actually materialise. This is the case with wind farms or solar panels. Or when the electricity grid for electrification needs to be brought to the countryside, across a farmer's field with kilometres of connections. Change must be democratically legitimised so that citizens feel involved.

Need for a national operational staff

If we don't find more effective ways to do this without losing democratic legitimacy, it will become abundantly clear over the next three to four years that it is one thing to have ambitions, but it is quite another to fulfil them. Failure to deliver on promises will create a deep crisis of confidence, which is already happening on many levels.

The challenge is that we need to integrate more of the solutions – and to see them in a holistic perspective. We haven't been good at that up to now. But nonetheless, that's what needs to happen if we are to have any hope.

There is a need to completely rethink the political decision-making processes around the climate crisis. We might take inspiration from the "Situation Command Centre" that coordinated the many activities during the coronavirus epidemic. A national operational staff was established that included ministries and authorities, private representatives, and retired experts with specialised experience. On one of the first days, for example, they realised that there wasn't enough hand sanitizer. People looked at each other and asked: who can take care of that? A former CEO from Novozymes could. It was just an example of how, if we know it's urgent enough, we can actually get people together and say: "This task must be solved, now".

The climate operational staff must be anchored in the state, preferably the Ministry of State or the Ministry of Finance to be able to avoid getting bogged down in bureaucratic barriers.

The new role and responsibilities of leaders

Businesses have a responsibility to provide the solutions and innovation that demonstrate it is possible to live your life in a fundamentally different way while maintaining modern conveniences. In the coming years, companies must therefore reach out further and wider with their solutions, which means they have a huge communication task on their hands. This is a particularly difficult task for business leaders.

Right now, they are still buried in logistics issues: the aftermath of the coronavirus lockdown, materials that didn't arrive, pandemics, energy prices, inflation, skills challenges. In a situation like this, it is extremely difficult to get leaders to take the long view.

The problem is particularly acute for the 95% of Danish companies that are small to medium-sized. Many of them are running at a loss and don't have the capacity to take on such tasks in a time of crisis. Small businesses know they need to do something, but they don't know what. They will soon be faced with these demands however, as subcontractors to larger companies. It would be nice if the various industry organisations were better at equipping companies to solve such complex challenges.

In general, however, I believe that the climate crisis unlocks great opportunities for Denmark to position itself as a pioneer. Therefore, I don't buy the argument about leakage and loss of competitiveness. There is empirical evidence that we have benefited greatly from being at the forefront in a number of areas. It really would be strange if, having been a pioneer in investing in environmentally-friendly products and renewable energy for decades, we were to be stuck in the middle of the pack just as the rest of the world starts recognising the green agenda and demanding our products.

