February 2024

Status Outlook 2024

Denmark's national climate targets and international obligations

English Summary

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About the Danish Council on Climate Change

The Danish Council on Climate Change (DCCC) is an independent body of experts who advise the Danish government on how to transition to a climate-neutral society, thereby ensuring that, in the future, we can live in a country with very low emissions of greenhouse gases while retaining our level of welfare and development.

The DCCC was established in 2014 as a result of the Climate Change Act , which outlined the Council's tasks. The Climate Change Act stipulates that the DCCC must:

- evaluate the status of Denmark's implementation of national climate objectives and international climate commitments,
- analyse potential means of transitioning to a low-carbon society by 2050 and identify possible measures to achieve greenhouse gas reductions,
- draw up recommendations to help shape climate policy, including a selection of potential mechanisms and transition scenarios.
- 4. contribute to the public debate.

The DCCC must, to the extent required in the preparation of its analyses and other work, consult and involve relevant parties, including, among others, business interests, social partners in the labour market and civil society.

The council members

- · Peter Møllgaard (Chair), Dean of the Faculty of Social Sciences at the University of Southern Denmark
- Bente Halkier (Vice Chair), Professor of Sociology at the University of Copenhagen
- Niels Buus Kristensen (Vice Chair), Director of Institute of Transport Economics, Norwegian Centre for Transport Research
- Brita Bye, Senior researcher at the Research Department at Statistics Norway
- Per Heiselberg, Professor at the Department of the Built Environment at Aalborg University
- Marie Trydeman Knudsen, Senior Researcher at the Department of Agroecology at Aarhus University
- Marie Münster, Professor in Energy Systems Analysis at the Technical University of Denmark
- Katherine Richardson, Professor in Biological Oceanography and Leader of the Sustainability Science Centre at the University of Copenhagen
- Bo Jellesmark Thorsen, Head of Department and professor of applied economics at the Department of Food and Resource Economics at the University of Copenhagen

The Status Outlook

Each year, the DCCC releases a Status Outlook. This report serves as a comprehensive overview of Denmark's climate efforts, highlighting achievements, gaps, and areas requiring further attention. In the Status Outlook, the DCCC takes stock of Danish climate policy, assessing whether current policy efforts demonstrate that Denmark will meet its national climate targets and its international obligations.

Denmark's current national climate targets include a target of a 50-54 percent reduction in greenhouse gas emissions by 2025 compared to 1990, a reduction of 70 percent by 2030, and climate neutrality no later than 2050. Finally, the DCCC Status Outlook includes recommendations for policies and measures that the government should prioritise in the coming year.

Main conclusions

Status of global climate policy

- The Paris Agreement has contributed to strengthening global climate action. Temperature
 forecasts made before the adoption of the Paris Agreement were more dire than those seen today.
 This indicates that the world's collective climate action has had and will continue to have a positive
 impact on the fight against climate change.
- The world's climate actions are still far from sufficient to meet the goals of the Paris Agreement. Even if the reduction targets of the world's countries for 2030 are met, the UN Environment Programme estimates that global temperatures will rise by 2.5°C above pre-industrial levels in this century.
- In the agreement from the 2023 climate summit, COP28, countries were urged to, among other things:
 - o Triple the installed capacity of renewable energy by 2030
 - Double efforts in energy efficiency by 2030
 - Transition away from fossil fuels in energy systems.
- The impacts of climate change in the most vulnerable nations are more extensive and severe than
 previously assessed, yet assistance to these nations has not been increased correspondingly. In
 fact, the number of climate adaptation projects in developing and vulnerable countries supported
 through international climate funds has stagnated.
- Climate-related losses and damages are already occurring at the current level of warming, and these costs will only increase with further warming. At COP28, a fund was established to address climate-related losses and damages in vulnerable countries, but the parties to the Paris Agreement have not yet agreed on the long-term financing of the fund.
- There is a general lack of climate finance. This applies globally, but especially in emerging and
 developing countries. Meeting all the ambitions and goals outlined at COP28 depends on countries
 and private actors investing much more than they do today.

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European Union frameworks for Danish climate policy

- The European Commission assesses that the climate plans of most EU Member States are not sufficiently ambitious to ensure that the EU's climate target of a 55 percent reduction by 2030 is achieved. The Commission commends Denmark for its high ambitions for renewable energy, our plans for energy security, and the phasing out of coal for energy production. At the same time, Denmark is criticized for not illustrating how to fulfill Danish obligations for the ESR, LULUCF and energy efficiency targets and for not having an adequate plan for climate adaptation.
- The European Commission has proposed a 2040 climate target for the EU of a 90 percent reduction in greenhouse gas emissions compared to 1990. At the same time, the Commission points out that a greenhouse gas budget of 16 billion tonnes of CO₂e for the period from 2030 to 2050 is compatible with the current 2030 target, the proposed 2040 target, and the target of climate neutrality by 2050. If the proposal is adopted, it is expected to lead to stricter climate legislation in the EU in the coming years.
- The new 2040 target is expected to lead to stricter climate legislation in the EU in the coming years. This will involve a revision of existing regulations to reflect the target and greenhouse gas budget for 2030-2050. And it is also expected to result in new forms of climate regulation.
- In the coming years, EU agricultural policy will increasingly be influenced by the EU's climate targets for 2040 and other legislation following EU strategies for forests and biodiversity. Denmark already regulates agriculture to meet Denmark's own climate targets, and the risk of carbon leakage and loss of competitiveness associated with this will decrease with further common European regulation of emissions in agriculture.
- To meet the EU's 2040 target, the Danish government has called for a common agricultural pillar comprising EU targets and EU regulation of agricultural emissions. Likewise, the government has proposed that agriculture should be regulated to the greatest extent possible through an emissions trading system for agriculture. However, stronger EU regulation of agriculture in the longer term does not reduce the need for a Danish climate tax on agriculture as soon as possible before 2030.
- Biomass will become a scarcer resource in the future. There may be EU regulation on the way that affects the consumption of biomass for energy, which could impact the role biomass can play in the Danish energy system.

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Status on the fulfilment of the Climate Act's targets

Denmark has a target of reducing emissions by 50-54 percent by 2025:

- Several new factors affect whether the 2025 target will be achieved. Denmark's total area of carbon-rich soils has been revised downward, significantly reducing the emission reduction needed. Additionally, the government has proposed an increase in diesel tax and subsidies for methane-reducing feed to meet the 2025 target.
- The DCCC assesses that it is likely that the lower limit of the 2025 target of 50 percent will be met with a margin of approximately 1.2 million tonnes of CO_2e . However, there is still a gap of about 1.9 million tonnes to the upper limit of 54 percent.
- There is still a risk that the lower limit of the 2025 target will not be reached, as there is a significant risk that several of the expected reductions predicted in the climate projections may not be realised quickly enough to fulfil the 2025 target.

