

Denmark's 2035 Climate Target

10 Questions and Answers regarding a
Forthcoming 2035 Climate Target

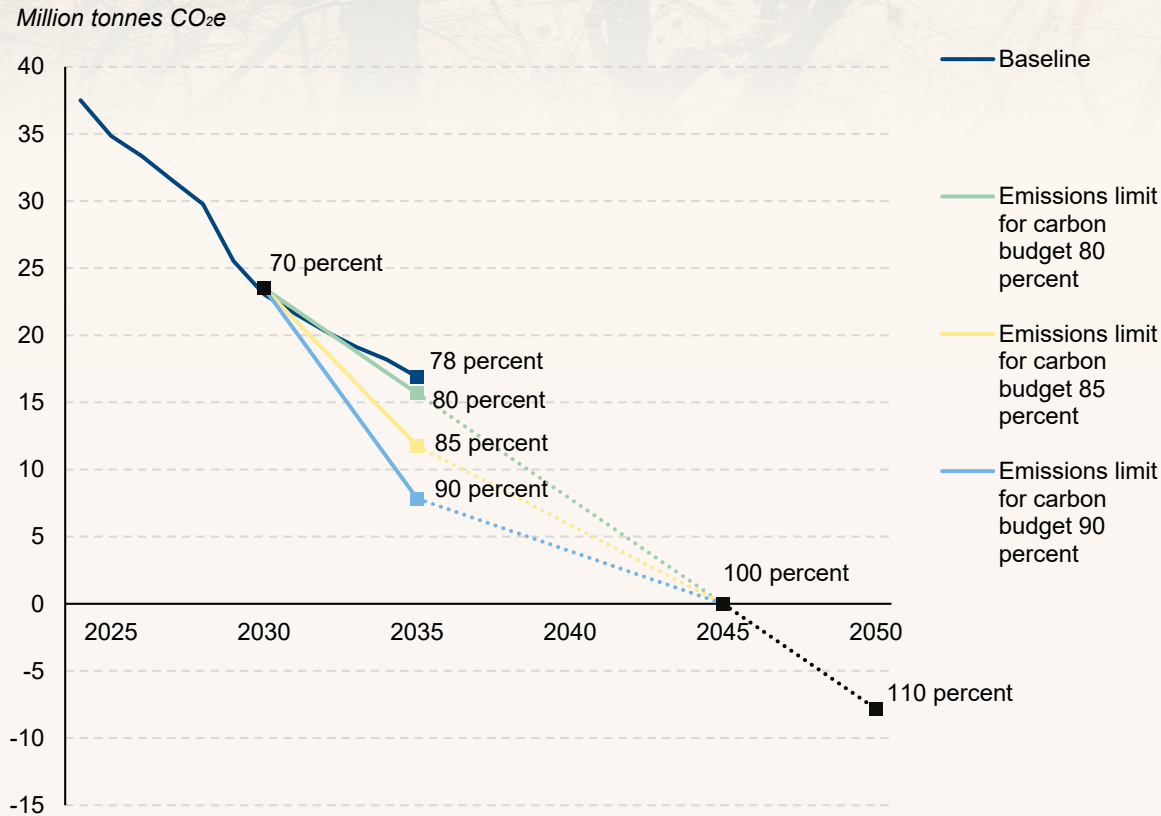
English summary

Should the 2035 climate target be 80, 85, 90 percent or something entirely different?

With the current climate policy, the government's projections and subsequent agreements indicate that Denmark will achieve a 78 percent reduction in greenhouse gas emissions by 2035 compared to 1990 levels.

The Danish Council on Climate Change (DCCC) has examined scenario outlines for how Denmark can increase reductions to 80, 85, and 90 percent respectively:

- **It will require a modest additional effort to reach 80 percent.** It would be particularly cost-effective to convert agricultural land. Such a conversion would also contribute to water quality, biodiversity, and other societal considerations.
- **It will require more effort to reach 85 percent.** The analysis indicates that carbon capture and storage (CCS) can be promoted, and emissions from livestock production can be reduced. The cost of this additional effort appears manageable as it remains below 1,500 DKK per tonne of CO₂e.
- **It could be more expensive to reach 90 percent.** A 90 percent target may, among other things, require accelerated electrification of the transport sector and more CCS. The cost of the additional reductions needed to reach 90 percent is estimated to be less than 2,000 DKK per tonne of CO₂e.



There are arguments for aiming for more than 80 percent



Climate Action is Urgent. Climate change projections are becoming increasingly bleak. In this light, all countries must strive as much as possible to reduce emissions. This supports the case for Denmark setting a high territorial target complemented by a strengthened global climate effort.