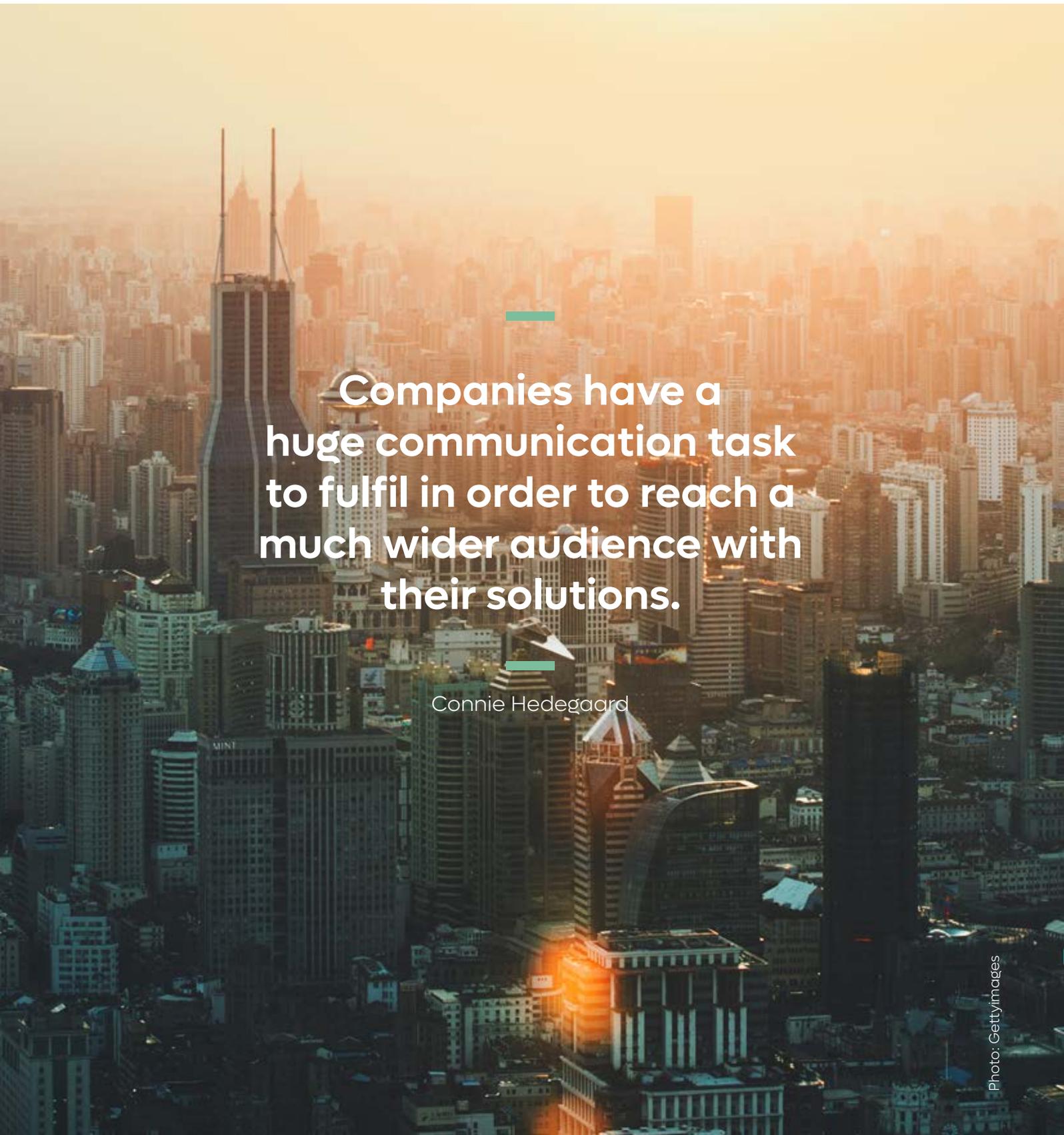
Greenwashing becomes a big issue

Polarisation and sluggishness will also increase the risk of greenwashing, which is going to become a big issue very soon. There is a proposal for a new marketing law in this regard because the consequences for greenwashing are far too lax currently: there should be such a huge reputational cost to greenwashing that it becomes unattractive to ever do it in the first place. Organisations that fear being hit by tougher legislation on greenwashing and fight against it on the grounds that the rules are unclear, should instead proactively contribute to clearer guidelines.

Greenwashing is becoming a hot topic because many NGOs want it as their main focus area. They are getting fed up with seeing companies coming up with climate goals, setting ESG targets,

talking about sustainability, etc. and then not following through on their targets. Therefore, reputational risks will certainly grow. Take finance as an example. It's good that many pension funds and banks have started to take climate change much more seriously by setting targets and offering green investment options. But when the World

Wildlife Fund (WWF) produces reports that show that there is no action behind those companies' words, there will be a cost to reputation which will ultimately impact their ability to attract young labour. Surely this is something to be avoided at a time when good minds are in short supply.



Companies have a huge communication task to fulfil in order to reach a much wider audience with their solutions.