Denmark's climate target in 2030 is an emission reduction of 70 percent compared to 1990 levels:

- The reduction requirement to meet the 2030 target has now been reduced to approximately 2.6 million tonnes of CO₂e. This is mainly due to the significant downward adjustment of Denmark's total area of carbonrich soils.
- The government plans to fulfil the remaining part of the 2030 target by introducing a tax on agricultural emissions. According to the government, the tax must not impair the industry's competitiveness. However, even if the tax is accompanied by subsidies, it is unlikely that a model can be designed that does not reduce the competitiveness.
- The government's plan for reaching the 2030 target bears a significant risk that many of the reductions expected by the government will not be realised by 2030. This includes:
 - o Agriculture, where several measures do not seem to have the expected effect.
 - o Emission factors for carbon-rich soils, which are expected to be adjusted upward.
 - o Industry, where the effect of the Danish CO₂ tax is likely overestimated.
 - o Investments in carbon capture and storage, where time schedules are tight.
- The overall assessment of the DCCC is that the government has not yet demonstrated that the 2030 target will be met. The government's plan aims to only just meet the target, and there is a significant risk that emissions will not drop below the level required by the target. Additionally, the timeframe and thus the options for action until 2030 have shrunk since 2023, when the DCCC also found that it had not been demonstrated that the 2030 target would be fulfilled.

In the EU, Denmark has committed to reduction targets for selected sectors by 2030:

- It appears Denmark will not meet the EU obligations without further measures, especially regarding emissions from transport, agriculture, and land use. Even if the national targets for 2025 and 2030 are met, it is far from certain that Denmark will fulfil its EU obligations.
- The EU obligations serve as a collective budget target for the sum of emissions over the period 2021-2030. This means that additional Danish measures must be decided quickly to meet the obligations. The budget target makes it particularly crucial that the government's announced tax for agriculture takes effect as soon as possible rather than only providing reductions immediately before 2030.

Recommendations for climate policy

The DCCC has identified seven important focus areas for climate policy in the coming year:

- **Implementation and monitoring:** The following supportive measures should strengthen monitoring and implementation of initiatives that are already adopted:
 - The CO₂ tax on industry should be revisited as soon as possible to ensure it leads to the expected reductions.
 - The data foundation for assessing Denmark's LULUCF emissions should be made more robust to reduce data uncertainties.
 - The government should consider initiating additional education and labour market policies to ensure sufficient workforce and skills for the green transition.
 - A strategy should be formulated to strengthen Danish public acceptance and support for addressing the climate challenge.
- **Regulation of agriculture:** A greenhouse gas tax on emissions from production should drive the green transition of agriculture. It should be implemented as soon as possible and should not be delayed by the green tripartite meetings in Denmark. Compensatory measures can support the transition but should not freeze agriculture in its current structure, and voluntary schemes should automatically be followed up by more tangible instruments.
- **Regulation of transportation:** The government has proposed raising the diesel tax by DKK 0.5 per litre. However, the tax should be increased by additional approximately DKK 0.4 to align with the German tax. Additionally, the government should focus on reducing the number of petrol- and diesel-powered cars, vans, and trucks by promoting a larger share of electric vehicles in new sales. Regulation ensuring transparency and competition in the market for charging electric vehicles can contribute to this.
- Global frameworks: Denmark's global climate action should be strengthened by making the global dimension clearer in the Danish Climate Act. Following this, targets for international transport and benchmarks for consumption-based climate footprints, the climate footprint of public procurement, and financial climate support to developing countries should be set.
- Climate footprint from consumption: A strategy should be developed to promote climate-friendly behaviour across consumption groups, including food consumption. The climate footprint of Danish food consumption should be reduced by serving climate-friendly food in public kitchens. Additionally, the government should work on imposing taxes on goods with large climate footprints; imposing taxes on such food products would be a natural place to start.
- **Biomass and land:** A strategy should be developed for Denmark's use of biomass, and more accurate incentives should be ensured for the use and production of biomass to reflect their real climate impact.
- **Expansion of green power:** The expansion of the electricity grid and energy from solar and wind should be increased and not hindered by concerns about electricity supply security, which can be ensured even with high proportions of wind and solar energy. However, challenges to the security of supply should be addressed as soon as possible. This includes ensuring increased flexibility in the electricity system by energy authorities.

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1 Purpose of the DCCC Status Outlook

Denmark faces a significant task in meeting the targets of the Danish Climate Act and ensuring the Danish ambition of being a frontrunner, inspiring the rest of the world. In this report, the DCCC assesses Danish climate policy and provides recommendations for future climate action. The report also describes the climate policy context in the EU and globally.

The DCCC provides status updates and recommendations

In this report, the DCCC assesses Danish climate policy and looks ahead to the important decisions that are to come. The DCCC conducts ongoing analyses of specific topics and provides recommendations for climate policy, guiding the Danish government and the Parliament. The Status Outlook summarises the past year's work and puts it into a comprehensive framework.

In this year's report, emissions from Danish land areas are a recurring theme. It is challenging to measure these emissions from the land, whether they come from forests or agricultural land. Therefore, predictions about the prospects of meeting climate targets become highly uncertain.

The report also focusses on the EU. While the report contains a separate EU chapter, the EU dimension permeates many other themes of the report. Danish climate policy cannot be separated from the European climate policy, and the scope for climate policy in Denmark depends largely on the EU.

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2 Status of global climate policy

In 2023, the world came dangerously close to a temperature increase of 1.5 degrees Celsius, and with current policies, the planet is on track for an increase of 3°C this century. COP28 sent a signal to the world's countries to phase out fossil fuels, but there is still an enormous need for faster reduction of greenhouse gas emissions, more climate adaptation action, and climate finance for the world's most vulnerable countries.

2023 was the year of climate records

In 2023, the world witnessed a series of alarming climate records. 2023 became the warmest year ever recorded, with a global temperature increase throughout the year of 1.48°C compared to the pre-industrial level in the period 1850-1900. 1 At the same time, human-made greenhouse gas emissions once again set a record, and the Intergovernmental Panel on Climate Change (IPCC) now estimates that the concentration of CO_2 in the atmosphere is at its highest level in over two million years. 2

The temperature records have been accompanied by extreme and destructive weather events worldwide. For example, there have been severe wildfires in Canada and Hawaii, massive flooding in Norway and India, and a continuation of a long-standing drought in the Horn of Africa.³

In Denmark, precipitation levels are rising, and 2023 became the wettest year on record since we began systematic weather measurements. Along with several cases of storm surges, the heavy rain has caused significant flooding in many areas.

It is not possible to limit warming to 1.5°C with current climate action

The world is on track for even higher temperature increases. With current policies, the UN's Environment Programme, UNEP, estimates that the global average temperature will rise by 3°C in this century compared to pre-industrial levels. If all countries in the world reach the 2030 targets they have submitted under the Paris Agreement, warming will be limited to 2.5°C. And if countries further meet the long-term goals of climate neutrality, as many have set, warming can be kept at 2°C in this century.⁴

These climate projections formed a dire context for the COP28 climate summit in Dubai that was held at the end of 2023. According to the summit's decision text, it is necessary to reduce global greenhouse gas emissions by 43 percent in 2030 compared to the 1990 level if warming is not to exceed 1.5°C. A reduction of this magnitude requires a significantly greater climate action than today.

The COP28 agreement from December 2023 calls on countries to transition away from fossil fuels in energy systems, to phase out coal-fired power plants without carbon capture and storage, to triple the global installed capacity of renewable energy, and double energy efficiency efforts by 2030. It is still too early to say how much impact these recommendations will actually have.⁵

The world needs to focus more on climate change adaptation

Climate change is already visible today. The latest synthesis report from the IPCC concludes that the global average temperature and sea levels are rising at unprecedented rates. Some of the observed changes are irreversible for centuries and in some cases millennia. This means that climate action will increasingly need to focus on adapting to climate change and not just trying to mitigate it by reducing emissions.

