Danish Ministry of Climate, Energy and Utilities

Recommendations of the Citizens' Assembly

Second Gathering

BORGERTINGET
PÅ KLIMAOMRÅDET

Recommendations of the Citizens' Assembly

Second Gathering

COLOPHON

Recommendations of the Citizens' Assembly on Climate Issues, Second Gathering, 2021 Project Management The Danish Board of Technology

Responsible editor:
Lars Klüver

Layout: The Danish Board of Technology, Søren B. Jepsen All photos retrieved from unsplash.com

The Danish Board of Technology

Arnold Nielsens Boulevard 68A 2650 Hvidovre, DK

Telephone: +45 33 32 05 03

Email: tekno@tekno.dk

Tekno.dk

The report is also available on the Danish Board of Technology's website www.tekno.dk. The Danish Board of Technology, February 2022

BORGERTINGET
PÅ KLIMAOMRÅDET

Contents:

Preface: The Citizens' Assembly

With our Heads, Hearts and Hands

Dear politicians of Denmark,

The climate crisis is upon us. Urgent action is needed to limit its impacts, and yet many citizens feel that things are moving too slowly. Politicians are being criticised for being too hesitant and for using cumbersome decision-making processes that delay vital decisions. This consumes precious time and often leads to compromises that weaken the effectiveness of the decisions taken, the consequences of which could be catastrophic. Many therefore doubt democracy's ability to solve the challenges posed by the climate crisis. This has resulted in a growing mistrust of our politicians and our democratic system.

The Citizens' Assembly is a contact point between the population and politicians and sits in this area of tension between the demand for more rapid action on the one hand and the desire to preserve the democratic system on the other.

The Citizens' Assembly consists of 99 members, selected by lot by Statistics Denmark, so that the composition of the Citizens' Assembly accurately reflects the population of Denmark in terms of age, gender, place of residence, education, occupation and income. All together, we represent a microcosm of the citizens of Denmark.

The Citizens' Assembly is an example of a conversation the entire country should be involved in. A conversation about the climate crisis based on informed discussions between citizens, authorities, politicians, experts and other interested parties. Our slogan for this is "heads, hearts and hands". This means that information and dialogue should be based on scientific knowledge, use easily understandable language, and include instructions for actions that individuals can take. Furthermore, the Citizens' Assembly believes that the future should not be painted in too dark a light, but instead highlight the benefits of a sustainable and people-oriented economy in terms of a better environment, cleaner water and air, more natural areas, less stress, better health and a greater sense of community. In short: We should not just talk about crisis, but also hope.

The Citizens' Assembly has held two gatherings. The first ran from autumn 2020 to spring 2021. The recommendations from this gathering can be read on the Ministry of Climate, Energy and Utilities' website.

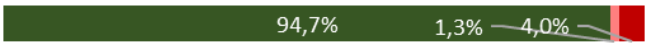
The second gathering took place in the autumn of 2021 and consisted of four three-hour online meetings, one five-hour meeting, and two weekend meetings in Copenhagen and Aarhus respectively. The second gathering has resulted in 73 recommendations divided across 18 subjects. The Citizens' Assembly has approved this preface and its four messages, as well as all the subjects and recommendations we have laid out in this document. The recommendations and votes are presented in this report.

Below, we will outline some of the Citizens' Assembly's key messages:

Urgency

The Citizens' Assembly is concerned about developments that may lead to so-called tipping points. By this we mean catastrophes so great that they affect the planet's entire ecosystem, and which are so severe that what is lost can never be restored. For Denmark to do its part to avoid these situations, we need to do our bit to meet the 1.5°C target by, among other things, staying within our share of the global carbon budget. Immediate action is required on this. The Citizen's Assembly therefore believes that economic arguments should not be allowed to hold up necessary action being taken. The climate crisis must be addressed in the same, decisive manner as the COVID-19 crisis was.

Introduction of a carbon tax

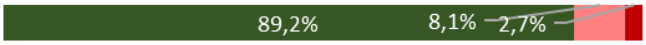


The Citizens' Assembly believes that it necessary to build mechanisms into the economy so that the market will move towards more climate-friendly products and production. We therefore recommend that a carbon tax be levied across all industries manufacturing goods in Denmark. The carbon tax must work in conjunction with a production tax on imported goods.

A Danish Parliament (Folketing) that takes responsibility

To implement the enormous changes demanded by the climate crisis, the Citizens' Assembly wants a Danish Parliament that is able to come together, take joint responsibility and put aside any special interests. Some examples of this are: (1) The Citizens' Assembly wants the Danish state to be able to force through the conversion of agricultural land and to turn fields into forests. (2) The state, regions, and municipalities must act as role models when it comes to environmentally friendly construction materials and building maintenance. (3) The state, regions, and municipalities must have common green guidelines for the renovation of buildings. (4) The state must guarantee consistent and trustworthy environmental labels. (5) The state, regions, and municipalities must ensure a uniform public transport ticketing system. (6) The state must appoint an impartial task force responsible for initiating and managing projects that promote carbon savings and other investments that ought to be made faster than markets can drive them.