Frontrunner in Climate Action. If territorial targets are seen as important for evaluating a country's overall climate efforts, or that a high Danish target can contribute positively to, for example, the EU increasing its climate ambitions, the 2035 target of 80 percent appears out of step with the Climate Act's principle that Denmark should be a frontrunner.



The Path towards Climate Neutrality. By 2035, there are only 10 years until 2045 and the government's goal of climate neutrality. Since the final reductions toward this goal may prove to be the most challenging—both technically and socially—and because implementation takes time, it may be reasonable to increase the target toward 2035.

There are advantages and disadvantages of higher targets

Societal considerations		
	Advantages	Disadvantages
Societal value	<ul style="list-style-type: none"> Potential for more nature and environmental benefits Potential for green business development 	<ul style="list-style-type: none"> Technical costs Production loss in some sectors
Fair transition	<ul style="list-style-type: none"> Higher targets can create new opportunities and be perceived as more fair from a global climate perspective 	<ul style="list-style-type: none"> A faster transition may have greater consequences, which some might perceive as unfair
Global impact	<ul style="list-style-type: none"> Denmark as a frontrunner 	<ul style="list-style-type: none"> Risk of carbon leakage Risk of increased import of biomass

- **Societal value.** Higher targets will inevitably cause increased costs for technical reduction measures and production losses in high-emission sectors. On the other hand, efforts in the agricultural sector could lead to more nature and environmental benefits, such as improved water quality and reduced air pollution. Higher targets may also foster green business development.
- **Fair transition.** Higher targets will result in greater societal changes and have greater social consequences over a shorter timeframe. These changes might be perceived as unfair by certain groups or regions, especially if they exacerbate existing inequalities or create new ones. Conversely, ambitious climate actions could be seen as fairer in light of the global climate crisis or across generations. Climate efforts will also create new opportunities and benefits for some groups in society.
- **Global impact.** Besides the immediate climate effect, a higher Danish target increases the likelihood that Denmark can act as a frontrunner and inspire other countries. However, higher targets might also require measures that risk shifting emissions to other countries, known as carbon leakage. There is also a risk that Denmark might need to increase its biomass imports from abroad. Importing biomass from other countries could potentially increase emissions or harm the biodiversity in these countries.

10 Questions and Answers regarding a Forthcoming 2035 Climate Target

- 1** Can climate change science determine what Denmark's climate target should be for 2035?
- 2** Can global climate action replace greenhouse gas reduction in Denmark?
- 3** Why should Denmark have its own climate targets when we are also subject to EU targets?
- 4** Should the 2035 target be formulated as a carbon budget or a reduction target¹?
- 5** How should uncertainty be accounted for when planning for meeting the 2035 target?
- 6** How can different 2035 targets be achieved?
- 7** What societal considerations are important when planning the path toward 2035?
- 8** What are the societal costs of achieving different targets in 2035?
- 9** What significance does the 2035 target have for the perception of a fair transition?
- 10** What global impacts can a 2035 target have?

¹ A reduction target refers to a specific level of greenhouse gas emission reductions to be achieved by a particular year relative to a baseline. Unlike carbon budget targets, which focus on the cumulative emissions over a period, a reduction target sets a single-year benchmark for mitigation.

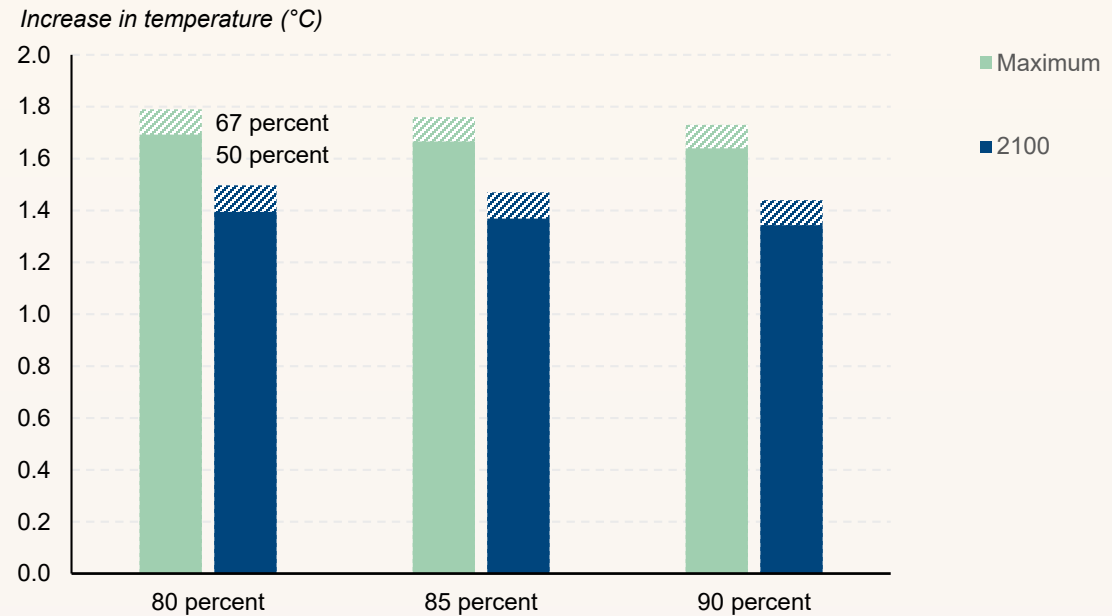
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Can climate change science determine what Denmark's climate target should be for 2035?

