



# From climate crisis *to climate action*

10 principles for future climate leadership

Lederne NAVIGATING 360

# Content

## Content

03	<b>Preface</b> Dear leader, here is why the climate crisis is your biggest challenge <i>by Bodil Nordestgaard Ismiris and Thomas Thune Andersen</i>
06	<b>The leadership we need</b>
08	Climate leadership's eight burning platforms
10	10 principles for future climate leadership
12	<b>Climatology</b> <i>Sebastian Mernild</i> "Understand what climate targets and climate crisis will require of you"
16	<b>Biology</b> <i>Katherine Richardson</i> "Account for all the resources you use. It determines your future"
20	<b>Disasters</b> <i>Kristian Lauts</i> "See climate disasters as new cohesive learning opportunities"

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

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

Recently, on the Danish Radio Channel P1, you could hear a feature about a woman from South Sudan. The country is affected by climate change and floods, which literally mean that she is a casualty of life – in highly polluted water that has made her “river blind”. The dirty water has taken her sight. She can no longer see where the floodwaters end, and the land begins. She can also no longer see that her surroundings have turned into one big brownish lake. But she can feel it because it has washed away her and the other inhabitants’ everyday lives and livelihoods.

The example from South Sudan is a picture of the challenges we as leaders are forced to deal with. Not in the near future, but here and now. Yet time and time again, we see climate action ending up in muddled words, declarations of intent and politically correct statements, with individual pioneering countries being more the exception than the rule. We have experienced this once again during the recent COP27, when it once again became about green tug-of-war on the road to the lowest common denominator.

We cannot leave the responsibility to the world’s politicians alone and sit back. Action is simply happening too slow. The challenges can seem daunting, and it is human to be tempted to leave the responsibility to others. But it just doesn’t work when the climate is deteriorating day by day.

If we are to do something effective about the climate crisis, action is needed - leadership is needed!

In this report, The Danish Association of Managers & Executives and the think tank Navigating 360° asked nine of Denmark’s leading climate and social scientists about their honest and accurate diagnosis of the climate crisis and its consequences for managers and companies. Unfortunately, the conclusion is not very encouraging, because things are worse and faster than most people probably realize. And according to the researchers, corporate leadership is an important prerequisite for solving the climate crisis.

Based on the scientists’ insights, we have therefore also developed 10 principles for future climate leadership. Principles that we leaders across society can use to develop our leadership. Because it is possible to change the trend. Or rather, we need to change the trend. The alternative, as the experts say, is simply unmanageable.

As global warming gets out of hand, we will experience climate wars, destruction and refugee flows on a scale we never imagined.

Right now, many leaders are facing challenges created by the aftermath of the pandemic, the war in Ukraine, inflation, and the energy and supply crisis. These are major - and for many of us



- incalculable crises. But the climate crisis is existential, and solving it is the prerequisite for our entire existence.

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

There is a need for activist leadership in all sectors and industries across the whole of society. In practice, this means that leaders are looking into a future where they should not only mitigate the consequences of the climate crisis by reducing CO2-emissions and reducing the negative impact on nature. The task will also largely be about seeking influence where new market conditions are created and ensuring ambitious and fair regulatory frameworks without compromising the individual manager's operational space. As a result of the climate crisis, companies will be faced with increased demands, and the activist leader must seek influence on these requirements to ensure that they become ambitious enough, create value and can accommodate the company's green transition in the best possible way.

Finally, activist leadership is based on virtues such as humility, courage, probity and generosity.

Humility, because it stands or falls with us leaders recognizing that we are a small part of something bigger, that we have a global consciousness. Courage, because the world needs the activist leader with clear strong positions who takes responsibility and seeks influence. Probity, because leadership privileges must never be abused for the sake of power. And generosity, because we need to think power to and not power over – power to make a difference to the society we are all a part of.

In other words, as a leader, you need an inner sustainability compass – both professionally and personally.

**Bodil Nordestgaard Ismiris,**  
CEO, The Managers

**Thomas Thune Andersen,**  
Chairman of Ørsted and VKR Holding

# The climate's *necessary leadership*

The climate crisis is a leadership crisis. In particular, failing global leadership is currently causing climate change to accelerate to a level where we do not avoid severe consequences for current and future generations. To a large extent, we have the technology and the financial resources to transform society and businesses, but we are sorely lacking in leadership at all levels. Leadership can become the crucial but so far most overlooked resource for solving the climate crisis.

This is one of the striking messages from nine of Denmark's leading social scientists and climate experts. According to these researchers, the scope of climate crisis overshadows both the energy and inflation crises and other similarly acute crises. According to them, the climate crisis is much bigger, much more severe and requires much more far-reaching interventions.

This raises key questions for leaders:

- What kind of future are we actually looking into?
- What new scenarios and conditions do managers need to cope with?
- What kind of leadership does it require?
- How are the requirements met?

The Danish Association of Managers & Executives (Lederne), in collaboration with the Danish think tank Navigating 360°, have forwarded these questions to the group of researchers that are experts within the field. Through in-depth interviews, they have uncovered the significantly changing conditions under which companies must navigate, as well as what role and responsibility they see that companies and their managers must take on. But just as much how leaders can anticipate crises, adapt and find new solutions.

Their message is very alarming: We are facing upheavals and changes to global society that have not been seen before and that will even significantly challenge democracy's ability to act. According to several scientists, it will be as much a matter of adapting to increasingly destructive climate change as it is to mitigate it. We may already have passed several tipping points in Earth systems, where widespread consequences in the coming decades cannot be avoided.

The climate crisis has in common with the COVID-19 pandemic that it must be solved both globally and nationally, and that each country's efforts will be crucial. It will be particularly decisive because of the difficulty of reaching globally binding agreements. This makes the need for the development of national role models even greater.

For business leaders, it is about either taking on new roles and responsibilities by taking the lead in the green transition or otherwise risking extensive government regulation that could undermine their business if they are not prepared. In other words, the new reality that climate change poses will be the biggest leadership challenge yet.





Photo: Gettyimages

# Climate leadership's *8 burning platforms*

**The scientists' conclusions can be summarized in eight burning platforms that together describe the landscape leaders have to navigate, which will challenge their current competencies.**

## 1. Scope

Few decision-makers are familiar with the scale of the crisis and how much it will take for politicians and businesses to address the crisis, both in terms of adaptation and reducing CO<sub>2</sub>. We will hardly avoid a temperature rise of 3°C by the end of the 21st century - and thus during the lifetime of our children and grandchildren. Already with the current 1.1°C increase, we may have passed critical tipping points, where we will not avoid destructive effects that will consequently call for extensive climate adaptation.

Therefore, all countries are faced with demands for landmark transformations of their social systems and supporting structures. According to the scientists, this will challenge democratic institutions and require new political decision-making processes.

## 2. Resources

Regardless of the scale and consequences of accelerating climate change, the biodiversity crisis may prove to hit harder and 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 applies, among other things, to rare metals and earths, plants, animal species, etc. There are no substitutes here. It could seriously slow down economic growth and, at the same time, undermine our civilization. Therefore, companies must prepare themselves to a much greater extent to gauge and handle their resource footprint throughout the supply chain, and in principle aim for 100% recycling, that is, resources must circulate as much as possible.

## 3. Conflicts

Climate change will spark conflicts in many countries, as a result of widespread resource scarcity and in particular as a result of drought. Drought is historically the leading cause of wars. Migratory pressures are therefore expected to increase significantly in the coming decades. In addition, there is the risk of significant polarization, tensions and conflicts in society, both because of lack of climate action or as a result of drastically introduced climate measures, which will affect the population. That is why it is imperative to prepare people for the profound changes in their ways of life, and this requires leadership.

## 4. Regulations

Managers and companies are facing increased regulation in the form of taxes, but possibly also bans and rationing. The current regulatory regime is not considered sufficient to deliver the necessary reductions. Several of the experts warn against politicians' statements that climate policies will not be felt by the population. But substantial behavioural changes will become inevitable.

## 5. Political processes

The experts point out the problem of sluggish and slow political decision-making processes once climate national targets are set. It is one thing to agree on ambitious targets, and quite another to implement them. Thus, there is an urgent need to rethink the political systems, and reference is made by the experts, to the experience with the "operational staff" established during the COVID-19-epidemic in Denmark that brought private and public actors together to rapidly react to the threats of the epidemic. In the context of clima-



te change, the experts call for stronger political involvement of industry and their leaders and the establishment of new public-private partnerships.

## 6. Misinformation

The climate crisis increases the risk of misinformation, conspiracy theories and polarizations, especially due to the demands for rapid changes in lifestyles among citizens. Anti-systemic forces always direct attention to where there is political focus – in this case, the climate crisis. The problem is exacerbated by increasingly poor access to quality information and misinformation on social media, which many people use as a source of news. The extent of misinformation can therefore have a decisive impact on popular support for climate solutions and, not least, impair the basis of business leaders' decision-making.

## 7. Reputation

The researchers agree on the critical role and responsibility of companies and managers in the transition of our societies. It confronts leaders with major challenges, including new demands for extensive transparency to live up to greater public awareness of businesses' behaviour. This increases the risk of shitstorms and loss of reputation, not least when attempting greenwashing. Here, stricter requirements and sanctions are expected.

## 8. Speed

The biggest challenge of the climate crisis is the speed at which it develops. The accelera-

tion has surprised even the scientists who has followed climate change closely. This applies in particular to the unexpected consequences of the currently only 1.1°C temperature increases. But that acceleration can be predicted to continue, and it will amplify the knock-on effects of climate change.

This will require adaptability on an unprecedented scale, and thus leaders - political and private - are confronted with difficult dilemmas: If the green transition is happening too slow, climate change might run amok. If the transition happens too quickly, it can trigger intense popular resistance.



Photo: Gettyimages

# 10 principles for *future climate leadership*

To succeed in the new reality, every leader must rethink the principles on which they base their leadership – and that goes for leadership at all levels in all parts of society. Based on the researchers' insights, we present 10 principles that can turn the climate crisis into new opportunities.

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

In order to create positive change and future-proof the company, it is crucial to have a clear purpose about contributing to a better world. It is important to have a vision for both the company as well as the society you are a part of. This requires reassessing the success criteria for the company: How can the company become part of the solution to the climate crisis? What new market position should you establish and what new markets should you pursue in a world that demands new solutions? In short, what should the company be known for? And what would the world miss if the company no longer existed?