At COP28, the world's countries established a framework to guide countries in strengthening their resilience to the impacts of climate change. However, the framework was not accompanied by new financial commitments to help developing countries with their climate adaptation efforts.

Climate change will hit developing countries the hardest. In that light, it is unfortunate that the number of climate adaptation projects is stagnating and that financing for climate adaptation in developing countries is declining.

COP28 had an increased focus on loss and damage

Climate-related losses and damages are inevitable already at the current level of warming, and these costs will only increase with further warming.⁷

At COP28, a fund was established to address climate-related losses and damages, particularly in vulnerable countries. The first financial commitments to the fund have been made, which means that the fund potentially can provide economic support to vulnerable countries in 2024. However, the parties to the Paris Agreement have not yet agreed on the long-term financing of the fund.

More climate finance is needed for the world's developing countries

Today, there is a significant gap between the global level of climate finance and the level required to meet the goals of the Paris Agreement. Achieving all the ambitions and goals presented at COP28 depends on sufficient financing being available, especially for developing countries. The financing needs to include the deployment of renewable energy, transitioning away from fossil fuels, and increased resilience to climate change.⁸

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3 EU frameworks for Danish climate policy

The European Union has great influence on the framework and opportunities for Danish climate policy. The European Commission has proposed an EU target for 2040 of 90 percent reduction in greenhouse gas emissions compared to 1990, which would mean that all Member States must accelerate their climate action. The target will likely mean that EU climate regulations will begin to impose requirements on agriculture. Biomass is also an area that is likely to receive increased attention from the EU in the future. Both areas are highly relevant to Denmark.

EU climate policy is crucial for Danish climate policy

Danish and European climate policies are closely linked, and Denmark's room for manoeuvre on climate policy is largely defined by Brussels. Therefore, the EU constitutes a natural part of the DCCC's status report on Danish climate policy.

The EU's climate policy is based on reduction targets for greenhouse gas emissions, just as the Danish policy. The EU as a whole must be climate neutral by 2050, while emissions in 2030 must be reduced by 55 percent compared to 1990.

EU climate measures drive developments in many areas in Denmark. This includes climate requirements for new cars and emissions trading systems for certain sectors. In other areas such as agriculture and heating in buildings, the Member States are responsible for implementing the measures necessary to meet the specific obligations of each country.

The EU's upcoming 2040 target

The Fit for 55 package is soon to be adopted

In order for the EU to achieve its upcoming climate target in 2030 of 55 percent, the Union requires a number of new climate measures. To this end, in 2021 the European Commission launched its *Fit for 55* package, which contained a wide range of new climate regulations. The package has been negotiated in the European Commission, the European Parliament, and the Council of Ministers over the past couple of years, and at the time of writing, all acts have been adopted except one.

Key measures in Fit for 55 include:

- Fewer quotas will be issued in the EU's emissions trading system in the future, and shipping will be included in the system.
- A new emissions trading system for land transport and buildings will be introduced from 2027.
- Member States' national obligations on climate and energy will be tightened.
- Import of certain goods from third countries will be subject to a climate tariff through a climate border adjustment mechanism (CBAM).

One piece of legislation remains to be negotiated (the revision of the Energy Taxation Directive), which is expected to take place after the European Parliament elections in June 2024.

The Commission has proposed a 90 percent target for 2040

Efforts to combat climate change will continue after 2030, and the EU is already looking ahead to the milestone for 2040. Negotiations on the European 2040 target will begin in the second half of 2024, after the European parliamentary elections. The 2040 target will be a crucial stepping stone towards the ambition of climate neutrality by 2050.

The European Commission presented its proposal for the 2040 target on February 6, 2024. The proposal calls for a 90 percent reduction compared to 1990. Thus, the Commission largely follows the recommendation from the European Scientific Advisory Board on Climate Change, which has recommended a target of 90-95 percent. 10

A 90 percent target will mean that European climate policy will have to speed up in the 2030s. There is a long way from the 2030 target of 55 percent to the 90 percent target in 2040. Some of the scenarios of the European Scientific Advisory Board on Climate Change imply that the EU will exceed 55 percent in 2030. However, this does not necessarily mean that the EU will increase its 2030 target. Nevertheless, Member States, companies, and citizens should prepare for a future where climate regulations are likely to be stricter.

Denmark advocates a high 2040 target

Denmark's official position in the upcoming negotiations is that the EU's target must be compatible with the Paris Agreement's 1.5°C target. At the same time, the target must put the EU on the right path towards climate neutrality in 2050. The Danish Minister for Climate, Energy, and Utilities has specified this position by stating that Denmark supports a target of at least 90 percent for 2040.

Focus areas in the EU: agriculture and biomass

The EU is likely to impose requirements on agriculture

So far, common European climate regulation has largely steered clear of agriculture. Member States themselves have been responsible for reducing greenhouse gas emissions from agriculture.

The emissions trading systems in the EU are on track to significantly reduce emissions from energy consumption, and agriculture remains the only major emitter not covered by an emissions trading system. An EU target of 90 percent for 2040 is likely to mean that the EU will begin to impose climate requirements on the agricultural sector. The most cost-effective way forward for the EU as a whole would be to subject agriculture to regulation that provides the same incentive for reductions as in the energy sector.

The European Commission has explored the possibilities of introducing an emissions trading system for greenhouse gas emissions from agriculture. Such a system could potentially be expanded to include carbon sequestration in forests and soils.

Denmark advocates a common agricultural pillar in the EU

The Danish government is working for a common agricultural pillar in the EU with both targets and regulation of emissions and uptake. The government supports the idea of an emissions trading system for agriculture. As a country with significant agricultural production, it is in Denmark's interest for the EU to take responsibility for the agricultural sector, reducing the need for national Danish measures that could harm the competitiveness of Danish agriculture.

The EU will need to prioritise biomass

Biomass is an important component in the green transition but is also a resource that will be scarce in the future. The various paths to a 90 percent reduction in 2040 proposed by the European Scientific Advisory Board on Climate Change all involve increased consumption of biomass. This can compromise biodiversity and carbon stocks in forests.

Therefore, the EU can be expected to increase its focus on biomass. Currently, the EU has no dedicated strategy for the production and use of biomass. This has led the European Environment Agency to recommend a European biomass strategy that can help prioritise the use of land and its impact on e.g. biodiversity and the environment.¹¹

A new biomass course in the EU can affect Denmark

Denmark is currently a major consumer of biomass. We are one of the EU countries that uses the most biomass per capita for energy purposes, ¹² and as a country with a relatively small share of forest, we are by far the largest importer of biomass in the EU in relation to the country's size. Therefore, Denmark may be more affected than other countries if EU biomass regulation is tightened.

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4 Status of Danish climate targets and obligations

Danish climate policy is largely driven by our climate targets. The DCCC has a statutory role in assessing the prospects of meeting the targets. New figures for carbon-rich soils mean that there are now good chances of reaching the lower limit of the 2025 target of 50 percent. However, there is still a significant risk that the Danish government's plans are not sufficient to meet the 2030 target. Denmark's EU obligations also require considerable attention.

Denmark has both its own climate targets and EU obligations

The Danish Climate Act sets targets for efforts to reduce Danish greenhouse gas emissions. By 2025, Danish emissions must be reduced by 50-54 percent compared to 1990. In 2030, the reduction target is 70 percent, while Denmark must be completely climate neutral by 2050 at the latest. According to the political platform for the Danish coalition government, the government intends to advance the year of climate neutrality to 2045 and supplement it with a target of 110 percent reduction by 2050. By 2025, a target for 2035 must be set.