The recent rapid rise in global temperatures underscores the need for countries worldwide to take stronger actions to limit global warming.

However, climate science cannot provide a definitive answer to what Denmark's 2035 target should be. The answer will partly depend on the interpretation of the Paris Agreement's temperature goals and partly on the extent to which Denmark, as a wealthy nation with significant historical per capita emissions, is held responsible. But the more and the faster we reduce Danish emissions, the more we help curb climate change.

The figure illustrates the temperature thresholds that the global average increase in temperature is likely to remain below, with probabilities of 50 percent and 60 percent, respectively, for each of the 2035 climate targets for Denmark. This is assuming that all other countries emit the same per capita as Denmark in the future.



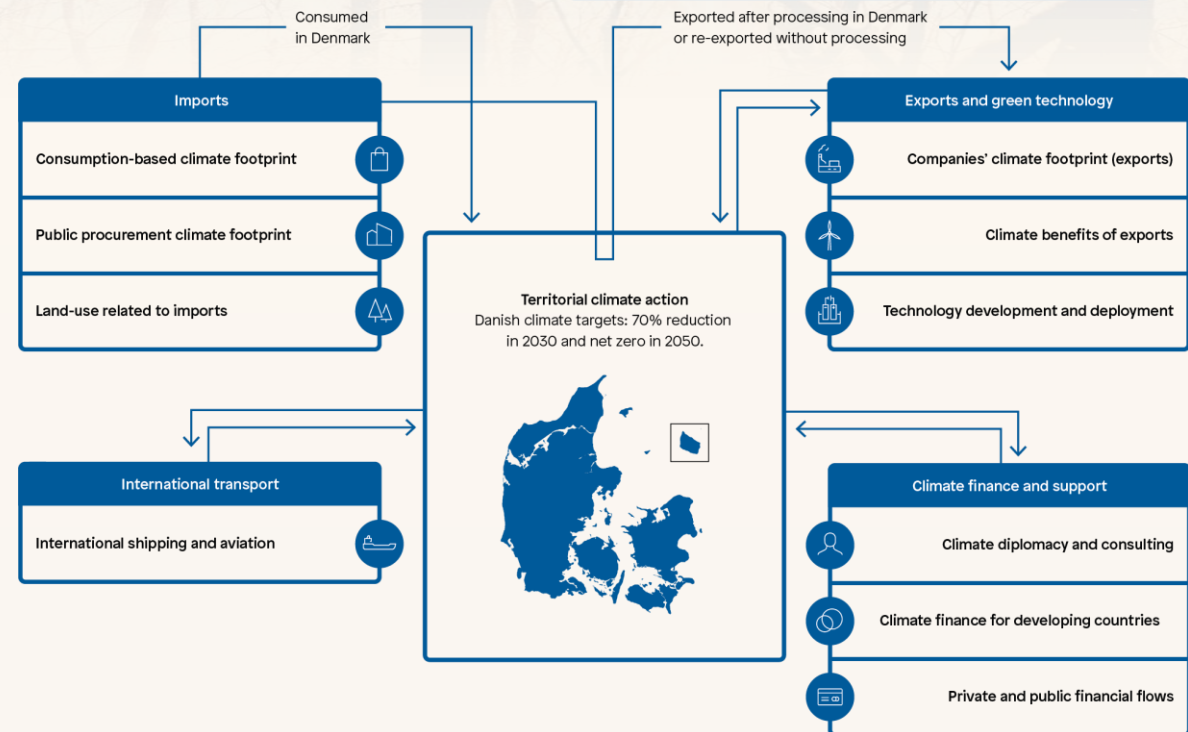
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Can global climate action replace greenhouse gas reduction in Denmark?

The 2035 target pertains only to the territorial dimension of Danish climate policy. This aligns with the UN conventions. However, the global dimension must also be considered when assessing Denmark's overall effort.

The two dimensions are not mutually exclusive and should complement each other. But an achievable territorial 2035 target will likely be inadequate if Denmark is attributed considerable historical responsibility. Accordingly, strengthened global climate action is also important. Denmark has significant opportunities to reduce emissions beyond its borders, and doing so would also contribute to Denmark being a frontrunner, as prescribed by the Climate Act.