More information



If the green transition is to succeed, it needs popular support. The Citizens' Assembly assumes that most citizens in Denmark want to live a climate-friendly life, but that they lack the information and proper knowledge to do so. Therefore, a continuous public information campaign around climate challenges must be established. The information provided must be based on dialogue between all affected parties and be disseminated through existing media channels, institutions and organisations. The tools available include daily and weekly newspapers, TV, radio, podcasts, online blogs, environmental trade shows and public meetings. It is particularly important that the information is locally based, and municipalities must be obliged to initiate public information campaigns in collaboration with local actors. Municipalities must make resources such as venues and expert knowledge available. Public libraries, public schools and public education associations should also be brought in, and it has been proposed that an annual National Climate Day be held involving all of the country's municipalities and official institutions.

In addition to these overarching messages, the Citizens' Assembly also presents various subjects on the following pages along with all of their associated recommendations. Together, they form a genuine treasure trove of reflections and proposals for climate action. We expect members of the Danish Parliament to read them all thoroughly.

Happy reading.

Preface: The Danish Board of Technology

With the publication of this report, the Citizens' Assembly on Climate Issues has completed the task assigned to it by the partners behind the Danish Climate Act of December 2019. It is stated that "The agreement parties also agree that in the run-up to the first Climate Action Plan, a Citizens' Assembly should be established for citizens to have their voices heard in the preparation of climate policy."

In The Citizens' Assembly Concept (see Appendix 2), which was a follow-up to this part of the agreement, it is stated that the Citizens' Assembly is tasked "to debate citizen-level dilemmas associated with the green transition as well as provide input and recommendations to the drafting of the climate action plans".

The Citizens' Assembly's work was divided into two gatherings. The first gathering was set to take place in spring 2020, and the second in autumn 2020. However, then came COVID. This led to a postponement of the first gathering until the start of October 2020, and it was held through online weekend and evening meetings. The second gathering began in October 2021 with physical weekend meetings and online evening meetings.

Multiple parties have suggested that Denmark should have a permanent Citizens' Assembly on Climate Issues. In light of the methodological experiments the Citizens' Assembly has been forced into due to COVID-19, it must be stated that there are no methodological obstacles to realising this. As a method, the Citizens' Assembly is already extremely flexible, and together the two gatherings have shown that the method can be adapted to the needs that will arise before 2030 and beyond. There are a range of tools for citizen participation in policy development that can be integrated into the framework of a Citizens' Assembly. There is no risk of methodological rigidity through this approach.

The Citizens' Assembly concept focuses on citizen-level issues. The first gathering already showed that, for citizens of Denmark, all issues around climate change affect the "citizen-level". Either because they have an impact on the society, about which citizens care, because it will directly affect their lives, or because the citizens will need to be involved in the transition. People also perceive the climate crisis as being related to other major challenges right up to the global level. Therefore, in terms of content, there is more than enough to address.

Throughout both phases, the Citizens' Assembly has examined things from the macro level right down to the finer details. In a Danish context, both of these approaches are needed since the climate action plans must both lay out the long-term goals and route maps, as well as form a basis for concrete decisions, where, as we know, the devil is in the details. It is also for the citizens of the country, which is why it will continue to be important to hear their voices.

We can only encourage anyone reading the Citizens' Assembly's report to genuinely consider the recommendations and try and think about them in their own politics and practices. It is not just politicians who can learn something here. The civil service, public and private institutions, businesses and the financial world are some of the actors our recommendations are targeted towards.

We at the Danish Board of Technology have had the great honour of managing the programming and facilitation of both gatherings of the Citizens' Assembly. We would like to thank you for this opportunity and experience. Special thanks go to the Citizens' Assembly.

The facilitators from The Danish Board of Technology

Lars Klüver, Gy Larsen, Nicklas Bang Bådum, Aske Palsberg, and others.

Introduction

In December 2019, the Agreement on the Climate Act determined that Denmark should have its first national Citizens' Assembly on Climate Issues, where citizens could have their voices heard in the drafting of climate policy. It was eventually decided that the Citizens' Assembly should consist of 99 citizens, selected by Statistics Denmark, based on simple criteria such as age, gender, geographic location, education, and income. They were tasked with debating citizen-level issues associated with the green transition and providing input and recommendations for the creation of climate action plans.