Connie Hedegaard

Who and what *should you trust?*

Information

Rebecca Adler-Nissen

Rebecca Adler-Nissen is Professor of Political Science at the University of Copenhagen. Her research interests include international politics and diplomacy, citizens' susceptibility to misinformation and fake news. She is currently leading the Diploface project, which deals with the conditions of international cooperation in an online universe. In addition, she is a former Head of Section in the European Policy Department in the Ministry of Foreign Affairs.

The more important an issue is to politicians and society as a whole, the more misinformation there will be. This poses a major problem for politicians, leaders, and businesses when it comes to the climate crisis. If climate challenges become larger and more complex at the same time as the quality of available information decreases, then a gap in understanding emerges. Along with the gap in action, this may prove to be another major challenge for the green transition. The green transition cannot tolerate information pollution, as policy solutions rely on a well-informed public.

The war in Ukraine shows how worrying misinformation can be: right now, we're seeing a lot of misinformation about the war. Italy was extremely exposed to this in the run-up to their recent 2022 elections, resulting in a shocking 35% of Italians believing that this conflict was primarily the fault of Ukraine, the EU and the US¹. Fortunately, we know a lot more about misinformation than we did even 10 years ago - how it works, how it spreads and who is most exposed to it².

The climate crisis is also an information crisis

Climate change is one of the topics on which there is perhaps the most misinformation, precisely because there is so much at stake, and so much that challenges the population and our way of life. Misinformation can come in many formats. One example of this is the tobacco industry. Historically, we have seen them - and other sectors - invest large amounts of money in challenging science to advance their own financial interests. We also see this on a political and ideological level in places such as in the US, where being green has come to be considered unpatriotic in large parts of Texas.

In other words, there will need to be some alliances with media and especially tech companies, who already take responsibility for information when it comes to violence or hate crimes, but do not yet take responsibility for climate misinformation.

Information cycles must be invested in as if they are critical infrastructure, just like our energy supply. That's why it's important that quality information is supported and widely accessible. Quality information does not write itself. These days,

we are discussing public service in Denmark and whether to cut back on, for example, science journalism. If leaders do not get the right information about matters such as the climate crisis, it may be the case that this is due to a lack of easily accessible, easily digestible and credible information. We risk losing momentum in the green transition, in part because the business community is simply unprepared. We know that education and strong public service can help make us more resilient in the fight against misinformation.

The new challenge of misinformation: Deepfakes

The biggest change from the times when we only had two channels and three local newspapers is that today we no longer have any control over who influences us and where the information we receive comes from. In the near future, we will have problems with so-called deepfakes, where people receive misinformation that is much more convincing than that which we might see today. Even those within the media or researchers may not be able to tell that it is not actually Mette Frederiksen or Al Gore speaking in the video they are watching, but that it is in fact a manipulation. This will be a colossal challenge for the green transition as well as action will only have to come when most people can agree on a diagnosis of the problem and when they accept the fact that we need to do something about this problem now.

Earlier this year, over a thousand French journalists signed a charter stating that they will not engage in the classic journalistic presentation of "this side and that side" in their climate coverage³. This means that they will not uncritically be microphone holders for disingenuous climate sceptics, but instead they will take climate research and the latest knowledge seriously. They want to communicate more responsibly and in a more accessible way. It's quite thought-provoking and innovative and this approach could win over a new audience if others were to follow suit.

¹ <https://ecfr.eu/publication/peace-versus-justice-the-coming-european-split-over-the-war-in-ukraine/>

² <https://doi.org/10.1093/joc/jqz006>

³ <https://climate-concern.com/french-journalists-commit-to-more-responsible-reporting-on-climate-issues/>

Without credible information, companies cannot solve the climate crisis.

Rebecca Adler-Nissen

Tech companies rule our everyday lives

One major challenge we face is that most of our information is online and therefore not anchored in Europe or Denmark, but in Chinese or American tech companies. This obviously has an impact on our communication with the public and as such is a challenge that needs to be addressed quickly.

Fortunately, there are plenty of interesting initiatives in the pipeline. In relation to technology control, legislation is on the way from the EU system, in which Danish parliamentarians are very active, and this will have an impact on the quality of public debate online. There will be requirements ranging from age verification to setting limits on harmful content - especially for large companies.