The figure shows Denmark's global climate impact as 10 key global focus areas funneled into four main subjects.



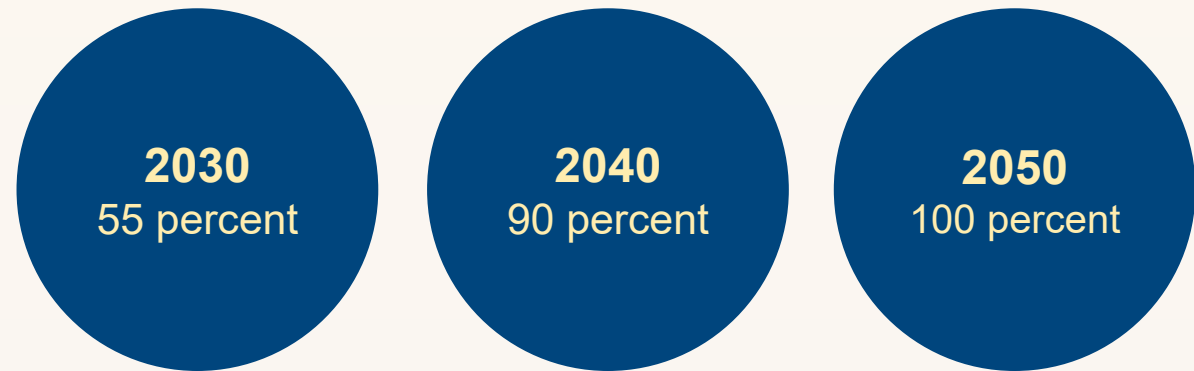
3 Why should Denmark have its own climate targets when we are also subject to EU targets?

In practice, the EU's climate policy is advanced through interaction with the member states' various and shifting national ambitions.

Therefore, it adds value if Denmark continues to set national climate targets. They can serve as a political lever in European negotiations, provided they are sufficiently ambitious.

Moreover, the political initiatives launched to achieve the national targets can demonstrate to the EU how climate regulation can be developed and function in practice. At the same time, Danish targets probably have a better chance of fostering proximity, legitimacy, and domestic support for climate action.

The figure shows the EU's three climate targets for 2030, 2040, and 2050. The climate target for 2040 is a proposal from the European Commission but has not yet been adopted.

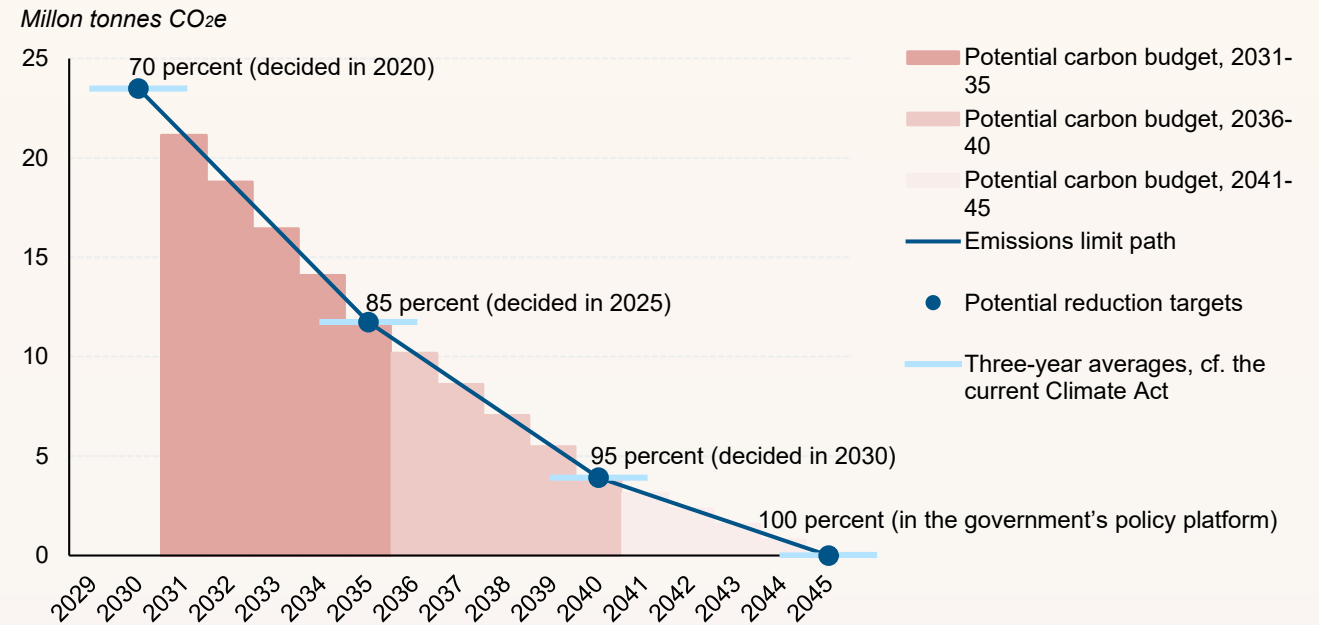


4 Should the 2035 target be formulated as a carbon budget or a reduction target¹?

The DCCC sees an advantage in adjusting the Climate Act so that the 2035 target is defined as a reduction trajectory with an overall budget for emissions in the period 2031 to 2035. Similarly, budgets could be established for the periods 2036-2040 and 2041-2045.