This was done through two gatherings, also referred to in some documents as "phases". The first gathering took place from October 2020 to March 2021, a report for this was released in April 2021. The second gathering took place between October and December 2021, and its findings are published in this report in February 2022.

The two gatherings are partially related. The citizens from the first gathering were offered the chance to participate in the second gathering, which 32 of them did, after which Statistics Denmark ran a recruitment campaign for additional citizens to reach the target of 99 participating citizens. This allowed experience to be transferred from the first gathering to the second. The subjects in the second gathering were developed by the Citizens' Assembly and there is only a minor degree of overlap between the subjects of the first and second gatherings.

This report from the second gathering of the Citizens' Assembly on Climate Issues is therefore a complement to the report from the first gathering which was published in April 2021. It has been decided to reprint the recommendations of the first gathering in Appendix 1 of this report so that the reader can get a full overview of all the recommendations from both gatherings and the development of the subjects the Citizens' Assembly has chosen to address.

The report communicates the recommendations of the Citizens' Assembly, but also aims to provide the reader with an overview of the Citizens' Assembly as a method, both generally, with regard to differences between the first and second gathering, and to provide evidence for any potential continued use of this method. The report also provides insight into the functioning of the Danish Citizens' Assembly, as well as the composition of the Citizens' Assembly.

The materials are not an expression of the views of the Ministry of Climate, Energy and Utilities. This report has been reviewed by the Danish Board of Technology, and the presentation of the Citizens' Assembly's process and the Citizens' Assembly as a method was prepared by the Danish Board of Technology, while the recommendations of the Citizens' Assembly were prepared and presented in their adopted form by the members of the Citizens' Assembly. However, some minor corrections and adjustments have been made to increase the readability of the material.

Happy reading.

The Citizens' Assembly as a method

A Citizens' Assembly, or Borgerting in Danish, covers a number of methods in which a group of citizens are provided with professional information about a societal challenge and then draw up and vote on recommendations about how the challenge should be approached. There are some common characteristics to this methodology, and the Danish Citizens' Assembly on Climate Issues has been set up within the following framework:

- Citizens are selected by lot. A representative and random group of citizens are invited to participate. Based on those who registered, a Citizens' Assembly is put together that best represents the demographics of the country.

- The Citizens' Assembly is of a specific size. In practice, Citizens' Assemblies contain 25-150 people. Both in the EU and globally, Citizens' Assemblies with several thousand participants are being explored. 99 participants have been selected for the Danish Citizens' Assembly.

- A number of lengthy meetings are held. There are Citizens' Assemblies that have up to eight full weekends of meetings, but there are also examples of those with as few as one weekend and series of evening meetings. For our Assembly, each gathering had the equivalent of 3-4 weekends worth of meetings.

- There must be a political mandate. There must be policymakers who set up a Citizens' Assembly. They should also promise to listen carefully to the Citizens' Assembly and earnestly take its proposals into consideration. However, there are Citizens' Assemblies that were set up by green organisations, funds, etc. In Denmark, the Assembly was set up by the partners behind the Climate Act, and the results are submitted to politicians at a seminar with the Citizens' Assembly and forms the basis of the Danish Government's considerations, standing on the same footing as the climate partnerships.

- The Citizens' Assembly process must be transparent. This is primarily done through publishing reports on the process, expert opinions, results, etc. on websites. Evaluations and accompanying research are often presented together. In Denmark, the Danish Ministry of Climate, Energy and Utilities' website is used for this purpose.

- Facilitation should take place at arm's length. There should be an independent "third party" that works directly with the Citizens' Assembly to protect against political interference in its work. The Danish Board of Technology acts as this "third party".

- The Citizens' Assembly should be well-informed. In Denmark, the Citizens' Assembly has received information material that is quality-assured by expert examination. Furthermore, the Citizens' Assembly receives a significant number of oral presentations from experts and interested parties.

- The Citizens' Assembly works through dialogue. There is a mixture of plenary and group work. As a general rule, the Citizens' Assembly gathers in plenary during presentations, debates about the processes and for concluding gatherings. Recommendations and feedback are mostly developed in smaller groups.

- The content is prioritised and written by the citizens themselves. There is a significant difference between various Citizens' Assemblies as to how open the themes are for the citizens. Sometimes, they are given a narrowly defined theme, such as abortion legislation in Ireland. At other times, they are very open, such as for the green transition in Ireland, the UK and Denmark. However, no matter how narrowly defined the topics are, it is the citizens themselves who decide what they want to write about, and what conclusions they come to. It is the sub-groups of the Citizens' Assembly that agree on the texts that are finally voted on..