The EU also sets limits on Danish emissions. Under the so-called Effort Sharing Regulation (ESR), Denmark must reduce its emissions, especially in transport, agriculture, and heating of buildings, by 50 percent by 2030 compared to 2005. However, the target effectively sets a ceiling on total emissions from 2021 to the target year in 2030. Additionally, Denmark has committed to limiting emissions from forestry and land use (the LULUCF sector) over the same period. It is possible to allow emission rights in one obligation to compensate for emissions in the other, which is why they are typically analysed together.

2025 climate target

The target period for the 2025 target has begun

The DCCC is required to annually assess the status of prospects of achieving the 2025 target of a 50-54 percent reduction. The target is calculated as a three-year average from 2024 to 2026 to smooth out fluctuations, such as those due to weather conditions. This implies that the target period has already begun, and every tonne of CO_2e emitted now counts in the calculation of whether the target is met.

The Danish Energy Agency's climate projection from April 2023 showed that there were still a few reductions needed to reach the lower limit of the 50 percent target. Therefore, the parties in the Danish Parliament have been negotiating a package of measures that can take Denmark to the target. As of the deadline for this report (February 2024), these negotiations had not resulted in an agreement. The government's proposal in the negotiations includes an increase in the diesel tax and subsidies for methane-reducing feed for cattle. The government expects these measures to collectively reduce expected emissions by 0.4 million tonnes of CO_2 e annually on average over the target period from 2024 to 2026.

New figures for carbon-rich soils help with the 2025 target

New calculations of emissions from Danish carbon-rich soils have helped bring us closer to meeting the 2025 target. These soils are also called peatlands. Figures presented in December 2023 by researchers from the University of Aarhus show that the portion of Danish agricultural land that is categorised as carbon rich is significantly less than estimated in the previous assessment that was carried out more than ten years ago. This reduction means that, all else being equal, the soils emit less than previously calculated. The new figures alone move Denmark 1.8 million tonnes of CO_2e closer to meeting its 2025 target.

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However, emissions from carbon-rich soils depend not only on the area of the soils but also on the emissions per hectare of carbon-rich soil, known as emission factors. The emission factors are expected to be updated during 2024, and preliminary indications suggest that the update, in isolation, will increase the estimate of how much the remaining carbon-rich soils emit, although the increase is unlikely to outweigh the reduction that was calculated on the basis of the reduced area of carbon-rich soils. This is explained further in Box 1.1.

Box 1.1 New figures for carbon-rich soils

The Danish Centre for Food and Agriculture (DCA) at the University of Aarhus has prepared a new map of Denmark's carbon-rich soils (also known as peatlands).¹³ The map was commissioned by the Ministry of Climate, Energy, and Utilities and shows that the area of carbon-rich soils in 2022 was significantly smaller than when the area of carbon-rich soils was last assessed in 2010 and 2011. The report downgrades the area from approximately 172,000 to approximately 118,000 hectares.

The reduction in area is primarily due to the fact that the organic carbon in the soils has decomposed into CO₂, so many of the soils can no longer be classified as carbon-rich. There are two possible reasons why this has happened faster than previously expected:

- The carbon in the soil has been released into the atmosphere faster than previously calculated.
- The carbon-rich peat layers in the soils have been thinner than expected, resulting in the soils transitioning more quickly to soil types that are not classified as carbon-rich.

At present, it is not known which of the two reasons has played the largest role.

Emissions depend on emission factors

Less carbon-rich soils mean, in isolation, fewer emissions. However, emissions also depend on the so-called emission factors, which indicate how much CO₂ each hectare of carbon-rich soil emits per year. Researchers at the University of Aarhus are reassessing these factors. Their final results have not been published at the time of writing (February 2024), so the extent to which the emission factors will be adjusted remains unclarified.

Figure 1.1 illustrates the consequences of the revised area of carbon-rich soils for emissions. The figure includes a rough estimate of emissions if adjusted emission factors are taken into account. The DCCC has made this estimate based on current data and the following three changes to factors affecting emissions, which are based on a memorandum from the Danish Centre for Environment and Energy (DCE) at the University of Aarhus:¹⁴

- 1. Emission factors for soils containing 6-12 percent organic carbon are raised to the level of soils containing more than 12 percent.
- Specific emission factors for grasslands and cultivated fields are replaced with one average emission factor based on the original factors.
- 3. The emission factor for soils with more than 12 percent organic carbon is reduced by 15 percent, considering that the soils are rarely fully drained.

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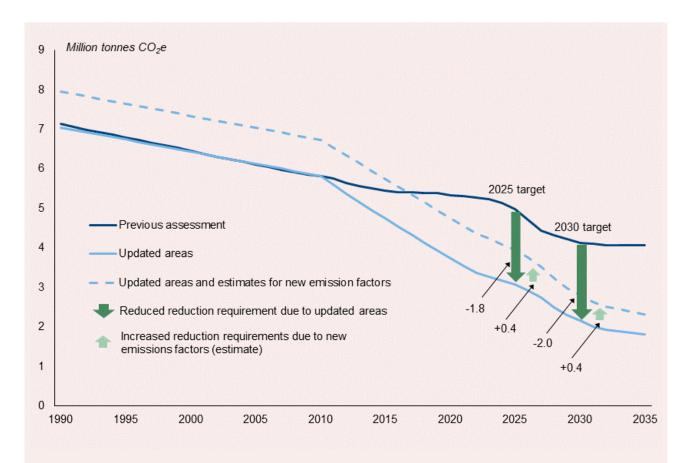


Figure 1.1 Consequences for emissions and reduction requirements of new figures for carbon-rich soils

Note.: The arrows and the associated numbers are three-year averages for the periods 2024-26 and 2029-31.

Sources: DCE¹⁵ and the DCCC.

Figure 1.1 shows that the reduction requirements decrease by 1.8 and 2.0 million tonnes of CO_2e in 2025 and 2030, respectively, when only the updated areas are taken into account. If the DCCC's estimates for emission factors are included, the reduction requirements increase by approximately 0.4 million tonnes of CO_2e in both target years. Combined, these two opposing effects, however, result in a significant decrease in the reduction requirements.

Higher emission factors inherently increase emissions in 1990. Since the climate targets are formulated as percentage changes relative to 1990, the higher emissions in 1990 allow for more emissions in the target years. This is the reason the higher emission factors only have a relatively modest effect on the reduction requirements.

It is important to emphasise that the estimated effects of the revised emission factors are highly uncertain. Specifically, it is still unclear how the factors for grasslands and cultivated land will be adjusted relative to each other. If these are not revised, reduction requirements increase by only 0.1 and 0.2 million tonnes of CO_2e in 2025 and 2030, respectively, which should be compared to the aforementioned 0.4 million tonnes.

Emissions from land areas create unpredictability in climate policy

The revision of the figures for carbon-rich soils has significant implications for the prospects of achieving Danish climate targets. And the new figures are crucial for determining the extent of reductions needed elsewhere in society to meet the targets.

There is also considerable uncertainty about sequestration and emissions in the forest sector. Measuring the amount of carbon in Danish forests is not straightforward, which makes measuring potential carbon emissions from the forest sector much more difficult to quantify than, for example, emissions from cars, as these emissions are closely linked to fuel sales. Changes in accounting methods in forests can have significant consequences for the reported emissions.