Emissions in every year affect the climate, and with budget targets, all years are included in a goal. Budget targets would encourage earlier reduction efforts, benefiting the climate compared to reduction targets every five years, even though reduction targets are currently calculated as 3-year averages. The incentive for early action is due to the fact that permanent greenhouse gas reductions carry more weight if they are implemented early in the budget period.

The figure shows an illustrative example with a carbon budget for 2031-2035. This carbon budget should be followed by a new target for 2036-2040. The targets of 85 percent and 95 percent are merely meant to illustrate the principles behind a potential carbon budget. The figure also shows the current practice under the Climate Act, where reduction targets every five years are calculated as three-year averages.



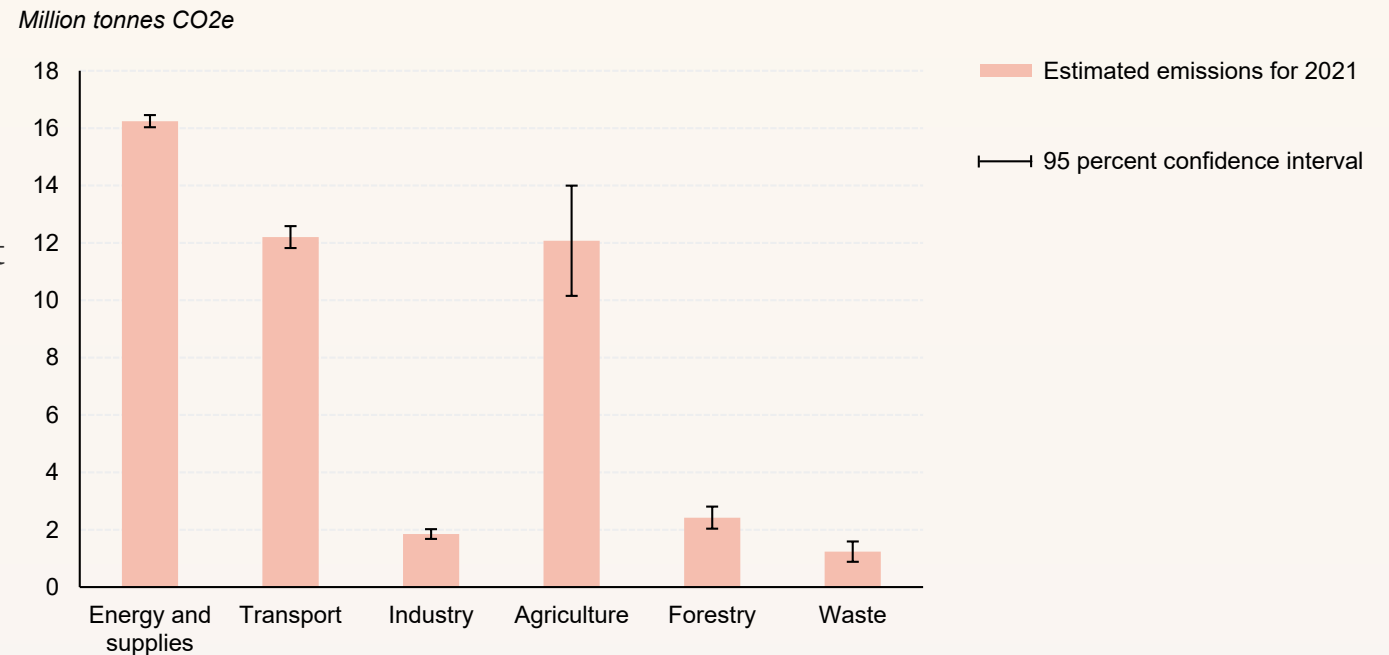
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5 How should uncertainty be accounted for when planning for meeting the 2035 target?

There is significant uncertainty about future emissions. This uncertainty stems from expectations regarding market developments, the implementation of new climate policies, and potential new measurement methods for emissions in agriculture and forestry.

Strategic benchmarks in selected sectors can ensure that uncertainty in one sector does not cast doubt on the direction in other sectors where uncertainty is smaller. For example, this could be a benchmark for fossil emissions, where measurement methods and emission factors are well established.