The Danish Citizens' Assembly on Climate Issues

It was decided that the Danish Citizens' Assembly on Climate Issues should consist of 99 citizens, selected by Statistics Denmark, based on simple criteria such as age, gender, geographic location, education, and income. The Ministry of Climate, Energy and Utilities is the coordinating secretariat for the Citizens' Assembly. To ensure trust and transparency, cf. the OECD's principles on citizen participation, three guarantors were named:

- A professional panel consisting of 4-6 experts to ensure the quality and professional balance of the themes, information materials and questions to the Citizens' Assembly.

- An expert on Citizens' Assemblies and citizen participation who can provide advice to ensure that the process remains of a high quality.

- A senior external facilitator for the Citizens' Assembly's gatherings.

The Danish Board of Technology was chosen as the senior, independent facilitator and was responsible for scheduling and chairing the meetings and managing the reproduction of the results of the Citizens' Assembly. During the process, the expert panel was consulted, particularly during the first gathering, to ensure the quality of the information material and for both gatherings to suggest opening speakers for the Citizens' Assembly's meetings. For both gatherings, a planning/contact group was set up by lot, consisting of five members of the Citizens' Assembly, one person from the Ministry of Climate, Energy and Utilities, and one person from the Danish Board of Technology, in which the process was discussed in order to ensure consensus on the process.

The first gathering was originally planned to take place over three weekends in 2020. Due to the spread of COVID-19, a decision was taken to hold the first Citizens' Assembly meetings online in October 2020 with the aim of providing its recommendations in spring 2021. The report and a detailed description of the process can be found at https://kefm.dk/klima-og-vejr/borgertinget-.

The process for the second gathering is detailed on the figure on the next page and described below. The meeting programmes can be found in Appendix 6.

There were two tasks up for discussion in the first weekend meeting. The first was to create an integrated Citizens' Assembly where all citizens – those who were part of the first gathering, and those who joined for the second gathering – could get to know each other, split up into the editorial groups that would write presentations on subjects and recommendations, and the role and expectations of the Citizens' Assembly were clarified. The second task was a "bottom-up" one aimed at finding the themes and sub-themes the Citizens' Assembly would work on. The citizens brainstormed ideas, points and challenges, which were then grouped into themes. The themes were then voted on. Three themes were chosen: Consumption and behaviour, Housing and urban development, and Robust, sustainable energy supply. For each theme, a number of sub-themes were defined, and the citizens were assigned into groups by lot to write about each of their sub-themes. The editorial groups began structuring their sub-themes. In addition to the three themes, a number of themes were defined that would be included in the preface of the Citizens' Assembly's report.

Evening meetings were held on the four Wednesdays after the first weekend. The first evening meetings provided input that was relevant for all three themes and included 15-minutes presentations from four experts and interested parties, followed by group work. The next three evening meetings were each dedicated to one of themes. They consisted of a one-hour presentation, a one-hour panel debate and one hour where the citizens took notes. Typically, there were presentations of 10-15 minutes from three presenters, and panelists each gave a 5-minutes statement, after which there was a debate and question and answer session. During group work, the editorial groups took notes to use both for their own sub-theme and as input for the other groups' sub-themes.

2021

October

1st Weekend meeting

30-31 October 2021

November

Evening meeting on themes

3 November 2021

Evening meeting on energy supply

10 November 2021

Evening meeting on housing and urban development

17 November 2021

Evening meeting on consumption and behaviour

24 November 2021

2nd Weekend meeting

27-28 November 2021

December

Afternoon meeting with voting

15.December 2021

The weekend meeting at the end of November had the sole task of finalising the texts on all the subjects. The editorial groups' task was to write a draft subject description with assessments and recommendations. They had the opportunity to put questions to four experts in an online meeting, get feedback from other groups or the entire Citizens' Assembly, after which they finalised their texts.

After the weekend meeting, there was a week in which the groups could arrange meetings on their own initiative and finalise the texts, though only a few groups chose to do so. Around a week before the last evening meeting, all texts were sent to Citizens' Assembly so that everyone could prepare for the voting.

Voting took place in the final evening meeting. The Citizens' Assembly was divided into four groups by lot. Led by the Danish Board of Technology, all texts and recommendations were commented on and then voted on online. Those citizens who were not used to online systems were able to vote with a written ballot.

The two weekend meetings took place in person, and all evening meetings were held online.

The second gathering will end with a meeting at Christiansborg between the Citizens' Assembly, the Climate, Energy and Utilities Committee and the Minister. The meeting was scheduled for 23 January 2021, but was postponed until later in the year due to the growing number of COVID cases.

Some key points and experiences from the overall process:

- The Danish process was designed to allow citizens to draw conclusions about both ***the big picture and the finer details of the green transition***. This is due in part to the unique situation in Denmark, where we are already implementing concrete solutions, and also because we have a Climate Act that has created a structure for the longer-term transition. Citizen input is needed for both aspects of this.