Climate policy is thus highly dependent on data that are subject to considerable uncertainty. For this reason, it is essential that there is a strong focus on producing accurate and updated data for emissions and uptake from Danish land use areas in the future. At the same time, plans to meet climate targets should incorporate the risk of future surprises in emissions data. In the future, we risk that the numbers move in the opposite direction, making it harder to achieve our climate targets.

The new figures significantly increase the chance of achieving the target in 2025

2021 is the latest year with complete statistics for actual Danish greenhouse gas emissions. In 2021, if the new estimates of the area of carbon-rich soils are included, Danish emissions were 44.4 million tonnes of CO₂e.

Emissions will be reduced by 6.5 million tonnes of CO_2e by 2025 relative to 2021. This expectation is based on the latest climate projection, the new figures for carbon-rich soils, and the government's proposal for, among other things, a higher diesel tax.

The net reduction of 6.5 million tonnes of CO_2e results from, on the one hand, a combined decrease from most sectors of 9.3 million tonnes in emissions, including both adopted policies and government proposals. Many of these reductions are due to the phasing out of fossil fuels in the energy sector. On the other hand, increased net emissions of 2.9 million tonnes in Danish forests are expected because the forests' uptake of CO_2 is declining in current forecasts. Figure 1.2 illustrates these numbers.

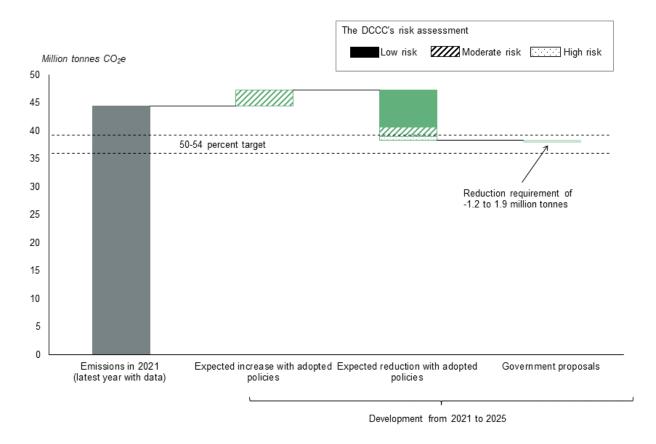


Figure 1.2 Prospects of reaching the 2025 target with adopted policies and government proposals

Note 1: The expected increases and reductions show the change from 2021 to 2025, with the latter year calculated as an average

for the period 2024-26.

Note 2: The latest climate projection is adjusted in the figure according to the latest numbers for the area of carbon-rich soils

and the expected delay in the tendering process to find operators to be funded under the subsidy scheme for negative

emissions carbon capture, transport and storage (the NECSS scheme).

Sources: Danish Energy Agency¹⁶ and the DCCC.

The latest climate projection indicated a reduction requirement of 1.0 million tonnes of CO_2e to meet the lower threshold of the 2025 target at 50 percent. With the elements in Figure 1.2, the 50 percent target is exceeded by 1.2 million tonnes. In Box 1.1, the DCCC estimates that the upcoming updated emissions factors for carbon-rich soils may lower this excess to 0.8 million tonnes. However, the estimate is associated with considerable uncertainty.

A gap of 1.9 million tonnes of CO_2e remains up to the upper threshold of the target at 54 percent. This figure corresponds to 2.3 million tonnes CO_2e when considering the estimate for the adjusted emissions factors. Although the 2025 target will formally be achieved with a 50 percent reduction, 54 percent is much more compatible with the temperature goal of the Paris Agreement, as previously noted by the DCCC. ¹⁷ The closer we get to the upper threshold of the 2025 target of 54 percent, the better Denmark will be placed to meet the 2030 target and our EU commitments.

The DCCC assessment focuses on uncertainty and risk

Figure 1.2 groups the expected changes from 2021 to 2025 by the risk of a change not occurring to the extent expected. Overall, the DCCC assesses that reductions of 2.4 million tonnes of CO_2e out of the 9.3 million are associated with either medium or high risk. This applies, among other things, to the expectation that the Danish carbon tax on industry will lead to a decrease in production, and it applies to the effect of several measures in agriculture.

On the other hand, there is a moderate risk (or chance) that the expected increased net emissions from forests of 2.9 million tonnes of CO₂e will not occur to the extent expected. This may happen if the predicted harvesting of forests turns out to be less than forecasted. Such a trend has been observed in the forestry sector before.

The lower 50 percent threshold of the 2025 target will likely be reached

Overall, Denmark will likely achieve the 2025 target. This is particularly due to the new estimates of the area of carbon-rich soils. However, it cannot yet be concluded that the target will be achieved. There is still a risk that the lower threshold of 50 percent may be missed.

Overall, there is considerable uncertainty regarding how emissions will evolve during the target period of 2024 to 2026. Although the target period has already begun, there is a risk that major emission sources in, among others, industry and agriculture will not be reduced as expected. Additionally, the update of emissions factors for carbon-rich soils is unknown at the time of writing (February 2024).

2030 climate target

The Danish Government's path to the 2030 target goes through agriculture

In 2030, Denmark is required to achieve a 70 percent reduction compared to 1990 levels. The climate projection from April 2023 identified a reduction requirement of 5.6 million tonnes of CO_2e that was uncovered with the current policies. However, with the new figures for the area of carbon-rich soils, the expected reduction requirement decreases to 3.6 million tonnes.

In 2023, policies contributing to approximately one million tonnes of CO_2e reductions were adopted and proposed. These reductions stem from, among other things, the proposed increase in diesel tax and initiatives at the EU level. This brings the reduction requirement down to 2.6 million tonnes.

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In December 2022, the political foundation statement for the new Danish government stated its intention to meet the emissions reduction requirement of 2.6 million tonnes CO_2e through reductions in the agricultural sector. Specifically, it states that a tax on greenhouse gas emissions will be introduced in agriculture to ensure that the reduction target for the agricultural and forestry sector is met. This target was adopted by the Danish Parliament as part of the agricultural agreement in 2021, aiming for a 55-65 percent reduction by 2030 compared to 1990 levels. If this sector target is achieved, emissions from agriculture and forestry will decrease enough to meet the overall 2030 target of 70 percent.

The DCCC assess prospects of reaching the 2030 target

The Danish Climate Act assigns a specific task to the DCCC regarding the 2030 target. The Council is tasked with assessing whether the government's climate action demonstrates that the target will be met. According to the DCCC, such demonstration requires a clear and concrete plan and process from the government on how it expects to achieve the target. The plan should include a significant degree of politically adopted measures, and the extent of adopted measures should increase as we approach the target year. The plan should also address the risk that individual elements of the plan may not deliver their expected contributions.

The DCCC's assessment is based on a thorough mapping of the government's climate action. The mapping relies on a systematic method that the DCCC has used in three previous Status Outlook reports. The method primarily focuses on two parameters:

- **Concretisation.** Each initiative is assessed based on the concrete potential for reduction. Adopted measures carry more weight than proposals and strategies from the government, which in turn carry more weight than identified reduction potentials.
- Risk. This refers to how likely it is that a specified reduction can be realised by 2030.
 There may be a high risk, for example, if the reduction is based on immature technologies or if it is uncertain whether the incentives in an initiative are strong enough.