The figure shows calculated uncertainties for Denmark's emissions in 2021. The confidence intervals indicate that there is significant uncertainty of several million tonnes when calculating Denmark's historical emissions, even after they have occurred. The uncertainty is particularly high in the agricultural sector.

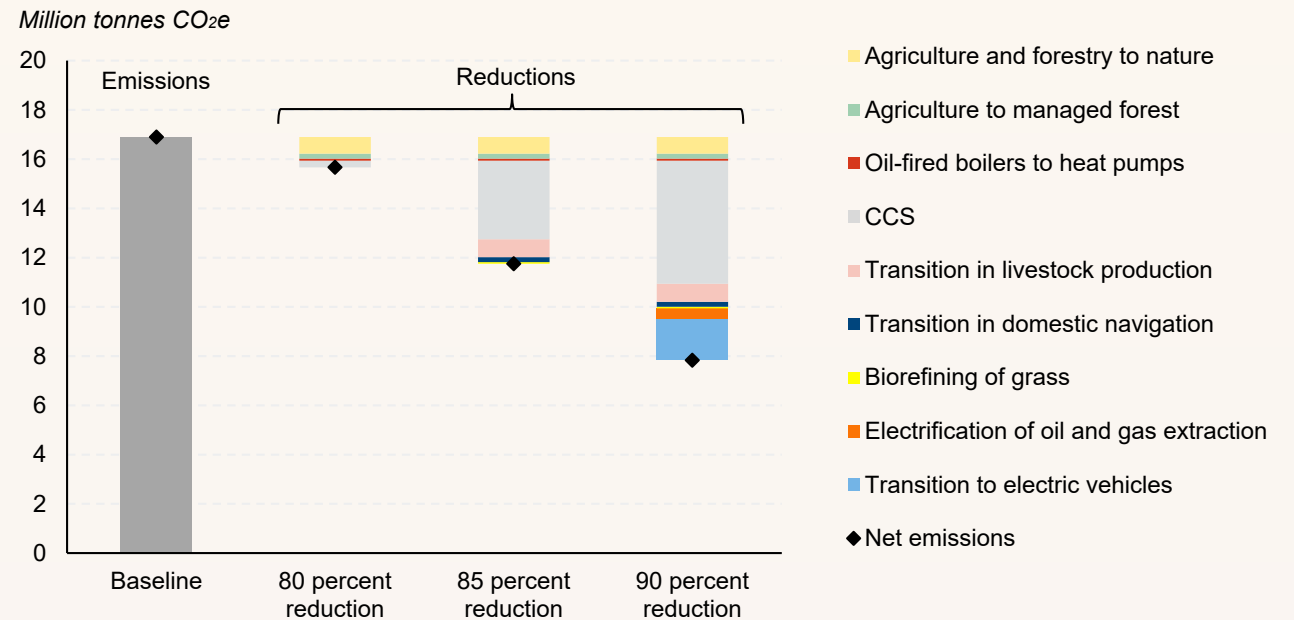


6 How can different 2035 targets be achieved?

Greenhouse gas emissions are expected to decrease by 78 percent by 2035 under current policies. Therefore, the 80 percent target is within reach, and in the DCCC scenario outline, it is primarily achieved by converting agricultural land. Agriculture and carbon capture dominate the DCCC scenario outline for an 85 percent target, while the transport sector also plays a role in the scenario outline for a 90 percent target.

All three scenario outlines include 20 percent of land allocated to nature by 2035. The scenario outlines should be seen as examples of how targets can be achieved and include both technical and structural changes. The primary approach has been to start with the most cost-efficient measures for society, but the 2035 target can also be achieved in ways other than those presented in this analysis.

The figure shows the various reduction measures that can contribute to achieving a climate target by 2035 of either 80, 85 or 90 percent in the DCCC scenario outlines.