- ***Full texts – Not just recommendations.*** The Danish Citizens' Assembly creates one cohesive text on each subject, explaining the challenges encountered and its assessment of the situation. Brief recommendations on the subject are then presented. This is time-consuming, but it ensures thorough consideration before the recommendations are formulated, and it helps the reader to both understand the intensions of the Assembly and the solutions put forward. If you wish to make an impact, you need to make sure you are understood.

- ***Ongoing results***. Since the Climate Act entails that climate policy is constantly being created, it has been decided that the Citizens' Assembly should publish results on an ongoing basis in the form of two gatherings. The Danish Citizens' Assembly should therefore be seen as a continuous process, feeding into the political debate at regular intervals. This experience should be considered if a decision is made to make the Citizens' Assembly a permanent part of the formulation and implementation of climate policy up to 2030.

- In the first gathering, all meetings were held online due to the development of the COVID-19 situation. This provided some important experiences which led to weekend meetings being held in-person and evening meetings being held online during the second gathering. There are advantages and disadvantages to ***both in-person and online meetings***. In the future, we will probably keep this mix of some in-person weekend meetings, supplemented by online evening meetings, as was the case for the second gathering of the Danish Citizens' Assembly.

- ***Not just weekend meetings***, as has been the case with other national Citizens' Assemblies. Using both weekend and evening meetings, work during the online evening meetings could have a clear focus, while the weekends could be used to get a grip on the bigger picture. This combination also allowed the second gathering to hold a meeting every week, which made the process significantly shorter than the first gathering.

- The Assembly experimented with setting the scene for the gatherings themes from both a ***"top-down" and "bottom-up"*** approach.
    - ***The first weekend*** of the first gathering was dominated by presentations from experts chosen by the expert panel and the Danish Board of Technology. Against this backdrop, the citizens brainstormed points, which the Danish Board of Technology then gathered into themes and sub-themes, all of which were then discussed by the Citizens' Assembly. Furthermore, the Citizens' Assembly chose to gather some of the points into an additional theme. This can be called a "partial top-down framing" on the part of the organisers.
    - ***In the second gathering***, a "bottom-up" approach was employed to define the themes, as described above. Here the citizens defined the themes through brainstorming, topicalisation and voting.
    - ***Experience*** shows that a mixture would probably be the strongest approach. The above-defined themes can help to ensure relevance and proper timing in relation to the political process. Citizen-defined themes can ensure that the political process is provided with new angles and input that are genuinely citizen-oriented. All in all, the results from the two gatherings were probably put together in the best way possible.
- A ***principle of drawing*** lots has been used throughout the process. Recruitment was made through lot. The editorial groups, contact committee and special editorial group for the "Citizens' Assembly's Preface" were all decided by lot. This was done to ensure that the groups were not dominated by special interests, which could occur if the citizens were free choose which themes they wanted to work on.
- ***Self-facilitating groups***. Danes are used to working together at, for example, their workplaces or in association activities. Apart from the overall facilitation on the two weekends and during voting, the Citizens' Assembly had a very high degree of self-sufficiency in its group work. This has led to the Danish Citizens' Assembly being able to work with a considerably smaller budget than we have seen in other countries because there were no costs for facilitators for all 25-30 editorial groups.
- ***Withdrawal is a basic condition*** of a Citizens' Assembly. A Citizens' Assembly is a demanding method with many meetings, lots of reading material, use of IT equipment and a requirement that you find time in your calendar for it all. Participation from start to finish requires, among other things, that you can keep your focus, not get into personal issues on the way, feel that you have the necessary resources available and that you get your participation in the Citizens' Assembly to line up with your job. Feedback from citizens who withdrew suggests that this occurs when citizens cannot balance these requirements. For the Danish Citizens' Assembly, 65-75% of selected citizens' participated, with the lowest attendance being when meetings only took place online