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

The companies of the future are radically minimizing the negative impact on nature. Therefore, it becomes a competitive factor both to understand the company's overall footprint on nature and to be able to provide reliable and transparent data on the use of natural resources. The goal is an approach where materials and resources are renewable and can be recycled as much as possible. Growth must not be at the expense of the climate and natural resources

## 3. **Knowledge: Expand horizons**

A turbulent and constantly changing landscape requires that you as a leader have a well-developed "GPS tool". That is, a strategic radar that continuously reads changes in the terrain and the changes that the climate crisis constantly triggers. This requires the individual manager to seek new knowledge. The leader's curriculum has simply become larger, and it is no longer enough to be an expert in your own field. Otherwise you risk getting stuck in solutions that were defined as green yesterday, but in all likelihood will not be in a few years.

## 4. **Risk landscape: Crisis management is a condition**

Climate change will hit harder and happen at shorter intervals. This means that managers have to deal with a situation where one crisis replaces the other. Therefore, there is a need to react even faster than we have previously done. The company that adapts quickest to the new reality wins. This requires understanding the risks posed by climate change, which determine where to invest. New risks will happen through changes in own markets, in broken supply chains and geopolitical conflicts.

## 5. **Organization: Shared values are a superpower**

In order to respond to crises and at the same time create positive changes, the entire company must pull in the same direction. It is the manager's role to encourage cross-functional collaboration and a corporate culture based on transparency, flexible processes and cohesion. Key factors will be a workplace where co-responsibility is taken by everyone and where values are shared and there is a sense of meaning across the organization. Psychological safety becomes essential.

**6. Partnerships: No one can change the world alone**  
Partnerships, knowledge sharing and innovation across disciplines, companies and industries will be crucial for achieving sustainability. The climate crisis has a broad impact and will require breaking down walls between known structures, silos and sectors. New solutions must be innovated between new partners – both between the public and private sectors and across industries. It's about nurturing new relationships – and also about seeing competitors as potential new partners.

**7. Responsibility: Become an activist leader**  
A political governance vacuum calls for increased social responsibility from business leaders. Social responsibility becomes an integral and important part of the company's position and reputation in society. The company will experience increased expectations to participate in solving society's major challenges – and to behave responsibly. Navigating this will increasingly require activist leaders who dare to lead the way. The activist leadership is based on strong and clearly defined values.

**8. Influence: Engage in the climate agenda**  
The climate crisis will impose a wide range of new requirements on companies, especially in the form of legislation. The activist leader therefore seeks political influence to ensure that the demands are ambitious enough and create value for companies that are ambitious when it comes to sustainability. The competition for talent, investments and markets will be tough and requires companies to engage and position themselves clearly in the green agenda.

**9. Terms: Green DNA becomes the most important capital**  
Sustainability must be part of the company's DNA. It is simply a matter of survival, because access to favourable loans, new customers and new markets is determined by a strong green profile. At the same time, any company will be under far greater scrutiny than before – an accusation of greenwashing and subsequent shitstorms can mean the end of the business. Striving for real green DNA can safeguard companies against this.

**10. Role model: Become a frontrunner**  
Someone has to take the lead. All leaders should have the mission to become a national or international role model or a green frontrunner in their industry, and they should work to demonstrate the benefits of being a first mover – and thus attract investors and talent. The leader of the future sees opportunities rather than limitations and understands that the sustainable transition is the most important asset.


The 10 principles are general and must be adapted and prioritized according to the individual company's situation and prerequisites. But it is crucial for the competitiveness and existence in the coming years that the individual company builds up preparedness and thus ensures optimal resilience to a significantly changed landscape as a result of the climate crisis.



**Erik Rasmussen**  
Founder Navigating  
360°, Mandag Morgen  
and Sustainia



**Anders Nølting  
Magelund**  
Chief Consultant on  
Climate Policy, Danish  
Association of Managers  
& Executives (Lederne)

A portrait of Sebastian Mernild, a man with short blonde hair and glasses, wearing a dark blazer over a black t-shirt. He is looking slightly to the right with a serious expression. The background is a clear blue sky with some white clouds. In the bottom right corner, a dark silhouette of a city skyline with a prominent spire is visible.

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

## Climatology

### *Sebastian Mernild*

Sebastian Mernild is a professor of climate change and glaciology. His research focuses on climate change, ice sheets, hydrology and sea level changes. He is a former prorektor at the University of Southern Denmark, as well as one of the authors of the IPCC's climate report from 2013 and 2021, most recently as lead author. In addition to his career as a researcher, Sebastian Mernild has a long management education from the Armed Forces, and he is a trained officer in the army.

Looking into the future, I see a world that is significantly warmer than today – significantly more extreme and with many more climate disasters. A world we have not seen before in human history. A world where climate change is developing much faster than we thought. Politicians want to set a limit 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. An increase of 2.8°C is mentioned by some, but it expresses only a subjective assessment and depends on which political agreements are negotiated.

It seems to me to be simply idiocy to talk about the fact that we can stay below the 1.5°C increase. It is not realistic and exists only in theory. The plans so far have underestimated climate change, so there is no doubt that we must raise our ambitions. We will already see an increase of 1.5°C in the early 2030s, a 2°C increase can be expected in the latter half of the 2040s - i.e., within the next 10-25 years. The deterioration is accelerating. If we are to keep up with such rapid changes and their consequences, we must speed up the interventions and create much greater awareness and a better understanding of the development.

### **A frightening example**

The floods in Pakistan over the summer of 2022 are a frightening example of the extremes to which we must adapt. One thing is that the monsoon comes stronger and is more intense, and that a glacier melts. Another thing is the disastrous knock-on effects. When Pakistan's agricultural land is flooded, the food base and access to drinking water for a lot of Pakistanis is removed. It will also lead to a significantly greater spread of diseases due to the invasion of mosquitoes and other carriers. And in addition, there is a broken infrastructure.

Climate change is creating unmanageable conditions for third world countries that have neither the energy, know-how nor the money to recover when they are affected. And there are many other examples from 2022: China had extreme drought, Europe experienced the most severe drought in 500 years, the United States suffered from both drought and heavy rainfall, including in the state of Kentucky, where the floodwaters caused severe damage. The examples are warnings of what to expect.

### **The great uncertainty: Tipping points**

At some point, we will pass critical tipping points if we haven't already. That is, climate damage that cannot be restored. Tipping points typically fall like dominoes. Once the first tipping point has been exceeded, we see repercussions with disastrous consequences elsewhere. Tipping points create great uncertainty about climate change. We do not know the threshold of a tipping point and how fast they develop with what consequences. We know they are coming, but do not know the full effect.

For example, there are tipping points around the sea ice in the Arctic and around the Greenland ice sheet. One of my studies shows that we will pass a tipping point with melting of the ice sheet around 2042, when the global mean value is 1.6°C. This will trigger a number of self-perpetuating processes and are expected to further affect the Gulf Stream, meaning, among other things, that we can expect to have a regional cold area in Northern Europe, while the rest of the globe is warming up rapidly. A weakening of the Gulf Stream also means that precipitation patterns over the rainforest – i.e. the Amazon – will change with fatal consequences for forest and trees. 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.



---

# It seems to me to be simply idiocy to talk about staying below the 1.5°C rise. It exists only in theory.

---

Sebastian Mernild

## **We are in two realities**

Right now, I'm seeing 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 gap has never been bigger. Therefore, the challenge has also accelerated, and climate change has run away from us. We must face the fact that our social 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. If that gap continues to widen in the coming years, we will not avoid major disasters.

When you listen to politicians, it is as if we are in two realities: That of politics and that of the climate. They evolve at two speeds, with climate change as the fastest force. If politicians do not understand this dynamic, they will face much bigger problems at the next election. Although the challenge is global, it is important that each nation understands that each has an individual responsibility. This is especially true for rich countries like Denmark, which per capita is among the countries with the largest carbon footprint from private consumption.

I really don't think many of our politicians and leaders understand the consequences of this. They do not know the extent of how much CO2 we need to cut back. When politicians met at COP21 in Paris in 2015 and agreed on a maximum tem-

perature increase of 1.5-2.0°C, they did not know how much would have to be reduced globally to achieve those goals. We must be open and honest and recognize that we will probably end up with 2.5°C - 3°C or maybe even 3.5°C. That is what we must work towards instead of constantly talking about 1.5-2°C.

We can rely again and again on COP meetings. I just doubt this is the right place to solve the climate crisis. With all the COP meetings we have had, we have so far only reached five agreements: Kyoto, Copenhagen, Paris, Katowice and Glasgow. Perhaps the time has come to rethink the entire governance structure surrounding the COP process. They often end up with everyone pulling in opposite directions to get their share of the pie, which ends up with the lowest common denominator. Therefore, only the basics are agreed on. I don't have the key to it but I just register that the existing system doesn't work.

## **Most managers don't even know what we're facing**

In May 2022, I experienced part of the explanation for the challenge. I was invited to speak to 50 climate ministers from all over the world at a summit in Copenhagen. I showed them some figures representing the scale of the crisis, and many of the participants were almost shocked. They probably hadn't been confronted with that reality before. It amazes me that climate ministers are surprised by such basic knowledge of





how fast our climate system is changing, when we compare it with what has happened since industrialization with a perspective back in time of, say, 22,000 years. Several of the participants said afterwards that the figures and charts I showed them were worrying (and that they would like to receive a copy). But most worrying was the lack of knowledge that should be widely known - especially by the ministers, politicians and decision-makers responsible for the solutions.

But one thing is whether politicians read and understand climate science. Another thing is this: How do you get through with such complex messages as climate change in an everyday life where people are busy with practical tasks? People go to work, pick up their children, shop, go to a summerhouse or travel to the USA, Thailand or southern Europe. Most people probably don't think about the climate or climate change at all. For them it is abstract issues with time horizons in the year 2030, 2050 or 2100. It is a huge communication task to connect climate change to people's everyday lives and make it relatable so that they understand the seriousness of the situation. We're just not good enough at that.

### **Our shared responsibility**

We all have a responsibility for the situation. As citizens, politicians and companies. As citizens, we must put pressure on our politicians to raise the ambitions more quickly. But unfortunately,

politicians have not taken the challenge seriously enough. For many reasons, they have prioritized all sorts of agendas around growth, the economy, inflation, security of supply, unemployment and local challenges – at the expense of the climate. It is only after the problems have really accelerated and become visible that more people have become aware of the seriousness – despite the fact that science has been sounding the alarm for many years.