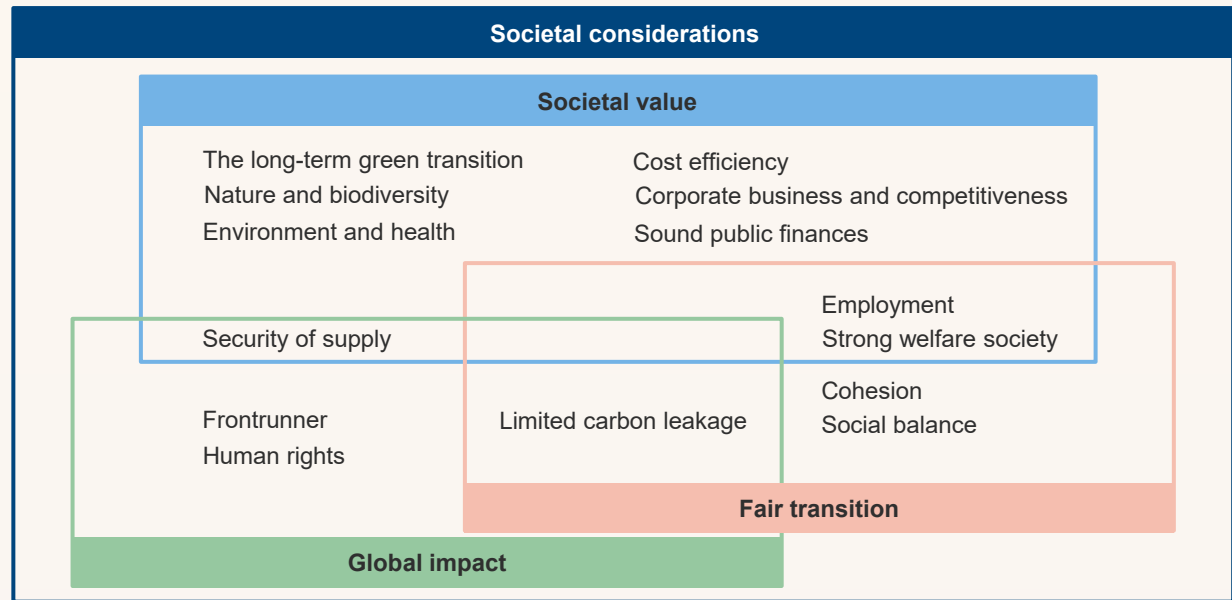


7 What societal considerations are important when planning the path toward 2035?

While climate policy must ensure that Denmark meets its targets, it must also take a wide range of societal considerations into account. The DCCC groups these considerations under three overlapping headings: societal value, fair transition, and global impact.

The transition must create value for society, be perceived as fair, and have a real global impact. However, it is not always possible to satisfy all considerations simultaneously, and this leads to the need for political compromises. This applies, for example, to balancing cost-effective measures with the consideration of not merely shifting emissions to other countries.

The figure shows societal considerations that are important to take into account in climate policy making. These considerations are grouped into three main areas.



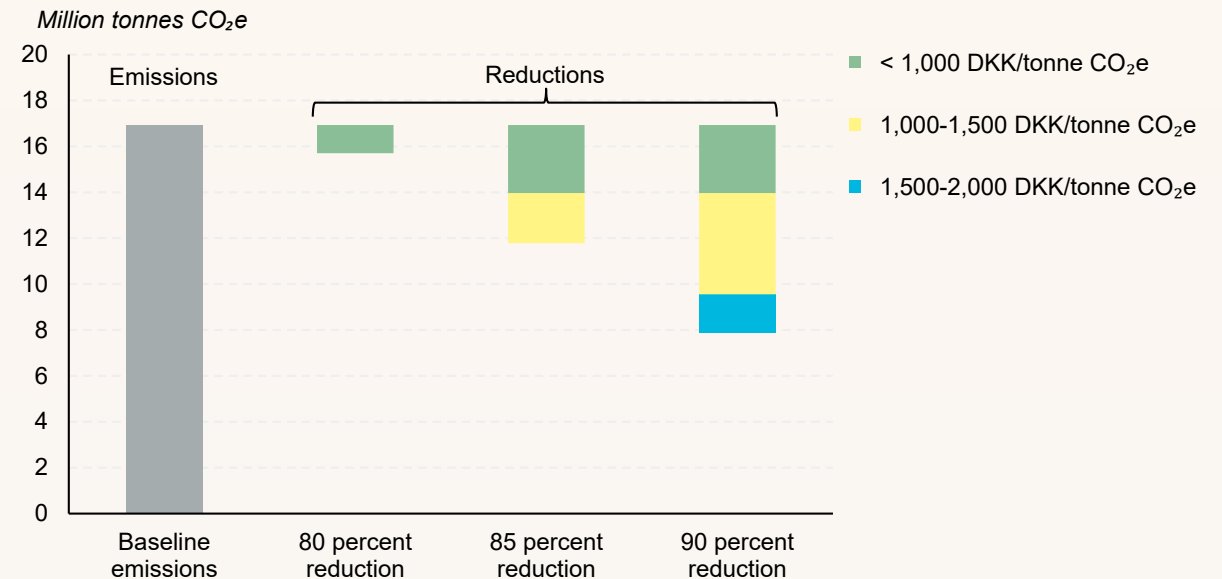
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What are the societal costs of achieving different targets in 2035?

There are significant benefits to integrating greenhouse gas reductions with nature and environment. In the DCCC scenario outlines for achieving climate targets, reduced pollution and more recreational areas generate a societal value that lowers the overall net costs. This means e.g. that an 80 percent target appears achievable at less than 1,000 DKK per tonne of CO₂e, including externalities for the most expensive reduction measure.