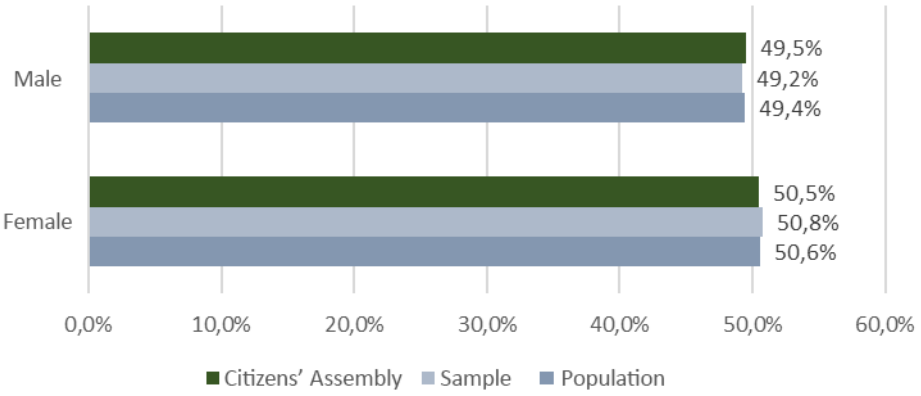
Members of the Citizens' Assembly

99 members were selected for the Danish Citizens' Assembly, as well as a pool of 99 substitutes. They were recruited through an invitation to some 10,000 people, taken from the CPR register, so that the sample would reflect the Danish population on a range of demographic parameters. Those invited responded as to whether they wanted or were able to take part in the Citizens' Assembly, and from these, a composition was selected that best reflected the population. Since it was not possible to account for all parameters at once, Gender and Geographic Location, as well as Age to an extent, were chosen as the most important parameters to create a balance, and the other were then taken into account as far as possible. The selection, carried out by Statistics Denmark, is described in Appendix 5.

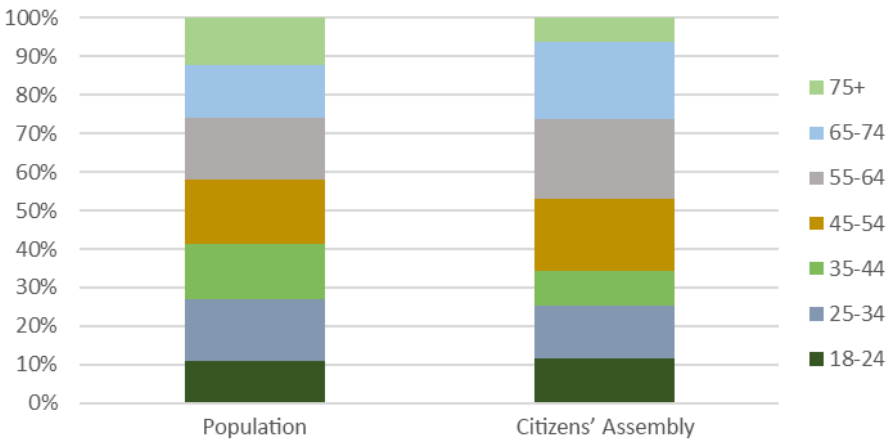
The charts showing the composition display the following data:

- Citizens' Assembly = 99 members + 99 substitutes
- Sample = the 10,000 or so selected for invitation
- Population = everyone in Denmark aged over 18