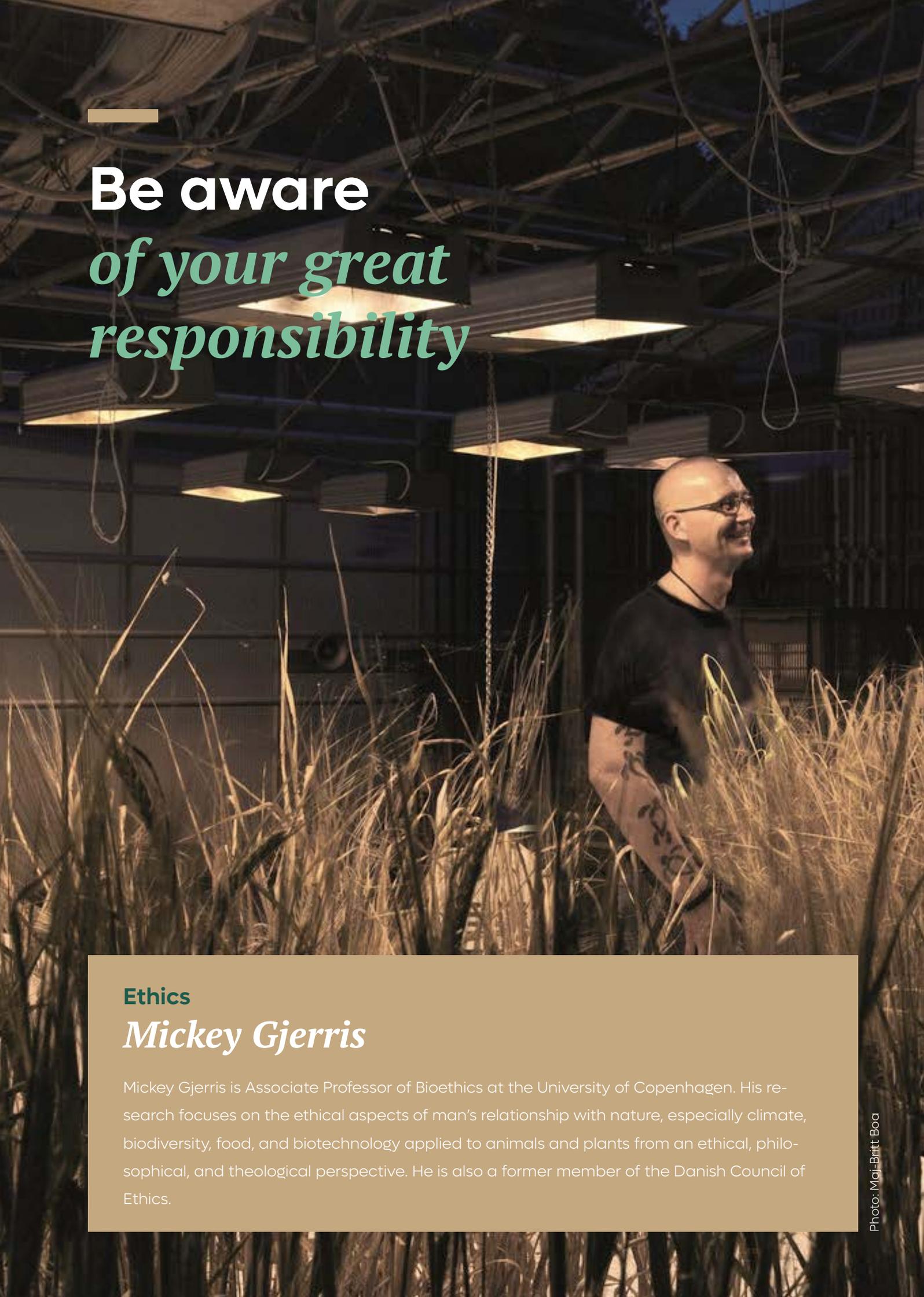
One of the problems is that not only do we get bad information, we also view the wrong kind of information. We spend our time watching cat videos instead of reading about the climate crisis. This is due to the "attention economy" that tech companies create and monetise. In general, there is a need for tech companies to change in many ways, including regulating access to the data they collect about us. Right now, we're getting addicted to junk, to put it bluntly.