The responsibility of companies and managers is as big as that of politicians. Politicians set the direction and regulatory framework for how companies can operate within a complex legal landscape. But it is companies that have to fill them in. Many companies already do, but not enough. Here, too, we need the necessary breakthroughs more quickly. The reality is that their efforts can not only contribute to solving the crisis, but they can also create new sustainable growth opportunities. For corporate management, it is about quickly realizing the potential and acting on it. Climate solutions can be expected to be one of the biggest market opportunities in the coming years and favour the frontrunners.



A woman with short brown hair, wearing a blue puffer vest over a light blue striped shirt and a colorful beaded necklace, stands amidst a dense thicket of green foliage. She is looking directly at the camera with a slight smile. The background is filled with various green leaves and small white flowers.

# Account for all the resources you use


## *It determines your future*

### **Biology**

## ***Katherine Richardson***

Katherine Richardson is a professor and dr. scient. She holds a PhD in biological oceanography and is head of the Sustainability Science Centre at the University of Copenhagen and a member of the Danish government's independent advisory body on the Danish Council on Climate Change. 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).





Climate change and the biodiversity crisis are confronting us with enormous existential challenges. There are two types of crises going on in nature's systems – a geophysical system (nature's energy budgets) and a biological system (animals and plants) that we humans disrupt in a way we have never seen before. We are in a big "minus" in both areas, but still consume without restraints. If everyone lived like Danes, we would need over four planets. But you can't party forever if you have a large deficit on your account.

Perhaps the biggest challenge is what we do not know. We know a lot about what may happen in the coming decades, but not much about what will happen in the time after the coming decades. We may already have set in motion processes that will have enormous consequences. But we don't know. Therefore, it is also difficult to prepare. We are already surprised at how big the effects have been with the current just 1.1°C temperature increases. Just ten years ago, we did not foresee the extreme weather conditions and widespread drought caused by 1.1°C today. We had very little understanding of the great importance of even small temperature increases as well as the risk of tipping points – i.e. irreversible damage in nature's systems.

### **The risk: Total meltdown**

The risk is that we will experience a total meltdown of the society we know. This means, among other things, that the areas where we grow our crops will be limited by the fact that many of the plants and animals that we depend on have disappeared, and that there will be large areas where people cannot live. With the current heat waves, we have seen how many people die from heat. In addition, there is the ice that will melt if we reach 4°C, 5°C or perhaps 6°C warmer climate and which will cause enormous sea level rise. At worst, it could mean that our society's infrastructure, our trade agreements and international relations will meltdown, lots of people will flee or die, and climate wars will lead to widespread destruction.

I expect politicians to take responsibility and recognise that we must act because we do not know which scenario will materialise. With the prospect of existential crises, we need to chan-

ge the way we talk about the crises and the way we act. Anyone can understand that we cannot feed 10 billion people with the way our food system is set up today. If we just scale up our current food production, we will increase greenhouse gas emissions by about 90% and we will need 50% more land. Everyone can figure out that this is not an acceptable option. Similarly, scaling up the energy system we have today is not an option.

Even if the worst-case scenarios of climate are not true, what have we lost by making our societies resilient to a future with limited resources?

### **We have lost control of Earth's resources**

In addition to politicians, companies – and thus managers – have a very great responsibility. The main problem here is not only climate, but that we live by depleting the earth's scarce resources. They are limited and they are heavily exhausted at the moment. After all, companies depend on extracting minerals from the soil. Right now, many companies have goals that, for example, 20% minerals or materials should be recycled. But when those minerals aren't there anymore, there aren't any minerals to recycle, and then 20% makes no sense. They should aim for 100% recycling!

And here we cannot wait for the politicians. Companies must start incorporating the use of natural resources into their budgeting, planning, construction work, etc. Price signals must be set, and they must calculate shadow prices for the natural resources on which they depend, i.e. taking into account expected higher prices for the resources on which they depend in the future, because there will necessarily be taxes or resources will be scarce.

We lack the financial incentives that set the price of using natural resources. If we go all the way back in human history, we see that we started by 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 a connection with nature and resources.

### **The main capital of enterprises: Nature**

Now, in our “wisdom”, we have completely removed money from contact with natural resources. But that doesn’t change the fact that we can’t eat money, we can’t put money on to keep us warm, and we can’t live in money — money doesn’t make us rich, it is Earth’s resources that do. Unfortunately, they are very limited. We just can’t see that in our economic models. And these models assume that you will always be able to find substitutes for exhausted resources. I have heard economists ask: “When will scientists find a replacement for phosphorus?”. To this I answer: “phosphorus? Phosphorus is one of the building blocks of life. It’s like wanting to find a replacement for the air!” This is where the main problem lies. Economic models - our behaviour and our way of life - do not recognise that Earth’s resources are limited.

This vulnerability will be addressed in the future through the use of big data and stronger transparency in resource flows. This makes it possible to follow the entire company’s supply chain and thus understand the overall impact on climate and natural resources. Therefore, maximum value creation will not only be about financial capital, but about minimizing the use of resources for the benefit of both the company and the rest of society. Nature may turn out to be the most important capital stock of enterprises.

All the resources that create our wealth – which provide us with energy, food, water, or materials for infrastructure and consumption – we derive from nature. And these resources are primarily in private hands. Therefore companies also have the power to regulate use. But right now, business leaders are waiting for politicians to set the rules. They are reactive, although most of them can see that this cannot go on forever. So, I believe companies have a responsibility to act.

### **Companies’ best answers**

We must recognize that we have put ourselves in an existential crisis. And recognize that we are not above nature but are part of nature. And we must abandon the idea that we must solve one crisis at a time. We think we must solve a financial crisis, then a pandemic and then a war and then an energy crisis. But the existential crisis is

the sum of several crises, and it only accelerates while we constantly change focus and treat symptoms rather than causes. The current energy crisis is partly created by the climate crisis and its consequences: We had energy shortages due to widespread drought, because nuclear power plants could not be cooled and had to close, or because there were restraints on producing hydropower in Norway. Thus, the climate problems triggered a number of knock-on effects. COVID-19 was caused, among other things, by the biodiversity crisis had widespread consequences that still disrupt our supply chains.

This is just one example of the need to understand the context of crises. The companies’ best answer is to build resilience against the various crises, including knowing how much they use of nature’s capital stock. It is not just a question of access to financial resources, but of being sure that the necessary natural resources are always available and are basically what determines the chances of survival.





**We cannot wait for  
the politicians.  
Companies also have a  
responsibility to act.**

Katherine Richardson



A man with a beard and long hair, wearing a grey blazer over a white sweater and grey trousers, is walking in a grassy field. He is looking towards the right. The background shows a clear blue sky and some trees in the distance.

# See climate disasters as new *cohesive learning opportunities*

## Disasters

### *Kristian Lautá*

Kristian Cedervall Lautá is Professor of Law, expert in disaster law and prorector for education at the University of Copenhagen. His research is about disasters, climate and risks, and both how these are regulated and affect the law, and how we as people and society react when they occur. In addition, he is affiliated with the inter-institutional research centre COPE and forms part of the management of the University of Copenhagen's Centre for Sustainability Research.



We need to talk less about what we can do about climate change and more about the need for a fundamental change in the systems on which our society is based. This is widely recognized in the research communities in which I am part of. In fact, we have created a social structure based on a notion of stability - a structure that was about distributing resources in a stable society.

However, climate change can be predicted to trigger significant fights over resources. The first thing I'm worried about is wars. History knows that when harvests fail, wars start. International research documents that the best indicator of war is a failed harvest. And the harvest will fail in many places due to climate change. We will see food crises and thus more wars, especially in countries in sub-Saharan Africa, in Asia and South America. This will trigger huge flows of refugees towards Europe. If I have to forecast the coming years, I see militarisation on the border between north and south, that is, around the Mediterranean, as well as a build-up in an Asia that recognises that the future is about military muscle.

The crises are exacerbated by two other challenges: first, increasing instability in our governance structure. The hope that the climate crisis can be solved through a global consensus will crumble and be replaced by global fragmentation. Secondly, many of the countries most in need of reducing their CO2 emissions will start a race to favour their own solutions. Since they do not expect the climate crisis to be solved through global agreements, they will end up taking care of own interests in the best possible way.

We must prepare ourselves for a cascade of crises that replace and reinforce each other. We mistakenly believe that they should be solved separately, but the reality is that they are interconnected and require comprehensive solutions. Right now, it's about 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 as we try to address the recession, both the climate and the biodiversity crisis are becoming increasingly insoluble. That is why radical changes must take place in the structures of our society.

### Three barriers hamper climate action

I see three huge challenges running simultaneously preventing us from acting.

**1.** Science is not equipped to deal with a new reality. It does not lend itself to predicting such complex phenomena as we are now facing. We have simply fragmented science into "single pillars" and now lack a science that can uncover the systemic challenges. And although climate science has sparked political progress when it comes to climate action, for many years it has been subject to suspicion of being politicized, while lobbyists have tried to combat it. This means that climate scientists are actually hesitant about what messages they dare to go out with. They only want to make a statement when based on extremely solid scientific grounds so that they are not being blamed, that they take a political position.

**2.** There is a lack of a common narrative or understanding that can bind the media, scientists and politicians together. That is, the unifying narrative that can create the balance between fear and hope, but at the same time emphasize the need to transform both society and way of life. That framework must be created in order to move forward.

**3.** We have a fundamental democratic problem because we have shaped our society to solve other problems. We see this when our democracy runs in a maximum of 4-year circles. It's known as the "NIMTOO effect" ("Not in my turn of office") and implies that politicians say to themselves: "This isn't going to hit me for the next three years, so it's better to invest in kindergartens". We also know it in the problem of "the politician's dilemma": As a politician, you do not get value for investing in something that does not manifest itself and is visible to everyone. An example: If you build a dike because you expect the water will rise and the water is actually rising, no one can see the flood because of the new dike, but it has been very expensive. "Politician's dilemma" is a classic disaster dilemma, which means that it pays better for the politician to let the disaster happen – and then step into the leadership role and position

himself as the great hero – even if it is more expensive for society than preventing the disaster.

### **Leaders must prepare for extensive legislation**

Leaders will have to adjust to regulation introduced on a large scale sooner or later. The COVID-19 crisis was a good example of this – never in such a short time has so much legislation been implemented, because we were suddenly in a new situation that needed to be handled with the means disposable to govern society.

To those people who imagine that it is possible to elect governments that can debureaucratize and also deregulate the business community, all I can say to them is: Forget about it - the complexity we are facing, will mean a gigantic increase in common demands on business.