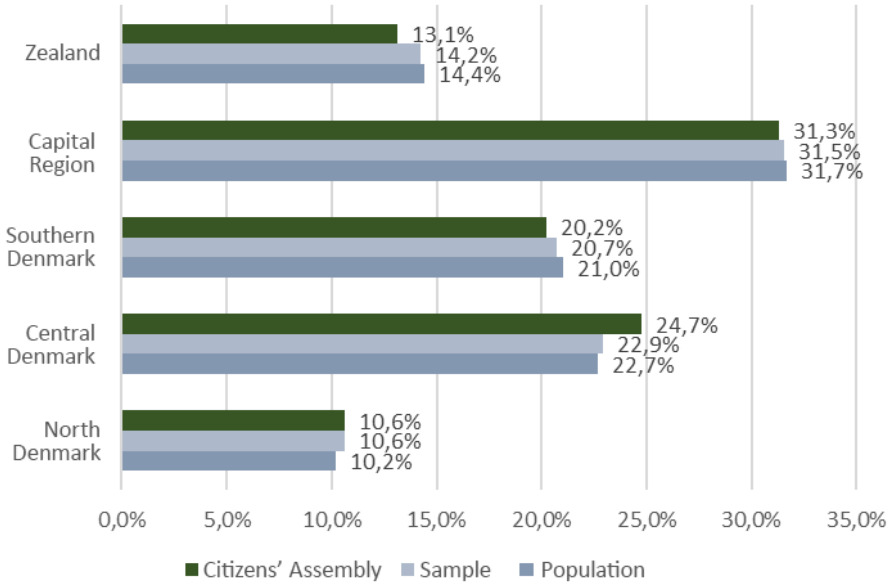
Gender



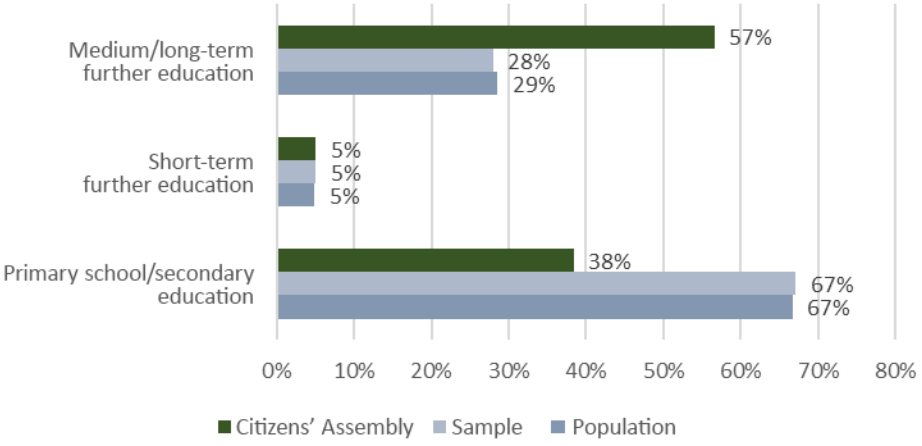
Age



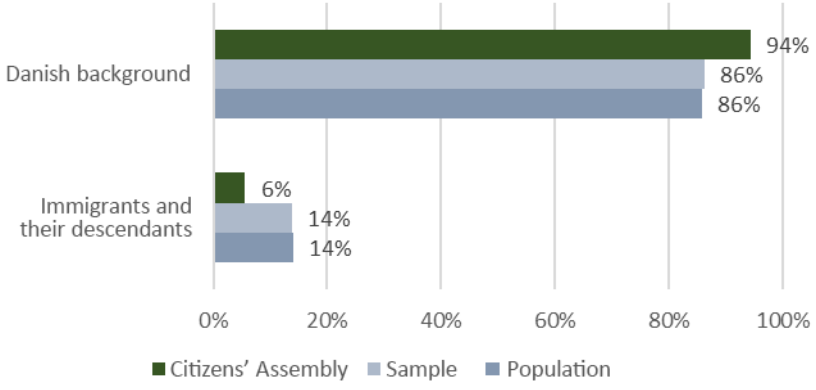
Geographic Location



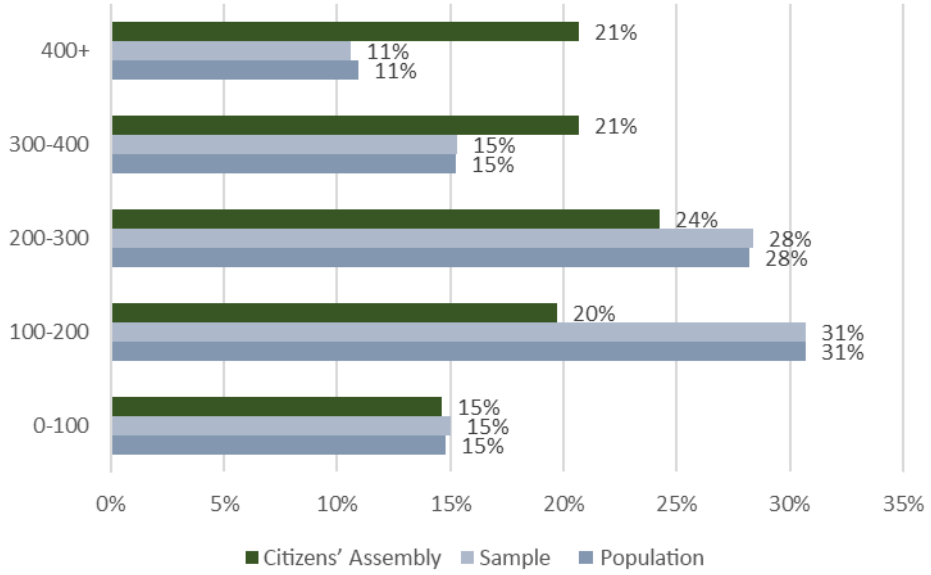
Level of education



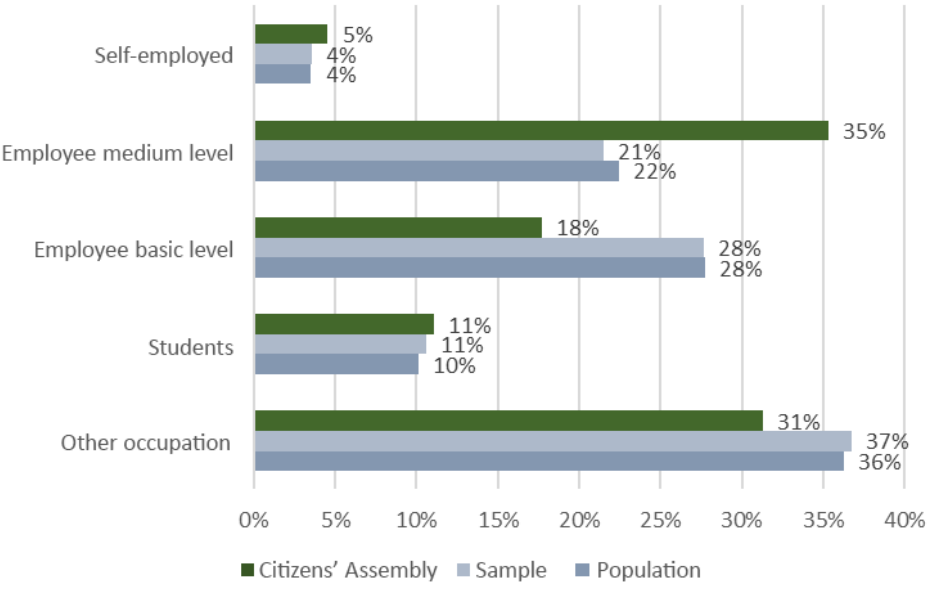
Place of birth



Disposable income
(DKK thousand)



Socioeconomic status



Recommendations of the Citizens' Assembly

The Citizens' Assembly has prepared 18 subject texts with a total of 73 recommendations on the following subjects:

- Behaviour
- Consumption
- Agriculture
- Construction
- Transport
- Energy supply

The subject texts consist of an introduction with the relevant observations, a text with the Citizens' Assembly's assessment of the challenges within the subject and finally the recommendations themselves. This format was chosen to ensure that anyone reading would understand the thought process behind the Citizens' Assembly's recommendations.

At their final evening meeting, the Citizens' Assembly voted on all of the subject texts and on all the recommendations for each subject, in addition to voting on "The Citizens' Assembly's Preface" and the four messages it contains.

The voting question for the subjects was "Do you vote for this subject as a whole?" and for the recommendations it was "Do you vote for this recommendation?".

For each vote, there were four options, of which only one could be chosen:

1. Yes
2. No, I do not think it is ready
3. No, I disagree
4. Don't know/Blank

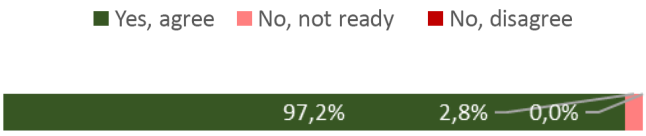
Answer 2) should allow for a deeper interpretation/understanding of the positions of the Citizens' Assembly. Choosing this answer means that, to some extent, the voter agrees with the subject, but with enough reservations that they cannot vote Yes. These reservations may be that the voter does not think that the text is well enough developed, that it has internal contradictions or that they think that the intention is good, but that there are elements in the text that the voter does not want to be referred to.

The Citizens' Assembly received clear instructions about the difference between voting for options 2) and 3) before voting began.

Only subjects and recommendations with at least 50% Yes-votes compared to No-votes were included in this report.

Recommendations on Behaviour

1 Carbon Tax