Fortunately, in Denmark, it is perhaps only 10-15% of people who are most exposed to misinformation. But the quality of what "the silent majority" of ordinary citizens and leaders are exposed to simply must be improved. It affects our ability to act and also impacts not only our general well-being, but also our social anxiety. It has been well documented that social media makes us more lonely, anxious, and insecure and it also reduces our sense of community.

I would hope that the next wave of tech regulation is not just about privacy and rights, but also the harmful effects that certain content and forms of "news" have in creating digital addictions. You can't act on the climate crisis if you're depressed. It's such a big problem now that some of the people at TikTok and Facebook blatantly know that this is addictive for both young and old but do nothing to remedy the situation; they will be judged for this in the future. We could perhaps draw comparisons with the tobacco industry, where it also took a long time to succeed in the fight for an effective policy on something so harmful.



Photo: Gettyimages

A photograph of a man with glasses and a black t-shirt standing in a field of tall, dry grass. The background is a dark, industrial-style ceiling with several square pendant lights hanging from it. The man is looking to the right with a slight smile. The overall mood is contemplative and artistic.

Be aware *of your great responsibility*

Ethics

Mickey Gjerris

Mickey Gjerris is Associate Professor of Bioethics at the University of Copenhagen. His research focuses on the ethical aspects of man's relationship with nature, especially climate, biodiversity, food, and biotechnology applied to animals and plants from an ethical, philosophical, and theological perspective. He is also a former member of the Danish Council of Ethics.

I see two options when it comes to the future of the climate crisis - either we wake up and realise we're all on the same little 'spaceship' in the universe, or we build higher walls. The latter is probably the most likely. We tend to turn inwards when threatened and try to protect what's closest to us. This can happen very quickly. For a long time, we have been "playing" with the climate as if it were a thermostat that we can turn up and down as we please, and we have overlooked the danger of tipping points - i.e., irreversible damage to nature and the climate.

Together with researchers from the Technical University of Denmark, I recently reviewed what has happened at the major climate summits since 1972, the year of the UN's first major conference on the environment. It is becoming increasingly clear that absolutely nothing has happened in terms of solving the climate and biodiversity crises. The challenge is that there are far too many participants at the summits who have an interest in maintaining yesterday's world. Either because it secures political influence for them or ensures that their companies can continue to make money. The fossil fuel industry is raking in money - and is still being subsidised with billions of dollars from governments around the world.

We are on the verge of the great "revelation"

But it might create some optimism if the leaders we elect to solve these problems were to recognise that we can no longer delude ourselves that we are green world champions in our part of the world. If that happens, I think we might be able to do something. There will be increasing pressure from below, which means that those politicians who have pretended to be green but allowed huge emissions to continue in order to preserve a minimal number of jobs at a handful of companies will be exposed. Hopefully, this will trigger some degree of change.

Winston Churchill once said that you can fool some of the people all of the time, you can fool all of the people some of the time, but you can't fool all of the people all of the time. Science is becoming more and more unambiguous; the cries of scientists are becoming more and more desperate. I have so much faith in human rationality that at some point our population with its above average level of education must realise that continuing in this way just doesn't make any sense.

The truth is that we in Denmark are nowhere near the 70% target we have set. We are protecting ourselves against rising sea levels by building Lynetteholm (an artificial island off the coast of Copenhagen), with a number of climate-damaging consequences - increased globalisation, increased transport of goods, increased urbanisation, increased growth. It doesn't make sense. I think - and this is my hope - there are limits to how long you can keep deluding people. There's a limit to how long large parts of the business world can pretend to be green and sustainable whilst selling more products that we don't actually need. Leaders, wherever they sit in the system, have a responsibility to tell the truth.