The government's plan aims to just reach the 2030 target

The DCCC's mapping of climate action towards 2030 is illustrated in Figure 1.3. Compared to the latest full statistical year, 2021, the climate projection suggests that net emissions from the forestry sector will increase by 2.8 million tonnes of CO_2e , while they will decrease in other sectors by 21.2 million tonnes when considering the government's proposals, including the increased diesel tax. This results in the aforementioned total reduction requirement of 2.6 million tonnes to reach the 2030 target.

Additionally, the government's plans for a tax on agricultural greenhouse gas emissions are included in figure 1.3. These plans are categorised as a strategy according to the DCCC's method and provide a reduction of 3.0 million tonnes of CO_2e . Overall, the 2030 target will be exceeded by 0.4 million tonnes if the effect of the tax on agricultural emissions is included.

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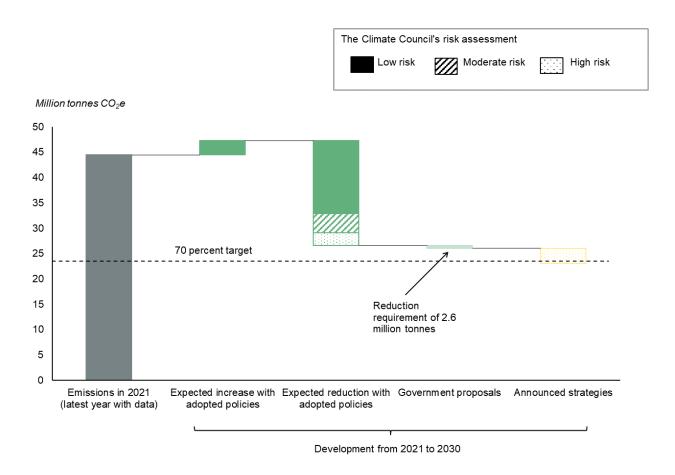


Figure 1.3 Prospects of achieving the 2030 target with adopted policies, proposals, and announced strategies

Note 1: The expected increases and reductions show the change from 2021 to 2030 with the latter year calculated as an average for the period 2029-31.

Note 2: In the figure, the latest climate projection is adjusted according to the newest data for the area of carbon-rich soils and the expected delay of the tendering process to find operators to be funded under the subsidy scheme for negative emissions carbon capture, transport and storage (the NECSS scheme).

Sources: Danish Energy Agency¹⁸ and the DCCC.

The government's plan contains significant risks

There is a considerable risk that many of the reductions anticipated by the government will not occur by 2030. This is illustrated by the striped and dotted columns in Figure 1.3. The main risks are as follows:

- **Tax on agricultural emissions.** In its political platform, the government states that a greenhouse gas tax on agricultural emissions must not impair the sector's competitiveness. Even if the tax is accompanied by subsidies, it will be challenging to avoid reducing the competitiveness of the sector. Consequently, there is a high risk that the government cannot both introduce a tax and fully protect the sector, which, on the current basis, creates doubt about the announced reductions for the agricultural sector.
- Emissions factors for carbon-rich soils. During 2024, the emissions factors for carbon-rich soils will be updated. The DCCC estimates that this may increase the reduction requirement in 2030 by 0.4 million tonnes of CO₂e. However, there is considerable uncertainty about this estimate.
- Carbon tax on industrial emissions. The DCCC assesses that there is a high risk that the CO₂ tax for industry will not lead to the expected production reduction in CO₂-intensive sectors. Therefore, the government's expectations for the reduction potential may be overstated.

• **Carbon capture and storage (CCS).** In 2023, the government reduced one of the risk factors by focusing on improving framework conditions for CCS, which is a significant step. However, the government's timeline is tight, and 3.2 million tonnes of CO₂e need to be captured from January 1, 2029. This therefore poses a risk, in that even minor delays will make it harder to fulfil the 2030 target.

Conversely, there is a possibility that the proliferation of electric vehicles will progress faster than projected. Thus, there are also uncertainties that point towards fewer emissions in 2030.

Achievement of the 2030 target has not yet been demonstrated

Is the government's plan too risky? This is the crucial question in the DCCC's overall assessment of the government's efforts to meet the 2030 target. The answer contains many nuances, emphasising that assessing whether the government's plan has demonstrated that the 2030 target will be met is a complex matter.

The DCCC's 2023 Status Outlook assessed that the government's plan did not demonstrate that the 2030 target would be met. This conclusion was made due to the significant risks in the plan.

Since last year's report, several factors have brought the achievement of the target closer. The new data for carbon-rich soils have reduced the overall challenge, the government has proposed new reductions (especially through higher diesel taxes), and improved framework conditions for CCS have reduced the risk of CSS not being able to deliver reductions on time.

However, the shorter time frame until 2030 works in the opposite direction. At the same time, the government has not managed to eliminate doubts about whether a tax on agricultural emissions can lead to reductions while satisfying the sector's interests. The tripartite negotiations that have been initiated on this area indicate that the government places great weight on considering the agricultural sector's interests.

Overall, the DCCC assesses that the government's plan for meeting the 2030 target still carries too high a risk of falling short, and therefore the government has not demonstrated that the target will be met. The plan aims to just meet the target, and with significant risks of less reduction than expected, there is a high likelihood that emissions will not be reduced to the level required by the target.

Exceedance can limit risk

How can the risk in the government's plan be minimised? First and foremost, a concrete proposal for regulating agriculture must be presented to achieve the sector's target. This proposal should include a greenhouse gas tax as a central element. If the tax or another form of regulation is adopted, it will increase the certainty of sufficient reductions being realised to achieve the target.

It is not possible to eliminate all risks. For example, there will often be uncertainty-based risks in the cases of new technologies and of regulatory forms based on expectations of how market actors will respond to regulation. Such risks should be considered and can be counteracted by budgeting for overachievement on climate targets, thereby providing greater certainty of achieving the target.

Another option is to review already adopted political agreements to assess whether they are on track to deliver the expected reductions. The government has already scheduled several such reviews. However, there is a risk that some reviews will come too late. Similarly, there are no agreements on which political measures to implement if the reviews show that actual reductions are trailing. Therefore, the reviews would be more robust if a plan B had already been considered.

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European Union obligations

The EU imposes requirements on Denmark for reductions by 2030

Reductions of emissions in Denmark are not solely a national concern. Denmark has committed to reducing emissions from sectors not covered by the EU's current emissions trading system. This mainly includes road transport, agriculture, oil and gas heating in homes, small industry, and forests. These are effectively different obligations under the regulations known as ESR and LULUCF, but as there is the possibility of transferring overachievement between obligations, and in practice they may be perceived as one collective obligation.

The EU obligations require reducing total emissions over the entire period from 2021 to 2030. This is in contrast to Denmark's national targets, which only apply to three-year periods around the target years.

With the currently adopted measures, a reduction requirement of 11.9 million tonnes of CO_2e remains for the period until 2030. In the calculation of this requirement, the government's proposal for, among other things, an increased diesel tax is considered as realised. If we add an estimate of the expected reductions from the tax on agricultural emissions that the government plans, the reduction requirement drops to 5.3 million tonnes. However, this figure depends on how quickly the tax is implemented.

Quick action is required to meet the obligations

Because all years in the period from 2021 to 2030 count towards the EU obligations, they encourage rapid climate action. It may become impossible to meet the obligations if reductions are postponed until just before 2030. In the current situation, particularly the announced initiatives in the agricultural sector need to take effect quickly. Therefore, reaching an agreement in this area is urgent.