I think very few people have understood what fundamental social demands will be made. Every company must relate to the new terms and decide how it fits into this new reality. There will be a shift in the relationship between the public and the private sector. That dividing line cannot be held 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 consequences. If companies do not catch it quickly, then all that remains is to regulate them. The advice to managers is therefore to work on drastically reducing the company's impact on nature and find out what the climate crisis will mean for your business, what potential breaches in global supply chains need to be addressed, etc.

### **We have embarked on the century of disasters**

Whichever way you look at it, this century will be the century of disasters. We will be wading from crisis to crisis from now on and for many decades to come. These crises are not only handled by traditional crisis planning i.e. "What do we do if there is a war in Ukraine, or what do we do if the power goes out?" It is about creating an organization that can work interdisciplinary and thus operate smoothly across boundaries. Where you as an employee want to work for the overall purpose, where there are purposeful activities. It's about being open, caring and adaptive. All of this goes against the way companies have been "LEAN-ing" and streamlined to operate in a specific reality over the last 20

years in particular. It will be a break with the traditional management ideals and models.

I was part of carrying out an exercise in Greenland a few years ago to find out who in an organization were the most important "network points" when the Armed Forces 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! This does not mean that we all have to smoke, but they were the ones who were the glue in an organization that is thrown into a crisis situation – those who manage to make quick inroads and manage to get the finance department to work with someone else. These are the employees who come to the Friday bar. You actually need an organization where you hire more people who are open to each other, and that you create an organization you want to work for and where you are happy with your boss and colleagues. It becomes a gigantic competitive advantage in a world that is unpredictable.

COVID-19 was just the litmus test – and in fact, almost all Danish companies got through well - why? Because we have adaptive teams that can be scaled and employees who actually want to work together across disciplines. Not because there were some leaders giving orders and controlling, but because there were some independent units that could take responsibility and adapt to a new reality.

### **We can learn a lot from disasters**

The reality is that leaders must navigate a world with more frequent disasters. Therefore, we also need to understand disasters in a new way, e.g. as a "developer liquid" that uncovers how the organization works under great pressure - whether we can think outside the box and collaborate across the organization. We could learn from the COVID-19 crisis, i.e. about making decisions under pressure, how we communicate and how to organize society in an intense crisis. Instead of seeing disasters as external disruptive forces, we can begin to see disasters for what they also are: coherent, organized learning opportunities.




A photograph of a flooded landscape. In the background, a dense line of green trees is visible under a grey, overcast sky. A single, smaller tree stands isolated in the middle ground, its lower branches submerged in the murky, brown floodwater. In the foreground, a black metal park bench is partially submerged, with only its backrest and one leg visible above the water. The water surface is rippled and reflects the overcast light. The overall mood is somber and desolate, illustrating the impact of flooding.

**We have designed our  
society to solve  
completely different  
problems than the  
climate crisis.**

Kristian Lauta



A photograph of a man with a beard and glasses, wearing a light blue button-down shirt and dark trousers, standing in a lush garden. He is looking off to the side. In the background, there is a brick house and dense green foliage. The text is overlaid on the left side of the image.


# We will not avoid more *regulation and more taxes*

## Economics

### *Peter Birch Sørensen*

Peter Birch Sørensen is professor of economics at the University of Copenhagen and former chief advisor to the Economic Council and former chairman of the Danish Council on Climate Change. His research deals with issues within environmental, resource and climate economics. In addition, Peter Birch Sørensen is deputy 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 measures they have promised. However, the substantial uncertainty about this estimate carries a significant risk that we will end up at 3°C. And then we end up in a situation we have not experienced in the last 50 million years. All people in leadership positions would do well to think about the risks such a climate would pose to the world.

My own biggest fear is that we will have much more economic and political instability. Global warming can lead to wars, conflicts and mass migrations, which means that Europe will have a much greater migratory pressure than we see now. I fear our democratic institutions will not be able to cope with this. In any case, our children and grandchildren will live in a more unstable world. We are already seeing the tensions triggered by the current energy crisis – there may be other regional shocks, and extreme weather events that could hit energy production and other critical infrastructure. Then there will be strong social reactions.

Realistically, the opportunity to keep warming below 1.5°C has already been missed, so while we continue the much-needed fight to lower greenhouse gas emissions, we must adapt to the climate change that we cannot prevent.

We in the West have a special responsibility because of our historically large contribution to the concentration of greenhouse gases in the atmosphere. That is why we must take on greater reduction commitments than poor countries. Countries such as China, India, South Africa, Brazil, Indonesia and Russia point out that the West has historically contributed the most to the current warming, but they will also have a great responsibility if they do not ramp up their climate ambitions. 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 things are going in the world as a whole – which includes climate change.

I believe that we in Denmark will reach our goal of 70% reductions by 2030, but based on our historical responsibility for emissions, it can be argued

that, for example, an Indian should have a larger future CO<sub>2</sub>-budget than a Dane. This means that in practice we would have to reduce much more CO<sub>2</sub> in Denmark.

### **We will calculate the risk of a 3°C warmer climate**

So far, we have had a strong focus on reducing emissions and we will soon be looking more at how we can adapt to a climate-changed world with significantly higher mean temperatures. 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 lower emissions as quickly as we can, but we can already see that the stage is set for some very significant changes in climate systems, regardless of what we do now and in the future.

The EU can play a pioneering role in climate policy, but it is crucial that EU countries can maintain political cooperation instead of looking after their own narrow national interests first. The risk factors are piling up. How long does the war last in Ukraine? What will be the consequences of a protracted 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 hardest hit by climate change are already politically fragile and risk intensifying internal conflicts. This will make them less attractive to invest in, which in turn will exacerbate global inequality and trigger other crises. It is an example of one of those vicious circles we can be trapped in.

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

### **Tougher regulation ahead**

A world with a more unstable climate is likely to lead to more extensive government regulation. We economists prefer to use the price mechanism and the market mechanism to drive the green transition. But it is well known that in many places there is great political opposition to, for example, a high CO<sub>2</sub> tax.

There is also the eternal problem of CO<sub>2</sub> leakage, i.e. the risk of a country losing competitiveness if it takes the lead and then parts of production move abroad.

But a CO<sub>2</sub> tax is a more cost-effective instrument than direct regulation in the form of, for example, injunctions and bans. Unfortunately, the costs of direct regulation are less visible, and therefore it is politically tempting to choose that way of regulating, even if it is not so effective. Therefore, we will most likely eventually end up with a more rigid and costly regulatory regime.

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

But if you did what economists always recommend – putting a price on the environment and climate by imposing taxes that reflect the costs of pollution, then consumers will be able to choose between different goods and services based on prices that take the environment into account. Here you still have your freedom to choose, while at the same time we increase taxes until we reach the climate and environmental goals we are supposed to. It is not an encroachment on personal freedom. It just confronts consumers directly with the environmental consequences of their choices. That would be my preferred option.

But I recognize that it is difficult politically to set taxes that are high enough. And it can be administratively difficult in some places to add a tax. Therefore, we may end up in a more rigid regulatory regime with injunctions and bans, or even rationing in extreme situations. And this will feel like a direct encroachment on personal freedom but may be where we end up if voters and politicians do not want to follow the economists' preferred path.

### **We need new economic models**

From an economist's point of view, it has been a problem that environmental economics and later climate economics have been marginalized disciplines for many years. Economics as a theoretical discipline has been dominated by otherwise excellent American scientists, but they just haven't

taken much interest in the environment and climate. This affects the way we teach at universities, with the consequence that environmental economics has not had the focus it should have had. I work with this agenda as the leader of a project on Denmark's green GDP. I am also co-leading a project on the development of a climate economic model for the Danish economy – called GrønREFORM (GreenREFORM) – which is about to be ready. Here we calculate the effects of the various economic activities on emissions of greenhouse gases and other pollutants.

In the project on Denmark's green GDP, we correct the traditional GDP for a wide range of environmental effects. In this way, we can assess whether economic growth is at the expense of the environment, and we gain a better understanding of what kind of ecosystem services – i.e. services from nature – are important for supporting our economic system. There is still work to be done to map, for example, the importance of biodiversity, but we have developed the relevant theoretical tools – we just need to incorporate it more systematically into the models that already exist as we get more and better data. We can go a long way, but we must also recognise that there will continue to be environmental and climate effects of economic activities 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 policies. But in any case, we have to deal with the risk of a world where the average temperature is 2-3°C above pre-industrial levels. Therefore, I think that future reports from the IPCC should focus more on describing the consequences of exceeding the Paris Agreement's warming targets. I also think it should be mandatory that each new IPCC report and each annual status report from the Danish Council on Climate Change provokes a debate or consultation in the Danish Parliament among leading politicians about 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 large amount of water. The scene is set against a bright, orange-hued sky, suggesting a sunset or sunrise. The forest below is dark and silhouetted against the lighter sky. The overall mood is dramatic and urgent.

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

Peter Birch Sørensen

A man with short brown hair, wearing a dark green parka with a fur-lined hood and dark trousers, stands in a forest. He is looking slightly to his left. The background is filled with trees, some with brown autumn leaves and others with green foliage. The lighting is soft, suggesting an overcast day.

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

**Adfærd**

## *Michael Bang Petersen*

Michael Bang Petersen is Professor at the Department of Political Science at Aarhus University, Denmark. Among other things, he conducts research into political psychology and human behaviour, including their importance for emergency management, e.g. for handling the climate crisis. In 2020, he became head of the large research project Hope, which has investigated and analysed the behaviour of Danes through the COVID-19 pandemic



The biggest problem with the climate crisis is that it is a so-called "collective action problem". That is, it can only be solved when everyone makes an effort at the same time. But it also means that we quickly let ourselves be paralyzed, because everyone is waiting for everyone. The problem is that we do not want to contribute ourselves if we fear that the others will not also take their part of the haul. This makes the climate crisis a huge psychological, behavioural and managerial crisis.

But we do not have the time and the money to be paralysed by the collective action problem. Research shows that such crises are best handled if some individuals prepare solutions that can trigger movements in the larger collective. Someone must necessarily lead the way. This applies to citizens, companies and nations alike. If Denmark (which is a small country) takes the lead, we can have a far greater impact on the climate than by reducing the country's own emissions alone, which are very small in a global perspective. It is about leadership at all levels and about understanding how to break the collective action problem.