Leader: Acknowledge your responsibility

The more power you have, the more responsibility you must also take on. That's why you, as leaders, need to recognise the gravity of this situation. And then if you don't act, you're either being deliberately naïve or you're making the wrong decisions based on a limited insight, which, while it may be well-intentioned, is just not good enough in the current situation. It is indisputable that, as a leader, you have a responsibility to familiarise yourself with the available knowledge and research and to operate with a precautionary principle.

As leaders, don't see yourself in a limited role - you have a huge responsibility.

Mickey Gjerris

My advice to leaders would be not to see themselves in a limited role, but to recognise that they have a special responsibility because they have great power, and it must be used for the good of others. And what would be for the good of others would be to minimise the negative consequences of the ecological crises we are facing. Therefore, with the power that leaders now have, they need to figure out how they can contribute to making sure action is taken; they must not just pretend that we are on the right track, which only serves to exacerbate the problem.

The leader of the future has a vision of where we're going - and gets their employees on board. Work isn't just about earning money so you can go home and survive. Work should also give people the opportunity to contribute to something that is significant and important in society. That, I believe, is a concept that will really engage people.

We need to develop a whole new culture

No one promised us that there were any solutions - and certainly not easy ones. Centuries of culture and societal formation must be radically reversed - and this will be incredibly difficult. It's not something you can do with one single political decision or a climate march.

In the short term, experts say that we should tax what we want less of - in other words, a carbon tax. But when we finally got a carbon tax in Denmark in the summer of 2022, it was so low that it is unlikely to have any impact.

In the long term, we need to educate each other so that we can learn to take care of the planet. This is something that needs to permeate learning right from nursery school, all the way through the education system and into adult life, in the form of conversations and education. We need better and clearer ideas about where we want to go. Is the best solution we can come up with really that we just put a wall up around us so we can be left alone to carry on watching a match every Friday night, while worrying about our to-do list? Or do we want a society where we focus on the values that we always say are important to us: love, family life, friendships, nature experiences?

Despite all of this, I believe there is reason to be cautiously optimistic. We can see that something is happening from the ground up, because the political system is being pressurised by the people. It's something I see when I give lectures. It becomes clear to me that this isn't just an issue for the young activists who chain themselves to the Great Belt Bridge, but there are plenty of communities who want to get involved in all kinds of ways.



Photo: Gettyimages

Glossary of terms

Biodiversity

The planet's biological diversity

Biodiversity is the variety of life found across the globe. Biological diversity is made up of all the species of animals, plants, fungi, bacteria, and other living organisms found on land and in water. Climate change is threatening the planet's biodiversity, and many scientists are talking about a new mass extinction of species similar to previous extinctions in Earth's history - this time caused by human activity. According to the IPCC, with a temperature increase of 1.5°C, we risk extinction of up to 14 percent of terrestrial species.⁴

Circular economy

Allowing materials to circulate and be reused instead of being thrown away

In a circular economy, materials and products circulate instead of ending up in incineration or landfill. In other words, it's a way for companies to minimise their material use. We are familiar with this from the bottle deposit system or when we buy other types of recycled materials. For years, we have been producing and consuming in a linear mindset where products are produced, consumed, and discarded. But if we are to create a sustainable future, we need to produce in a much more circular way.

Carbon tax

A tax that makes it more expensive to emit carbon dioxide

A carbon tax is a political tool to reduce greenhouse gas emissions. The tax makes it more expensive to emit CO₂. In Denmark, a gradually increasing CO₂ tax on industry will be introduced from 2025 until 2030.

CO₂

The greenhouse gas carbon dioxide

CO₂ is a naturally occurring gas, but if there is too much of it in the atmosphere, the atmosphere will heat up. This is also known as the greenhouse effect because CO₂ traps Earth's heat so that it cannot escape into space. This is why CO₂ is also called a greenhouse gas.