The EU rules include various options for meeting obligations through reductions outside the country's borders. For example, Denmark has the option to buy and cancel emission allowances for up to 4 million tonnes of CO_2e . Such cancellation can be used as insurance if it becomes difficult to meet the target towards the end of the decade. However, this insurance is not free. At the current price on emission allowances of around DKK 600, cancelling 4 million emission allowances costs almost DKK 2.4 billion.

It is also possible to purchase excess emission rights from other countries that exceed their obligations. However, it seems that most countries will struggle to meet their obligations, and very few countries will have anything to sell. Therefore, relying on this option could prove very costly.

The EU also imposes requirements on energy consumption and renewable energy

As part of the EU's Energy Efficiency Directive, Member States must achieve annual savings in final energy consumption every year from 2021 to 2030. The savings requirement started at 0.8 percent per year in 2021 and gradually increases to 1.9 percent in 2030. The percentages are measured relative to consumption from 2017 to 2019. Assessing what can be considered energy savings is a complex task, but the DCCC's estimates suggest that Denmark needs to save more on energy than we currently do to meet the obligation.

The EU also imposes requirements on the proportion of Member States' energy consumption in transport and heating that must come from renewable energy sources. However, Denmark seems to fulfil both of these obligations. The same applies to the EU's requirements for the use of advanced biofuels.

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5 Recommendations for climate policy

Climate policy must meet many different objectives. The Danish Climate Act focuses on both the short and long term, and the national and global dimensions. This means that there is a need for a wide range of measures. In this Status Outlook, the DCCC provides recommendations within seven areas that cover the many different considerations.

Climate policy must meet a range of objectives

Climate policy must reduce greenhouse gas emissions and must transition society broadly. In the short and near term, climate policy must ensure that Denmark meets its climate targets in 2025 and 2030 and fulfils its obligations to the EU. In a longer and broader perspective, Danish climate policy should set the course for climate neutrality and support Denmark's role as a pioneer in international climate action.

The DCCC provides recommendations in seven areas

In this report, the DCCC provides recommendations within seven areas. The areas are shown in Figure 1.4 and focus on various aspects of the green transition. Some areas aim at short-term targets, while others have a more long-term and international perspective.

Through its recommendations, the DCCC points to the most important elements that climate policy should address in the near future. However, the recommendations should not be seen as an exhaustive list, and there may be measures that the DCCC has not yet examined. The Council continuously analyses new areas of climate policy, thus expanding its pool of recommendations.

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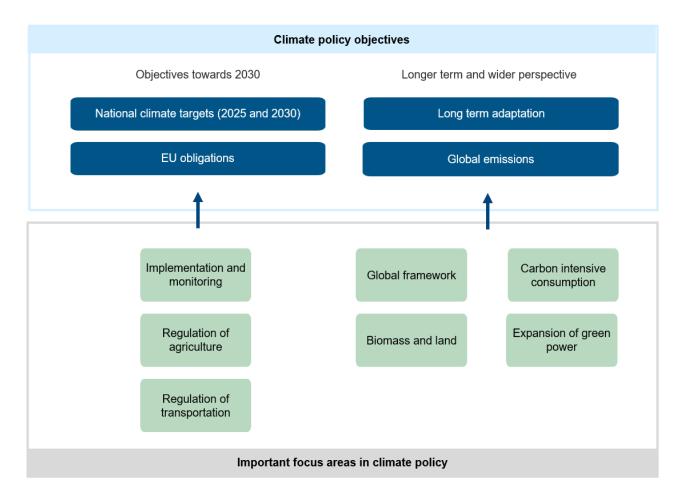


Figure 1.4 Relationship between objectives and key focus areas in climate policy

Note: The climate policy focus areas are placed under the climate policy objectives that the measures primarily address. This

does not mean that the measures cannot also have an effect on other objectives.

Source: The DCCC.

The recommendations primarily stem from the analyses that the DCCC continuously produces. This report provides overarching justifications for the recommendations. An extended argumentation and more detailed analysis can be found in the underlying Danish publications on the DCCC's website.

Recommendations targeted at short-term targets

Implementation and monitoring are essential for achieving reductions

In recent years, numerous new measures in the climate sector have been decided upon, requiring significant changes in a short period. The reduction requirements for 2030 are now nearing completion. However, there is still a gap between the adoption of a politically agreed-upon reduction plan and the actual reduction of greenhouse gas emissions. To achieve the climate targets, barriers need to be identified and broken down, risks need to be minimised, and the effectiveness of agreements needs to be monitored. Therefore, the work on implementation and monitoring continues to be increasingly important in climate policy.

The challenges with implementation and monitoring depend on the specific context, so there are no universal solutions. The Danish climate partnerships and the National Energy Crisis Team (NEKST) have identified several challenges and

proposed solutions. As a supplement to those solutions, the DCCC recommends the following. The recommendations address some, but certainly not all, challenges:

- Review the agreement on the CO₂ tax on industry as soon as possible to determine if higher rates are necessary.
- Strengthen the data foundation for calculating Denmark's LULUCF emissions to reduce uncertainties as much as possible.
- Consider initiating additional education and labour market policies to ensure the availability
 of the right skills for the future green transition.
- Formulate a concrete strategy to enhance the Danish public's acceptance of and support for addressing the climate challenge.

Regulating agriculture is key to reaching the target by 2030

To achieve Denmark's target of a 70 percent reduction by 2030 and to fulfil its EU obligations, it is crucial to reduce emissions from agriculture. This requires new and reinforced regulation.

Agriculture should be incentivised to adopt climate-friendly practices, preferably through a tax on the industry's greenhouse gas emissions, which is the most cost-effective approach. However, a tax alone is insufficient. It can be supplemented with measures to facilitate faster operational transition, including compensatory measures for the hardest-hit farms, and subsidies and funding for research, development, and application of new technologies. Voluntary subsidy schemes should automatically be followed up with more robust instruments to ensure the intended effect.

The necessary regulations must be adopted urgently, especially since Denmark's ESR commitment to the EU applies to the total emissions leading up to 2030. Therefore, we cannot wait idly in the coming years hoping for a last-minute sprint just before 2030. The agricultural sector also needs to know the framework for the future agricultural sector as soon as possible. Therefore, the tripartite negotiations that have been started in this area must not delay a greenhouse gas tax on agriculture.

The Danish government and the Danish Parliament have received a solid foundation for making the necessary political decisions with the report from the expert group established by the government. Led by Professor Michael Svarer, the expert group provided its recommendations for a greenhouse gas tax in agriculture on February 21, 2024. The report was released after the deadline for this Status Outlook, so the DCCC has not had the opportunity to incorporate the expert group's recommendations.

Transportation is heading in the right direction

Transportation represents another major sector in Denmark's greenhouse gas accounting, and its share will increase by 2030 as emissions from other sectors decrease. The majority of Danish transportation emissions occur on roads, primarily from passenger vehicles, commercial and delivery vehicles, and heavy goods vehicles.

Fossil-free road transport will mainly be ensured with zero-emission vehicles, primarily electric vehicles. Significant sales of electric cars in 2023 demonstrated that progress is being made for passenger vehicles. The number of electric cars sold is expected to increase as the range of electric cars expands and as car manufacturers increase production. The EU has recently adopted rules that effectively mean no new fossil-fuelled cars will be sold from 2035. Thus, the need to enforce further reductions in the passenger vehicle sector will gradually become significantly smaller compared to the need to enforce further reductions in agriculture.