An 85 percent target appears achievable for under 1,500 DKK per tonne, including side effects for the most expensive reduction measure, while a 90 percent target is likely to remain below 2,000 DKK per tonne, including side effects for the most expensive reduction measure.

The figure shows the average reduction cost per tonne in 2024-2035, distributed by categories, for a climate target of 80, 85, or 90 percent by 2035 in the DCCC scenario outlines.



9

What significance does the 2035 target have for the perception of a fair transition?

A fair transition is inclusive, involves recognition, and distributes burdens and benefits equitably. The perception of fairness among the population may depend on whether a 2035 target of 80, 85, or 90 percent is chosen, and how that target will be achieved.

On the one hand, higher targets entail greater societal changes over a shorter timeframe. These changes may be perceived as unfair if they disproportionately affect certain income groups, geographic regions, or generations. On the other hand, climate efforts can create new jobs, more opportunities to enjoy nature, and healthier environments. Ambitious climate action may also be seen as the most just approach for nature and future generations.

Politicians can support the public perception of the transition as fair by:



- Political instruments
- Compensation
- Integrating climate policy with other policy areas
- Citizen engagement
- Political leadership
- Communication on climate change

10 What global impacts can a 2035 target have?

An ambitious Danish 2035 climate target can inspire other countries. However, achieving the target may lead to carbon leakage in both the agricultural and the transport sector. The risk of leakage will diminish as more countries are expected to adopt binding climate targets.

The import of biomass is also central to global effects. Even a 90 percent target appears achievable without Denmark significantly increasing its biomass consumption. However, it is important to note that scarce biogenic resources used to meet Denmark's territorial targets cannot simultaneously be used for fuels for international shipping and aviation.

Achieving climate targets can lead to impacts on a global scale

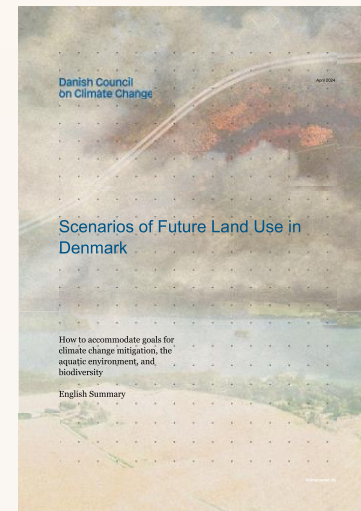
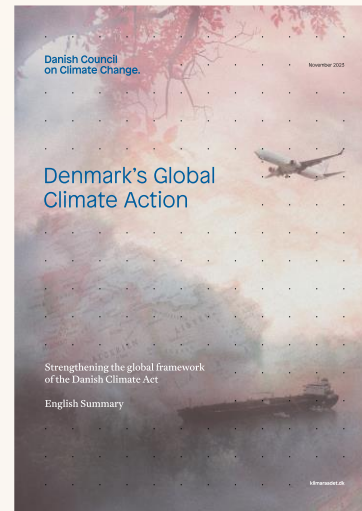
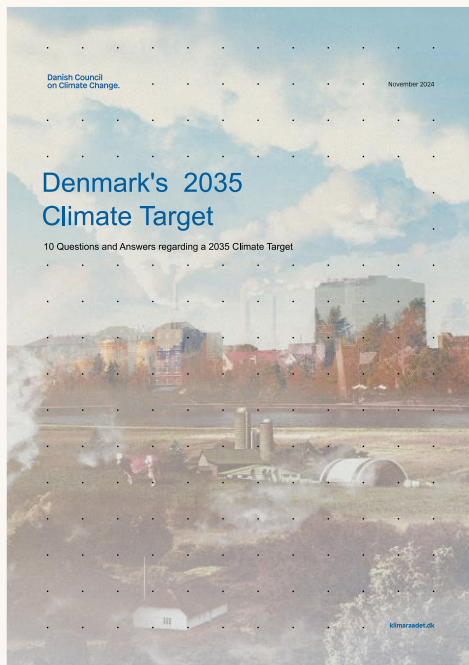


The analysis discusses four different ways in which Danish climate action can have global impacts:

- Denmark as a frontrunner and source of inspiration
- Carbon leakage
- Release of arable land used for feed production
- Biomass and green fuels

About the DCCC 2035 analysis

- According to the Climate Act, the DCCC must **assist the government** in setting a climate target for 2035. The target must be set no later than 2025.
- In the analysis, the DCCC poses **10 questions** about a forthcoming 2035 target, which the DCCC discusses and answers.
- The DCCC 2035 analysis **builds on** four previous analyses by the DCCC:



Click on the analyses to read more.

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