COP (Conference of the Parties)

The UN's annual climate conference

The COP is the annual climate summit held between the 195 member states that have joined the UN Framework Convention on Climate Change. At the meeting, the results of current climate action are evaluated and new binding additions to the agreement can be negotiated. Since 1995, 26 meetings have been held. In 2022, COP27 was held in Sharm el-Sheikh and COP28 will be held in Dubai in 2023.

Deepfake

Deepfake is a term for manipulated videos, images or audio recordings that are produced using artificial intelligence. This type of digital forgery technology makes it possible to distort reality, for example, by distorting a person's face so that their facial expressions match another audio track. With deepfakes, you can make a person appear to do or say things on video that never actually happened.

Greenhouse gases

Type of gas that retains the sun's heat

Greenhouse gases is a term that covers a range of gases that are able to retain heat in Earth's atmosphere and thus help create a greenhouse effect on Earth. The greenhouse gases that are relevant in climate accounting - and thus for business - are:

Carbon dioxide (CO₂)

The most dominant greenhouse gas

- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)

ESG

Reporting on the environmental, social and governance impact of companies

ESG stands for 'Environmental', 'Social' and 'Governance' and is also known as the 'non-financial figures'. They are used as metrics to report on and assess a company's sustainability in terms of how well it performs in environmental, social and governance sustainability - for example, in relation to CO₂ emissions, water and energy consumption, gender equality, sickness absence, employee satisfaction and gender equality in management and board.

Phosphorus

Phosphorus is an element and a limited resource in the world. Phosphorus is used as a plant nutrient by agriculture, where it is added to fields through fertilisers and agricultural feed. There is a need to reduce phosphorus emissions as it pollutes the aquatic environment. A higher content of phosphorus in agricultural soils increases the risk of increased phosphorus inputs to lakes and fjords.

Gulf Stream

A warm ocean current that runs from the Gulf of Mexico into the Atlantic Ocean

The Gulf Stream is the fastest ocean current in the world and flows from the Gulf of Mexico, up the North American coastline and out into the Atlantic Ocean. The Gulf Stream brings warm water to the east coast of North America and the coast of Western Europe. Without the influx, these areas would have a significantly colder climate. Melting fresh water from the ice sheet, caused by the rising global temperatures, may lower the salinity of the northbound part of the Gulf Stream, which lowers the heat input to Northern Europe, causing significantly lower temperatures.

Greenwashing

False green product labelling

When you promise more than you actually do in the climate and environmental area. There are increasing demands on what it takes for a company to call itself or its products green or sustainable. The Danish Consumer Ombudsman has recently published a guide to green marketing that, among other things, requires a full life cycle analysis (LCA) of a product that can document environmental impact before it can be called green or sustainable.

IPCC (Intergovernmental Panel on Climate Change)

United Nations Intergovernmental Panel on Climate Change

The UN Intergovernmental Panel on Climate Change was established in 1988. The main task of the Panel is to provide a scientific assessment of the extent and understanding of climate change and its impacts. The panel consists of three working groups, which respectively assess the scientific status of climate change, the consequences of climate change for societies and people and the possibilities for adaptation, and finally the possibilities for reducing greenhouse gas emissions.

Climate

The average weather conditions measured at a specific point in time over an extended period of time

Identifying a climate requires measurements over a 30-year period to determine whether a climate is temperate, for example. There are different climates on Earth, which lie like belts across the planet. These are, for example, tropical, subtropical, or temperate climates. The climate changes we have already observed are largely caused solely by human activity, creating different types of climates, and thus changing living conditions for people around the world.

Leakage

When national climate regulation moves greenhouse gas emissions abroad

A carbon leakage occurs when ambitious national climate regulation is implemented and shuts down parts of national production, causing it to move abroad. In the worst-case scenario, this can mean that emissions which were intended to be reduced nationally will actually increase globally through the production that moves abroad.

De-growth

A non-economic growth

De-growth is an economic way of thinking that recognises that unlimited economic growth is not possible on a planet with limited resources. Only through negative or alternative growth can you create an economy that takes into account the planet's finite resources.