In this respect, value-based communication becomes crucial. It is basically about having to accept costs that, taken in isolation, do not alleviate the climate crisis, but where we at the same time indicate that we do not want to tacitly and passively observe the climate crisis accelerate. I can draw a parallel with Médecins Sans Frontières, where I have spoken to representatives who have been in situations where they invested blood, sweat and tears while knowing that it did not solve the real problems. The point and motivation were that as a doctor, you couldn't just not care about children dying. Acting was an ethical imperative. It is basically the same value-based leadership that will motivate Denmark to take the lead. We will not solve the climate crisis alone, but on ethical and moral grounds we cannot do otherwise than act.

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 reasons why we are facing a climate catastrophe. That is why we in the West should bear a consi-

derably greater burden. And we have to recognise that it is necessary and in our own interests that we go much further and take on considerably higher costs in the part of the world where we live.

### **Disaster communication must give us scope for action**

Leadership is important in a crisis. This is shown by my research during the COVID-19 crisis. It was a serious crisis that depended on how people behaved. What we saw was that authorities can actually – if not threaten – speak in very clear words. It is crucial when communicating in an emergency situation to make people focus on the possibility of disaster averting. This is where the motivation lies – not only in describing the nature of the disaster. Where are the potentials and opportunities for action? In an accelerating climate crisis, it is about continuously communicating about the options and opportunities, even though the world will become a very different place to live in.

The vast majority of the population is concerned about climate change. They lack answers as to what each citizen can do. The most important lesson from my research on the COVID-19 crisis is that the belief that your behaviour also matters to others and is a contribution to solving the crisis is crucial. That belief is more important than the fear you have. Here there is a huge need for leadership that can offer a strategy where you as a citizen can see yourself as a pawn in a larger more general plan. If so, I think people are willing to do quite a lot. What matters is that there is a very concrete message from leaders that says: "This is what you have to do - then you are helping to remedy 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 the political. In addition to eating less beef and cutting down on consumption, we are met with very general recommendations - and recommendations that are left to the individual to interpret.

---

## Someone must necessarily lead the way. This applies to citizens, companies and nations alike.

---

Michael Bang Petersen

### **Leadership must also mitigate panic and polarization**

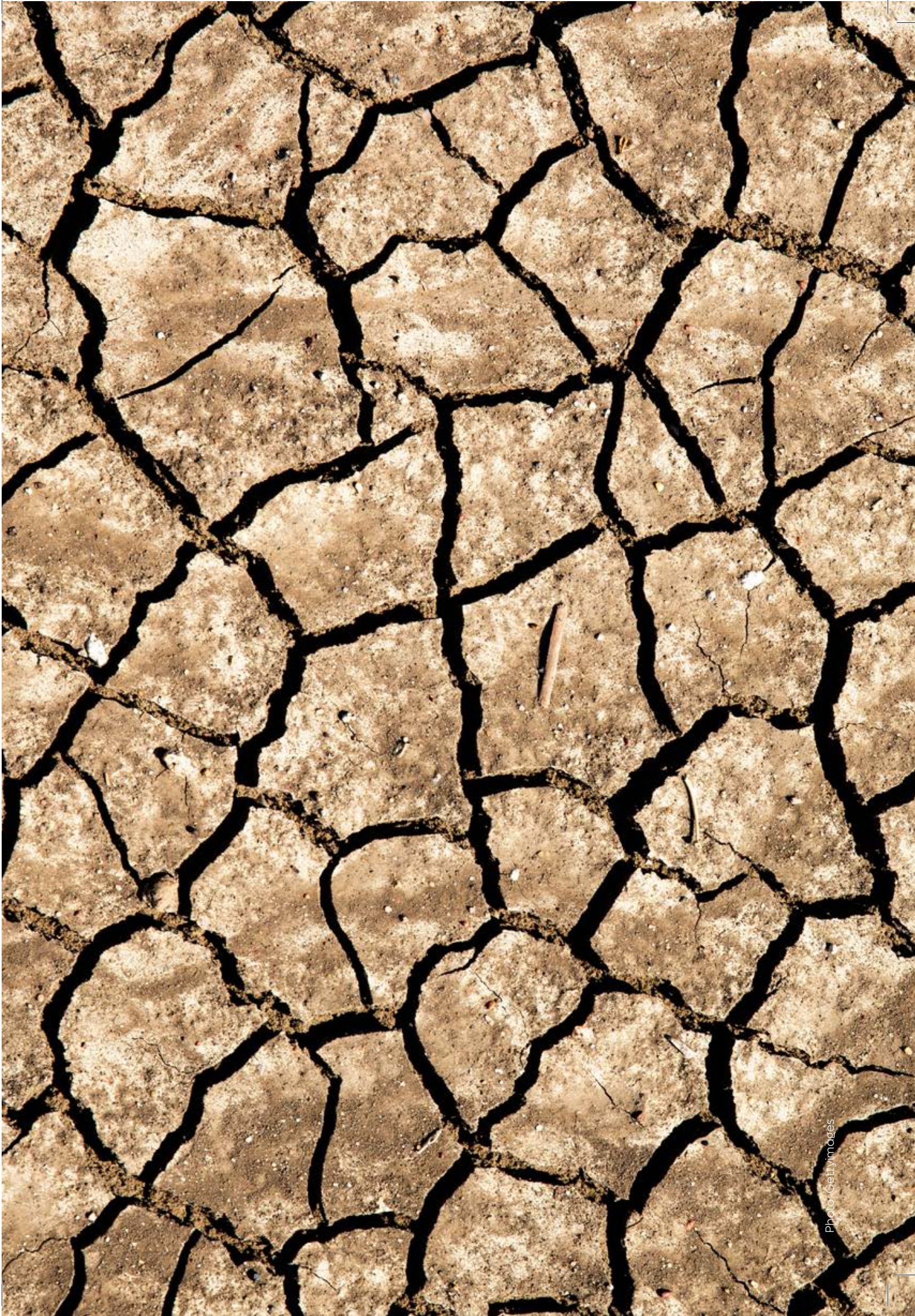
However, the climate crisis is another type of crisis that is not experienced as urgently as COVID-19. This places special demands on leadership. There is a need for more of the kind of leadership that Danish Prime Minister Mette Frederiksen showed at the press conference on March 11, 2020, when the Danish government shut down large parts of the country due to increased levels of infection from COVID-19. 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 examine the disaster scenarios and use them as a starting point to get people with power to get together and commit to doing something. This requires both private and public actors. The private actors must put the pressure on politicians, because it is very much the private actors who have to accept the costs associated with it. They must show the will to do so. But in order to obtain the necessary democratic legitimacy, it is the politicians who must eventually draw the outline of it. In this way, it requires that everyone who has power in a society sits down together.

We are going to see climate as the subject of new polarization, because anti-systemic forces always direct attention in the same place as the political system. The mere focus on climate means that anti-systemic forces and conspiracy theorists will take to the streets in demonstrations. That is precisely why leadership needs to be taken right now. It is right now that the basic understanding of the crisis must be established in the population, it is now the basic support for taking action must be established, rather than waiting until the state is forced to use more heavy-handed methods. It is in these situations that we will see a harsh backlash. We will probably see polarization in countries like the United States and France, but not necessarily in Denmark, provided the politicians manage to explain what is necessary and why.

Here it is absolutely crucial that there is consensus at elite level. If you can establish consensus among the political and business elites, the vast majority will basically follow consensus among the elites – just as with COVID-19, where you only had scattered pockets of resistance.









# Companies *also conduct politics*

## Geopolitics

### *Karen Lund Petersen*

Karen Lund Petersen is Professor II at the University of Stavanger, Norway. In particular, she conducts research into global risk and security, climate change, emergency management, intelligence work as well as resilience and political risk analysis.



Who is responsible? This is the burning question when disasters such as climate change are to be solved. On the face of it, this seems to be a political responsibility. Unfortunately, fewer and fewer people believe in political breakthroughs. In any case, there is a decline in confidence that this can be done under the auspices of the UN and through major international agreements. As a result, more and more people believe that responsibility must be decentralised to individual societies, businesses and citizens.

This means, among other things, that companies can foresee having to play a new, larger political role. And this has the consequence that the private sector can be held much more accountable for its political decisions and efforts. And this is reasonable, as the private sector is responsible for most CO<sub>2</sub> emissions and thus must also contribute with the solutions. It just requires that we better understand what political responsibility for business leaders actually entails.

The challenge that arises here, however, is that we then ask companies for private sector solutions to a problem that is basically created by capitalism. The private sector has to deal with this paradox. There are many – even in the private sector – who start talking about degrowth (i.e. that we set limits on endless growth, ed.) and thus come up with a response to capitalism, that is, a break with the fact that the solutions can be found within a traditional market economy logic. This raises fundamental questions about whether the market is able to deliver the necessary solutions and whether the climate crisis can be solved on market economy terms.

But if the market alone cannot, what do we do? We therefore run the risk of finding ourselves in a governance vacuum in which no one really takes responsibility: who will be in charge of the great master plan? Who ensures the progress? It may prove to be the biggest challenge of the climate crisis that everyone relies on the others.

### **Companies also conduct politics**

My starting point in my research is that companies also conduct politics. Climate policy is already being shaped in companies and will become much more so as the climate crisis accelerates. When politicians say that: 'private companies make technologies and we make policy', I do not think that is right. Technology is politics. Leadership is politics. When it comes to climate change, it is very much political whether companies, for example, implement new business models or initiate new technological solutions.

The same thing happens in security politics, where we note that companies must to a greater extent act in ways that are aligned with national security political interests. This is all an indication that political agendas can be predicted to move into executive boards and boardrooms – almost whether they like it or not. This in addition to the fact that companies may have a vested interest in exerting a greater influence on political decisions.

It is natural to raise the question of the extent to which society can trust companies to pursue responsible policies, for example in the area of climate. Let it be emphasized that the new political role and responsibility of companies does not free politicians from their responsibility and the task of defining the regulatory framework, the solutions are only outsourced to a much greater extent to companies.

Moreover, companies' commitment and participation in handling major societal crises will be closely followed by a very scrutinizing and critical public. This includes – in addition to politicians – investors, media, NGOs, activists and others. Therefore, increased transparency about companies' operations will become a strong self-regulating factor.

### **Leaders' three ways out of the climate crisis**

One solution is, therefore, to point to new forms of leadership in the business community. In my research, among other things by reviewing a large number of American business magazines, I have found three paths to take as a leader in the climate field, today:

## **1. The conservative path:**

Many leaders think they need to create a future that is reflecting the past. This means continuing more or less with status quo and working with, for example, CO2 removal, more nuclear power, securing coastlines, and other technological fixes that will maintain the current economic order. This is particularly true in American conservative circles but is also seen elsewhere.