However, as long as cars with petrol or diesel engines continue to be sold, they will contribute to emissions for many years after 2030. If we aim to achieve more reductions in road transportation both before and after 2030, it should be done by accelerating the transition from fossil-fuelled cars to electric vehicles. The fewer fossil cars that are sold in the coming years leading up to 2030, the easier the transition will be towards meeting the upcoming climate targets in 2035 and 2040. A first step should be to ensure a transparent and competitive market for charging.

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Progress for heavy goods vehicles is slower. Only a small portion of new heavy goods vehicles in 2023 were electric, but manufacturers are now offering more and more models, increasing the potential to promote the transition. At the same time, the Danish climate accounts are burdened by foreign heavy goods vehicles refuelling diesel in Denmark, as the Danish tax level is lower than in neighbouring countries.

The Danish government proposes to increase the diesel tax by DKK 0.5 per litre, but the DCCC recommends raising the tax by an additional DKK 0.4 per litre so that the Danish tax level aligns with Germany's. This would significantly reduce cross-border shopping to the benefit of the Danish climate accounts.

An increased tax is also more in line with the 'polluter pays' principle, as it will bring the tax on heavy goods vehicles closer to the damages they inflict on society in terms of congestion, accidents, pollution, noise, and strain on road infrastructure.

Recommendations targeted at the broader and longer-term perspective

Strengthening the global framework of climate policy

The current Danish Climate Act has a distinct national focus. However, Denmark also has significant opportunities to influence emissions beyond its borders. Therefore, the Climate Act should stipulate that Denmark must work to reduce its global climate footprint and increase its positive global climate impact, ensuring a coherent framework for global climate action.

The globally oriented climate action should be supported by targets and benchmarks similar to those known from the nationally oriented climate action. Therefore, the DCCC recommends:

- **Targets for international transport.** The Danish Climate Act should include a target for emissions from bunker fuels bunkered at Danish ports and used for international aviation and shipping.
- Benchmark for financial climate support to developing countries. The long-term global climate strategy should include a benchmark for Denmark's financial climate support to developing countries after 2025.
- **Benchmark for consumption-based climate footprint.** Milestones should be set every five years for the consumption-based climate footprint in the long-term global climate strategy.
- **Benchmark for the climate footprint of public procurement.** The long-term global climate strategy should include a benchmark for reducing the climate footprint of public procurement.

Pushing Danish consumption towards climate-friendly practices

Danish consumption has a significant global climate footprint. This substantial footprint is hardly compatible with the Danish Climate Act's ambition for Denmark to be a frontrunner in climate action. Therefore, from a political perspective, climate-friendly behaviour in Denmark should be promoted to reduce our climate footprint from consumption.

The strategy should target behaviour across consumption groups, including food, which the DCCC has focused on extensively. ¹⁹ If Danes can consume more climate-friendly products, the transition of Danish agriculture will be supported and Denmark's climate footprint abroad will be reduced. This can be achieved, for example, by following the official Danish dietary guidelines, which recommend that the consumption of animal-based foods be reduced.

The public sector can contribute to normalising climate-friendly diets among the Danish population by setting goals for public kitchens to serve climate-friendly food. This goal should be supported through the training of public kitchen staff and through public-private partnerships.

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A more concrete measure is taxes on selected high-carbon-footprint foods. Such taxes should theoretically apply to all product groups, but the food sector is a natural place to start since it is particularly challenging to transition food production in a climate-friendly direction. The government should work to introduce consumption taxes on the food sector, encouraging consumers to choose the most climate-friendly foods instead of the more high-carbon-footprint foods.

Reducing biomass consumption to a sustainable level

Denmark currently has a high consumption of biomass, much of which is imported. The high consumption is due in part to the fact that the price of biomass does not reflect the climate impact of harvesting and burning it. This has led to a higher consumption of biomass than is justifiable in terms of climate action and sustainable in the long term.

The DCCC recommends that the government develops a comprehensive strategy to scale down and prioritise Denmark's consumption of biomass. The strategy should have a long-term perspective and consider that both afforestation and carbon capture and storage from biomass (BECCS) are important tools for achieving negative emissions, which are necessary to meet long-term climate targets. At the same time, more accurate incentives for the use and production of biomass should be ensured to reflect the real climate impact.

The energy system must be geared towards large amounts of electricity from wind and solar

Future energy consumption will require significant amounts of electricity, mainly from wind and solar sources. The government should ensure that the expansion rate of solar and wind energy at a minimum keeps pace with Danish electricity consumption.

Challenges in the energy system cannot be addressed solely by installing wind turbines and solar panels. High political priority should be given to ensuring sufficient and timely expansion of the electricity grid. At the same time, it is important to plan for the necessary flexibility in the energy system now to maintain a high level of security of electricity supply. Flexibility can come from, for example, storage, flexible electricity consumption, and controllable electricity production. Finally, energy authorities should more thoroughly incorporate the risk of extreme events when assessing electricity supply security.

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6 References

- ¹ Copernicus, 2023 is the hottest year on record, with global temperatures close to the 1.5°C limit, 2024. UNEP, Emissions Gap Report, 2023.
- ² IPCC, AR6 Synthesis Report: Climate Change 2023, 2023.
- 3 UNEP, Adaptation Gap Report, 2023.
- 4 UNEP, Emissions Gap Report, 2023.
- ⁵ UNFCCC, First global stock take Draft decision -/CMA.5, 2023
- ⁶ IPCC, AR6 Synthesis Report: Climate Change 2023, 2023.
- ⁷ IPCC, AR6 Synthesis Report: Climate Change 2023, 2023.
- ⁸ UNFCCC, First global stock take Draft decision -/CMA.5, 2023.
- ⁹ European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Securing our future. Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society, 2024.
- ¹⁰ European Scientific Advisory Board on Climate Change, *Scientific advice for the determination of an EU-wide 2040 climate target and a greenhouse gas budget for 2030–2050*, 2023.
- ¹¹ European Environment Agency, *The European Biomass Puzzle: Challenges, Opportunities and Trade Offs around Biomass Production and Use in the EU*, 2023.
- ¹² Eurostat, Dataset on supply, transformation and consumption of renewables and wastes, 2024.
- ¹³ Beucher, A. M., Weber, P. L., Hermansen, C., Pesch, C., Koganti, T., Møller, A. B., Gomes, L., Greve, M. B. and Greve, M. H., *Updating the Danish peatland map with a combination of new data and modelling approaches*, DCA Danish Centre For Food And Agriculture, Aarhus University, 2023.
- ¹⁴ Gyldenkærne, S. and Callisen, L.W., *Notat om emissionsestimater for organiske jorder historisk (1990-2022) og i fremskrivningen (2023-2040)*, DCE Danish Centre For Environment And Energy, Aarhus University, 2024.
- ¹⁵ Gyldenkærne, S. and Callisen, L.W., *Notat om emissionsestimater for organiske jorder historisk (1990-2022) og i fremskrivningen (2023-2040)*, DCE Danish Centre For Environment And Energy, Aarhus University, 2024.
- ¹⁶ Danish Energy Agency, Klimastatus og -fremskrivning 2023, 2023.
- ¹⁷ Danish Council on Climate Change, Kendte veje og nye spor til 70 procents reduktion, 2020.
- ¹⁸ Danish Energy Agency, Klimastatus og -fremskrivning 2023, 2023.
- ¹⁹ Danish Council on Climate Change, Klimavenlig mad og forbrugeradfærd, 2021.