Paris Agreement

UN countries' climate agreement

In 2015, world leaders signed the so-called Paris Agreement, which aims to keep global temperatures below 1.5°C and a maximum of 2°C. This will require significant reductions in CO₂ and other greenhouse gases. On the same occasion in Paris, the Sustainable Development Goals were signed.

Tipping point

Damage to natural and climate systems that cannot be restored

A tipping point is climate and environmental damage to natural systems that is irreversible, meaning it cannot be restored. In the worst-case scenario, they will spiral out of control and trigger self-reinforcing, damaging processes. Examples of tipping points are the melting of the Arctic Sea ice or the Greenland ice sheet and the North Atlantic Current, which transports heat from the Gulf Stream towards Northern Europe. The UN Intergovernmental Panel on Climate Change has estimated that even with a global temperature increase of 1.5°C, many of the consequences of climate change cannot be prevented.

⁴ IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Lösschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation and Vulnerability.

Lederne

At Danish Association of Managers & Executives (Lederne), we are something for those who are a lot for others, a professional organisation and unemployment insurance fund for leaders and specially trusted employees. We help those who lead others - providing education, inspiration, networking, career counselling and legal assistance. With a special focus on sustainable leadership, we believe that we can help those who will go on to help us all move forward. And that makes a world of difference for our more than 130,000 members and the future we're all a part of.

Read more about Lederne at www.lederne.dk.

Navigating 360

Navigating 360 is a think-tank that brings researchers' knowledge into play to solve current societal problems. The network was founded by Erik Rasmussen, also founder of Mandag Morgen and Sustainia.

Read more at www.navigating360.dk.

For more information, please contact

Anders Nolting Magelund,
Chief consultant on climate policy at Danish
Association of Managers & Executives
anm@lho.dk



10 principles for future climate leadership

- 1. Goal: Who do you want to be as a leader?**

The climate crisis requires a clear purpose for your business and a vision for the society you are part of. How can your business be part of the solution to the climate crisis? What new markets should you pursue in a world that demands new solutions?
- 2. Business: The company is part of nature**

The businesses of the future radically minimise their impact on nature. The goal is an approach where materials and resources are renewable and recycled.
- 3. Knowledge: Expand your horizons**

A turbulent and constantly changing climate landscape requires leaders to have a well-developed "GPS tool". This requires individual leaders to constantly seek out new climate knowledge. Quite simply, the curriculum has increased.
- 4. Risk scenario: Crisis management is a condition**

Climate change will hit harder and at shorter intervals. Leaders will have to deal with a constant crisis situation where one extreme follows another. Therefore, there is a need to react even faster than we have previously realised.
- 5. Organisation: Shared values is a superpower**

In order to respond to crises and create positive change, the entire organisation must pull in the same direction based on a strong community of values. Research shows that this is the best way to prepare for and recover from crises.
- 6. Partnerships: No one can change the world alone**

Partnerships, knowledge sharing and innovation across disciplines, companies and industries will be crucial to achieving sustainable change. The climate crisis has a wide impact and will require a breakdown of familiar structures, silos, and sectors.
- 7. Responsibility: Become an activist leader**

A political vacuum requires increased social responsibility from business leaders. Businesses will face increased expectations to participate in solving society's grand challenges. Navigating this will increasingly require activist leaders who dare to take the lead.
- 8. Influence: Get involved in the climate agenda**

The climate crisis will lead to a wide range of new demands on the organisation, including stricter legislation. The activist leader therefore seeks political influence to ensure that the demands are ambitious enough and create value, while the leader still retains his/hers operating space.
- 9. Terms: Green DNA becomes the most important capital**

The green transition must become part of a company's DNA. It's simply a matter of survival, because access to favourable loans, customers and new markets is determined by a strong green profile.
- 10. Role modelling: Become a frontrunner**

Someone has to lead the way. Every leader should be on a mission to become a national or international role model, to be a green frontrunner in their industry and to help demonstrate the benefits of finding new ways of doing things and acting first.