## **2. The evolutionary path:**

Here, the companies' management gradually changes focus, e.g. by sustainability reporting through standards, certifications and compliance with regulation. That is, streamline internal processes and gradually transform the company. Sustainable goals are pursued, but within a clear market economy capitalist logic. It will push the world towards sustainable goals through measured steps.

## **3. The activist path:**

That path has become more pronounced — especially in media outlets like the Harvard Business Review — and is about radically changing the way we think about capitalism. It is a bottom-up approach and is based on ideas such as degrowth and disruption but based on an activist logic. Examples of this type are CEO activists such as Paul Polman, Unilever's former CEO. The argument is that if we can get the company to operate circularly, implement new business models and take into account reputational risks and opportunities, we can revolutionize the capitalist market logic. It is the radical way of thinking and is more like a grassroots movement.

This revolutionary path requires a new form of leadership. That's why we're increasingly talking about the 'activist CEO'. That is, a top executive who recognizes and actively performs a clearer leadership. In addition to having its advantages, it also presents challenges - depending on how credibly the role is played and how authentically the person expresses themselves.

Who do you want to be in the future?

Something that will be more likely to present opportunities or risks is reputation. It will be a very important capital in the future. It must be handled with as much care and precision as the financial operations. Analyses show that a significant part of the company's value is determined by reputation. A single shitstorm can quickly reduce a large part of the company's value.

We also saw this in Denmark with Ukraine and the companies that got into a reputational shitstorm with regard to their economic activities in Russia. Just because you are a private actor, you are not spared any political backlog. You have to deal with your potential reputation. You cannot assume that the climate crisis is not relevant to you because you do not produce something that is harmful to the climate, nor a large company or otherwise very visible in the public. You must constantly relate to your "potential self". That is, who you want to be and how you become that. The idea of your "potential self" is here to stay. It is part of the logic of uncertainty that applies especially in security politics, where we do not know what the world will bring – whether it will be a pandemic, climate catastrophe, war or terrorism. But the answer is to decide for yourself what you want to be known for - what reputation you want.

A young girl with dark hair, wearing a white short-sleeved shirt and a red neckerchief, is wading through shallow, rippling water. She is carrying a large, orange and black backpack on her head, holding the straps with both hands. Her expression is serious and determined. The background is a blurred view of water and distant structures. The entire scene is reflected in the calm water in the foreground.

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

Karen Lund Petersen



A woman with short blonde hair, wearing a dark coat and a brown scarf, is riding a bicycle on a bridge. The bridge has a metal railing and a concrete base. In the background, there is a body of water with several wooden posts or buoys. On the far side of the water, there are modern buildings and a clear blue sky. The lighting suggests it is either early morning or late afternoon, with long shadows cast on the bridge.


# We have to rethink *policy-making processes*

## Climate policy

### *Connie Hedegaard*

Connie Hedegaard is chairwoman of the green think tank CONCITO and of the climate foundation KR Foundation. Furthermore, she is 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 of the Environment and in 2007 Minister of Climate and Energy. From 2010-2014, she was also the EU's first Commissioner for Climate Action.





The climate crisis confronts us with a great paradox: As we move towards disaster scenarios, many politicians try to make people believe that they will hardly notice what it requires to solve the climate crisis. It will lead us into a dangerous impasse of division and polarisation if we do not correct people's perception of it in due time.

In the times we live in, it's just incredibly difficult to predict where we're going. Much depends on how we deal with the immediate crises. Unfortunately, they can lock us into a path that is tremendously hopeless when it comes to staying below 1.5°C temperature increase. I personally have never believed in that goal. That objective was set solely for political reasons and has therefore not been achieved. On the other hand, I believe that the current crises can push us in the right direction by accelerating a number of important initiatives that focus on the right use of raw materials, new materials, new technologies and circular processes. That means, completely different ways of producing.

We all have a responsibility to solve this challenge – politicians, the business community, investors, researchers and consumers. This is especially true of us in the affluent part of the world. Our consumption patterns and mindset about what the good life is, need change. That is why I think it is dangerous to maintain the idea that we can make a transition without substantial behavioural changes.

### **The most serious and overlooked polarization**

There is a huge need for politicians not only to set goals and set up frameworks for, for example, a price on CO<sub>2</sub>. We need to prepare people to live in a completely different way and work with completely different pricing. Now we pretend in Denmark that we got a green tax reform before the summer of 2022. We did not get that, but simply a CO<sub>2</sub> tax on some industry sectors, but not all. We need a complete overhaul of the way we tax consumption and production and give significant rewards to those who are pulling in the right direction and the opposite if they do not. Therefore, it will be necessary to have a joint dialogue about behavioural change and what the good life is in the 21st century, what kind of growth and ideals we should focus on.

If politicians and companies fail in this task, I fear that we will see enormous polarization in society. When politicians argue that the green transition must not cost anything, it is usually because of the fear of phenomena like “yellow vests” (demonstrations in France against climate taxes on gasoline, ed.), increased polarization and losing popular support. The paradox is that instead we risk a different and far more dangerous polarization: That young people not only become more activist but more frustrated, some even radicalized, while others give up faith in the system and think it needs to be completely rebuilt. We can spend 10 years on discussing back and forth. That is why we must try to achieve a broad consensus on where we are going and not only set climate targets, but also agree on the means to get there.

### **Sluggish political systems must be challenged**

This will challenge the sluggish political systems and require a break with the zero-error culture that characterizes administrations and risks that administrative processes will be delayed and not get us anywhere. It is good to set targets for phasing out North Sea oil extraction, to plan energy islands and offshore wind of 150GW, to hold a Baltic Sea summit to ensure more wind energy, and invest in Power-to-X. But it is still relatively few people who sit in some government offices that will have to implement on all this.

When the president of the EU Commission Ursula von der Leyen said at the Summit on Offshore Wind in Esbjerg May 2022 that permission must be granted to expand offshore wind within certain zones within a year, it is the 32-year-old clerk at the Danish Energy Agency who must find out what this means for, among other things, the Birds Directive, the Habitats Directive and everything else. Despite everyone saying they want to, it just takes an unbelievably long time for things to actually materialize. It does this with wind farms or photovoltaic systems. It does this when the electricity grid for electrification is to be brought ashore, over a farmer's field with kilometer-long grids. And it must be democratically legitimized so that citizens feel involved.

### **Use for a “national operational staff”**

If we do not find more effective ways of doing this without losing democratic legitimacy, it will become perfectly clear over the next three or four years that it is one thing to have ambitions, and quite another to fulfil them. Failure to deliver on promises will create a deep crisis of confidence, as is already being seen on many levels.

The challenge is that we need to integrate several of the solutions - see them in a holistic perspective. We have not been good at that. Nevertheless, this is what must happen if we are to have the slightest hope.

There is a need to completely rethink the political decision-making processes surrounding the climate crisis. Here we could draw inspiration from the “General Staff of the situation” who coordinated the many activities during the COVID-19 pandemic in Denmark. A national operational staff was established here, which included ministries and authorities, private representatives and retired experts with specialist knowledge. One of the first days, for example, it was discovered that there was a lack of hand sanitizer. People looked at each other and asked: who can run with it? A former CEO from Novozymes was able to do that. It was just one example of how if we know it’s urgent enough, we’re actually able to put people together and say, “Now this task has to be done.” Such an operational staff of the climate must be anchored in the state, preferably the Prime Minister’s Office or the Ministry of Finance and be able to prevent getting bogged down in bureaucratic barriers. This has in fact been implemented by the new Danish Government after the election in 2022.

### **Leaders’ new role and responsibilities**

The responsibility of companies is to provide the solutions and innovation that demonstrate that you can live your life in a fundamentally different way while preserving modern conveniences. In the coming years, companies will therefore have to reach further and wider with their solutions, which will require a very large communication effort. This is a particularly difficult task for business managers. They are now buried in logistics problems, the aftermath of the COVID-19 lockdown, materials that do not arrive, energy prices, inflation, lack of workers. It is extremely difficult in this

situation to get leaders to put the long light on.

The problem is particularly acute for the 95% of Danish companies that are small and medium-sized. A great many of them are perplexed and, in a time of crisis, do not have the strength to handle such tasks. Small businesses know they have to do something, but don’t know what exactly. But soon they will meet the requirements as subcontractors to the big companies. Here, one wishes that the various trade associations were better at equipping companies to solve such complex challenges.

In general, however, I believe that the climate crisis opens up great opportunities for Denmark to position itself as a pioneering country. Therefore, I do not buy the argument about CO2 leakages and loss of competitiveness. There is empirical evidence that we in Denmark have benefited greatly from being a green frontrunner in a number of areas. It would be strange when for decades we have been investing in developing more environmentally friendly products and renewable energy, then want to be in the middle of the field, while the rest of the world is becoming aware of the green agenda and begins to demand our products.

### **Greenwashing becomes a major theme**

The polarization and slowness will also fuel the risk of greenwashing. It will be a major theme very soon. For example, there is a proposal for a new Marketing Practices Act because the consequences are far too lax in relation to greenwashing: It simply has to cost a little more on reputation to greenwash. The organizations that fear being hit by tougher legislation and fight back on the grounds that the rules are unclear should instead proactively contribute to the creation of clear guidelines.

Greenwashing will be a big theme because many NGOs want it as their major focus area. They’re getting fed up watching companies setting climate- and ESG-targets, talk about sustainability, etc., and when you check up on it a few years later, not much has improved. Therefore, reputational risks will grow. Take finance as an example. It is good that many pension funds and banks have begun to take the climate much more seriously by setting targets and offering green investment

offers. But when the World Wide Fund for Nature (WWF) then produces reports showing that there is no action behind the words, it will cost reputation and ultimately the ability to attract young employees to these companies at a time when there is a battle for the competent heads.

An aerial photograph of a dense city skyline, likely New York City, taken from a high vantage point. The image is bathed in the warm, golden light of a sunset or sunrise, with the sun low on the horizon, creating a strong lens flare and illuminating the tops of the buildings. The skyscrapers are packed closely together, and the overall atmosphere is hazy and dramatic. The text is overlaid on the center of the image.

**Companies have to  
take on a very large  
communication task in  
order to reach out  
much more widely with  
their solutions.**

Connie Hedegaard



A portrait of Rebecca Adler-Nissen, a woman with short brown hair and bangs, wearing glasses and a dark top. The background is dark and textured.

# Who and what *should you trust?*

## Information

### *Rebecca Adler-Nissen*

Rebecca Adler-Nissen is Professor of Political Science at the University of Copenhagen. She conducts research into international politics and diplomacy, citizens' susceptibility to misinformation and fake news. Currently she heads the project Diploface, which deals with the conditions of international cooperation in an online universe. In addition, she is a former head of section in the Department of European Policy at the Ministry of Foreign Affairs.

Photo: Søren Kjeldgaard



The more important an issue is for politicians and society as a whole, the more misinformation there will be. This poses a major challenge for politicians, managers and companies when it comes to the climate crisis. If the climate challenges become greater and more complex as the quality of serious information decreases, there will also be a comprehension gap in addition to the action gap, which can become a major challenge for the green transition. "Information pollution" will impede the transition, as political solutions require a public that is properly informed.

The war in Ukraine shows how worrying misinformation can be: Right now, we are experiencing a lot of misinformation about the war – not so much in Denmark, but in many other European countries where it is really bad. Italy was extremely exposed right up to the last elections in 2022, with the result that 35% of Italians believed that the war is primarily the fault of Ukraine, the EU and the US itself<sup>1</sup>. Fortunately, we know a lot more about misinformation than just 10 years ago – how it works, how it spreads, and who is most at risk<sup>2</sup>.

The climate crisis is also an information crisis. We see a lot of misinformation in the area of climate change, because there is so much at stake that challenges the population and our way of life. The wrong information can come in many formats. Historically, we have observed that the tobacco industry – but also other sectors – invests large amounts of money in challenging science in order to defend their own economic interests. We are also experiencing it at the political and ideological level. This is the case in the United States, where in large parts of Texas it is even considered un-patriotic to be green.

In other words, there will have to be formed some alliances with the media and especially the tech companies that already take responsibility for information when it comes to violence or hate crimes, but do not take responsibility for misdirection when it comes to climate change.

Investment must be made in information circuits as if they were critical infrastructure, like our energy supply. That is why it is important that quality information is supported and widely available.

Quality information does not come by itself. In recent years, we have been discussing public service in Denmark and whether to make cuts in, for example, science journalism. If corporate leaders do not get the right information about, for example, the climate crisis, then it is among other things, because of lack of access to easily accessible, easily digestible but credible information. We thus risk losing momentum in the green transition, among other things because the business community is unprepared. We know that education and strong public service can help make us more resilient to misinformation.

### **The new challenge of misinformation: Deep-Fakes**

What is changed from when we only had two TV channels and three local newspapers is that today we do not have control over who influences us and where the information comes from. In the near future, we will have problems with so-called 'deep fakes', where people receive misinformation that is much more convincing than what we see today, where even media people and researchers will not be able to see that it is not The Danish Prime Minister or Al Gore who speaks in a video, but that it is manipulated. This will be a gigantic challenge also for the green transition. Because action happens when most people can agree on a diagnosis of the problem and that we need to do something about it now.

More than a thousand French journalists signed a charter earlier this year stating that in climate coverage they will not employ the classic journalistic presentation "on one side and the other"<sup>3</sup>. This means that they will not uncritically be holding the microphone for disingenuous climate sceptics but take climate research and the latest knowledge seriously. They will communicate more responsibly, and more accessibly. It is quite thought-provoking and innovative and can create a different opinion in the public if others follow.

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

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

<sup>3</sup> <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 control our everyday lives**

It is a big challenge that most of our information is online, and that it is therefore not rooted in Europe or Denmark but in the Chinese or American tech companies. This has of course importance for the communication to the public and is therefore a challenge that must be addressed quickly.

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

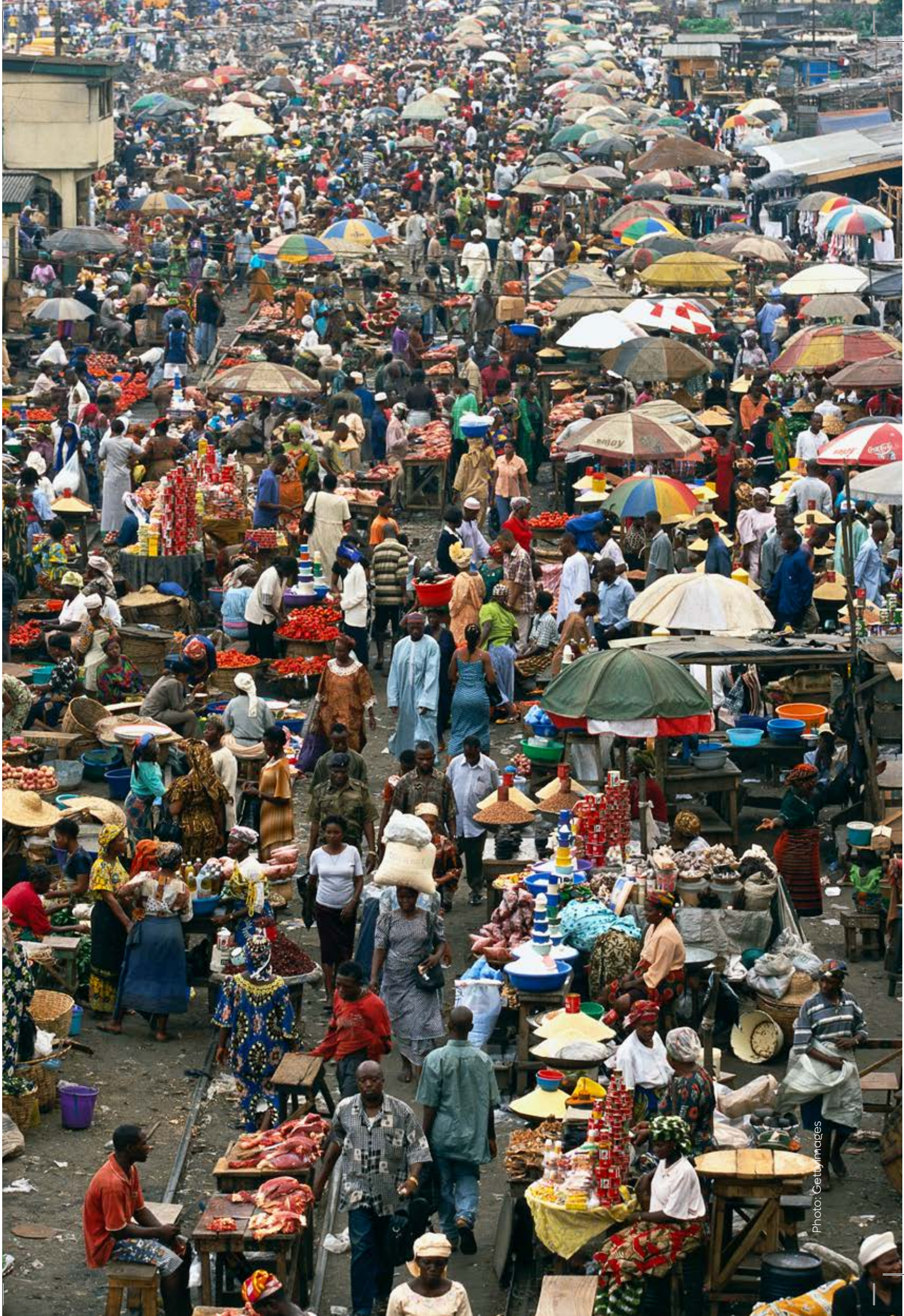
One of the problems is not only that we get bad information, but also that we spend too much time watching information we don't really need. We spend our time watching cat videos instead of reading about the climate crisis. That's because of the "attention economy" tech companies create and profit from. In general, there is a need to regulate tech companies, including regulating access to the data they collect about us. Right now, to be frank, we're getting addicted to some crap.

Fortunately, in Denmark, only 10-15% of the population may be most at risk of misinformation. But the quality of what the silent majority, including ordinary citizens and leaders, is exposed to, simply needs to be raised. It does something about our vigour and general well-being but also social anxiety. It is now well documented that social media makes us more lonely, anxious and insecure and harms the sense of community.

I would hope that the next wave of tech regulation was not just about privacy and rights, but also what harmful effects certain content and forms of "news" have when it comes to creating digital addictions. You can't act on the climate crisis if you're depressed. It's such a big problem now that there are going to be some big lawsuits in the future against some of the people working in TikTok and Facebook who know that this is addictive for both young and old, but don't do anything about it. Here you can compare it with the tobacco industry, where it also took a long time before we had effective policies.









A photograph of a man with a shaved head and glasses, smiling and looking to the right. He is standing in a field of tall, dry grass. Above him is a complex, industrial-looking structure of hanging lights and wires, creating a dramatic, high-contrast scene. The lighting is warm and focused on the man and the grass.

# Be aware *of your great responsibility*

## Ethics

### *Mickey Gjerris*

Mickey Gjerris is associate professor of bioethics at the University of Copenhagen. He conducts research into the ethical aspects of man's relationship with nature, including in particular climate, biodiversity, food and biotechnology applied to animals and plants in an ethical, philosophical and theological perspective. In addition, he is a former member of the Danish Council of Ethics.

I see two possible scenarios when it comes to the future of the climate crisis – either we wake up and understand that we are all aboard the same little “Spaceship Earth” in the universe, or we build higher walls. The latter is probably the most likely since we tend to turn inward when threatened and try to protect what’s closest to us. It can happen really fast. We have long “pretended” that the climate was a thermostat that we could just turn up and down as we pleased but overlook the danger of tipping points - i.e. irreversible damage to nature and the climate that comes with higher temperatures.

Together with researchers from the Technical University of Denmark (DTU), I have recently reviewed the outcome of the major climate summits over time, starting in 1972 with 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 in the summits who have an interest in continuing with the world of yesterday. Either because it ensures them political influence or ensures that their companies can continue to make money. The fossil fuel industry is raking in money - and is still being supported with billions of dollars from states around the world.

### **We are facing the great “mask drop”**

But it can create a certain optimism if the leaders we choose to solve the problems recognize that we can no longer tell each other that we are green world champions. If that happens, I believe something can change. There is increasing bottom-up pressure. This 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 in a handful of companies will eventually be exposed. Hopefully, this will trigger some changes.

Winston Churchill once said that you can fool some of the people all the time, you can fool all the people some of the time, but you can’t fool all the people all 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 an above-average level of education can see that it makes no sense what we are doing right now.

The truth is that we in Denmark are nowhere near our 70% CO2-reduction target. We protect ourselves from rising sea levels by building the artificial peninsula Lynetteholm around Copenhagen, with a number of consequences that will further damage the climate – increased globalisation, increased transport of goods, increased urbanisation, increased growth. It makes no sense. I believe that – and this is my hope – there are limits to how long we can fool people. There are limits to how long large parts of the business community can pretend to be green and sustainable and sell more products we don’t need. Leaders have a responsibility to tell the truth wherever they sit in the system.

### **Leaders: Recognize your responsibilities**

The more power you have, the more responsibility. And that is why we need to know the seriousness of the situation. And if you do not act, you are either deliberately naïve or you are making wrong decisions based on limited insight, which, although it is in the best sense, is not good enough in the current situation. Of course, as a leader, you have a responsibility to familiarize yourself with the available knowledge and research on climate change and then operate with a precautionary principle.



---

## As leaders, you must not see yourself in a limited role - you have a great responsibility.

---

Mickey Gjerris

My advice to leaders must be that they should not see themselves in a limited role but recognize that they have a special responsibility because they have great power that must be used for the good of others. And the best interests of others are to minimize the negative consequences of the natural crises we face. Therefore, with the power that is now theirs, they must find out how they can help to ensure that something actually happens and not just pretend that we are on the right track and thus exacerbate the problems.

In my opinion, the leader of the future must have a vision of where we should go – and gets his employees on board. To work isn't just about going to the office in order to earn some money so you can go home and survive. Work should also give people the opportunity to contribute to something that is essential and important in society. I think that would engage people.

### **We need to develop a whole new culture**

No one has promised us that there were any solutions – and certainly not easy solutions. Centuries of culture and social formation must be radically reversed – and that is terribly difficult. This is not something you can do with a political decision or a single climate march.

In the short term, the experts say that we should put taxes on what we want less of – in other words, we need a CO2 tax. But when we finally got a CO2 tax in Denmark in the summer of 2022, it was so low that it is unlikely to matter.

In the long term, we must educate one another so that we learn to take care of the planet. It is something that must permeate everything from nursery to the education system and adult life in the form of conversations and enlightenment. We need better and clearer ideas about where we want to go. Is the best thing we can imagine that we have a garden hedge so that we can be left alone on Fridays when we watch a handball match and at the same time worry about all sorts of little practical challenges? Or do we want a society where we focus on the values, we say are important when we ask each other what is most important: love, family life, friendships, and nature experiences?

But there is also reason for cautious optimism. We can see that something is happening bottom-up, because there is being put pressure on the political system from below. I experience that when I give talks and lectures. Here it becomes clear that it is not only young activists who are chained to bridges, but there are plenty of people with all sorts of backgrounds that want to get involved in numerous ways.





# Glossary

## **Biodiversity**

Biodiversity is the variety of life found across the globe. Biological diversity consists of all the animal species, plants, fungi, bacteria and other living organisms found on land and in water. Climate change threatens the planet's biodiversity, and several scientists point to a new mass extinction of species in line with previous extinctions of species in Earth's history – this time simply caused by human activity. According to the IPCC, with a temperature increase of 1.5°C, we risk the extinction of up to 14 percent of the species living on land<sup>4</sup>.

## **Circular economy**

In a circular economy, materials and products circulate instead of ending up for incineration or landfill. In other words, it is a way for companies to minimize their material use. We know this from the bottle deposit system or when we buy other types of recycled material. For years, we have produced and consumed from a linear mindset, where products are produced, consumed and thrown away. But if we are to create a sustainable future, we need to produce much more circularly.

## **Climate**

The average weather condition measured at a certain point in time over a long period of time. When identifying a climate, it requires measurements over a 30-year period, after which you can demonstrate whether a climate is, for example, temperate. There are different climates on Earth, which lie like belts above the planet. These are, for example, tropical, subtropical or temperate climates. The climate changes we have already observed are largely caused only by human activity and create other types of climates and thus changed living conditions for people around the world.

## **CO2-tax**

A CO2 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 will be introduced from 2025 until 2030 on parts of the industry.

## **CO2**

The greenhouse gas carbon dioxide. CO2 is a naturally occurring gas in the atmosphere, but if there is too much of the gas in the atmosphere, the atmosphere will warm up. It is also known as the greenhouse effect because CO2 retains the Earth's heat so that it cannot escape into space. Therefore, CO2 is also called a greenhouse gas.

## **COP (Conference of the Parties)**

UN's annual climate conference. COP is the annual climate summit held between the 195 member states that have signed up for the UN Climate Convention. The meeting will evaluate the results of current climate action and negotiate new binding additions to the agreement. 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 made using artificial intelligence. This kind of digital counterfeiting technology makes it possible to distort reality, for example by distorting a person's face so that their facial expression matches another audio track. With deepfakes, you can get a person to do or say things on video that in reality never really happened.

## **Degrowth**

Degrowth is an economic thinking that assumes that unlimited economic growth is not possible on a planet with limited resources. Only through negative or alternative growth can one create an economy that takes into account the planet's finite resources.

## **ESG**

ESG stands for 'Environmental', 'Social' and 'Governance' and is also known as the 'non-financial reporting'. They are used as metrics to report on and assess a company's sustainability performance in environmental, social and governance sustainability – for example in relation to CO2 emissions, water and energy consumption, gender equality, sick leave, employee satisfaction and gender equality in management and board.

### Greenhouse gases

Gases that retain the sun's heat. Greenhouse gases are a term that covers a number of gases that are able to retain heat in the Earth's atmosphere and thus can help create a greenhouse effect on the Earth. The greenhouse gases that are relevant in corporate climate reporting are:

- Carbon dioxide (CO<sub>2</sub>)
  - The most dominant greenhouse gas
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorochemicals (PFCs)
- Sulphur hexafluoride (SF<sub>6</sub>)

### Greenwashing

When you promise more than you actually do in terms of climate and the environment. 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, which, among other things, requires a full life cycle analysis (LCA) of a product that can document positive environmental impact before it can be labelled green or sustainable.

### Gulf Stream

The Gulf Stream is the fastest ocean current in the world and runs from the Gulf of Mexico, up along North America and further into the Atlantic Ocean. The Gulf Stream supplies warm water to the East Coast of North America and the Western European coast. Without the influx, these areas would have a significantly colder climate. Melted fresh water from the ice sheet, caused by the planet's rising temperatures, may lower the salinity of the northbound Gulf Stream, which lowers the heat input to Northern Europe and will thus cause significantly lower temperatures.

### IPCC (Intergovernmental Panel on Climate Change)

UN's climate panel which 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 assess the scientific status of climate change, the consequences of climate change for society and people, as well as the possibilities of adapting, and finally the possibilities of reducing greenhouse gas emissions.

### Leakage

A CO<sub>2</sub> leak occurs when ambitious national climate regulation hits and shuts down parts of the national production, which thus moves abroad. In the worst case, this may mean that the emissions that are desired to be reduced nationally will increase through the production that moves abroad.

### Paris Agreement

UN countries' climate agreement. In 2015, world leaders signed the so-called Paris Agreement, which aims to ensure that we keep global temperature increase below 1.5°C and a maximum of 2°C. This will require substantial reductions in CO<sub>2</sub> and other greenhouse gases. On the same occasion in Paris, the 17 Sustainable Development Goals were signed.

### Phosphorus

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

### Tipping point

A tipping point is climate and environmental damage in nature's systems that is irreversible, that is, they cannot be restored again. In the worst cases, they will get out of hand and initiate self-perpetuating, harmful 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 the heat from the Gulf Stream towards Northern Europe. The Intergovernmental Panel on Climate Change has estimated that already at a global temperature increase of 1.5°C, several of the consequences of climate change will not be averted.

<sup>4</sup>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. Löschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation and Vulnerability.

\*In terrestrial ecosystems, 3 to 14% of species assessed will likely face very high risk of extinction at global warming levels of 1.5°C

# Lederne

The Danish Association of Managers & Executives (DAME)

At the Danish Association of Managers & Executives we are here for you, who are a lot for others: A professional organization and unemployment insurance fund for managers and specially trusted employees. We help you who lead others - with education, inspiration, networking and advice in career and legal assistance. With a special focus on sustainable management, we believe that we can elevate those who will elevate us all forward. And it makes a world of difference to our more than 130,000 members and to the future we are all a part of.

Read more about Lederne on [www.lederne.dk](http://www.lederne.dk). Member of CEC European Managers (cec-manager.org).

# Navigating 360

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

Read more on [www.navigating360.dk](http://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](mailto:anm@lho.dk)







# 10 principles *for future climate leadership*

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

The climate crisis requires that you have a clear purpose for the company and a vision for the society you are a part of. How can the company become part of the solution to the climate crisis? What new markets should be pursued in a world that demands new solutions?

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

The companies of the future are radically minimizing the negative impact on nature. The goal is an approach where materials and resources are renewable and can be 100% recycled.

**3. Knowledge: Expand horizons**

A turbulent and constantly changed landscape due to climate change requires that you as a leader have a well-developed "GPS tool". This places demands on the individual manager to constantly seek new climate knowledge. The curriculum has simply become larger.

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

Climate change will hit harder and at shorter intervals. Leaders have to deal with a situation where one crisis replaces the other. Therefore, there is a need to react even faster than we have previously done.

**5. Organization: Shared values are a super-power**

In order to respond to crises and at the same time create positive changes, the entire company must pull in the same direction based on a strong sense of shared values. Research shows that this is the best way to prepare for and get through crises.

**6. Partnerships: No one can change the world alone**

Partnerships, knowledge sharing and innovation across disciplines, companies and industries will be crucial for achieving sustainability. The climate crisis will affect every sector and thus becomes a break with known structures, silos and sectors.

**7. Responsibility: Become an activist leader**

A political vacuum demands increased social responsibility from business leaders. The company will experience increased expectations to participate in solving society's major challenges. Navigating this will increasingly require activist leaders who dare to lead the way..

**8. Influence: Engage in the climate agenda**

The climate crisis will lead to a large number of new requirements for the company, 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 operating space.

**9. Terms: Green DNA becomes the most important capital**

The green transition must become part of the company's DNA. It is simply a matter of survival, because access to favourable loans, customers and new markets is determined by a strong green profile.

**10. Role model: Become a frontrunner**

Someone has to take the lead. All leaders should have the mission to become a national or international role model, be a green frontrunner in their industry and help demonstrate the benefits of acting new and first.