We find that there is broad consensus from experts that a carbon tax should be introduced as soon as possible. To achieve a 70% target, radical changes by industry and consumers are needed. For industry, a carbon tax can create an incentive to rethink production and cut its carbon footprint. For consumers, a carbon tax can increase awareness about how to avoid negatively impacting the environment, and there will be an economic incentive to consume more sustainably.
Based from the information provided to us by the Danish Economic Council, we find that a subsidy scheme for businesses that emit less CO2 would be significantly more expensive than a carbon tax where the aim is to achieve a 70% reduction.

We have learned that there are enough tools, technology and knowledge to implement the green transition, but that many industries lack the incentives and means to transition on a large scale. This is where a carbon tax can come into play so that companies can see a positive business case for transitioning.

In Denmark, we already have taxes on many goods, both to change consumption patterns and to bring in money to the coffers that can be spent elsewhere in society. A carbon tax would serve the same purpose with the difference being that the price of comparable goods can vary a great deal according to the level of emissions they have resulted in. The money that could be brought into the treasury through a carbon tax could be used to explore possible ways of facilitating the green transition, which must be seen as improving overall welfare. Emissions data are available in most industries, but the carbon footprint of agriculture has not yet been reported on enough.

Assessment

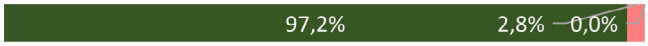
It would be possible to rapidly introduce a carbon tax in most sectors since there are already fuel taxes that can levied. However, there is not enough knowledge within the agricultural sector, so a carbon tax could be phased in here over a longer period of time. The carbon tax should cover production within the borders of Denmark. In order to not avoid market turbulence, a production tax on imported goods should be introduced as well. The carbon tax should be applied during production. This will provide manufacturers with an incentive to reduce their carbon emissions in order to become more competitive.

The argument against a carbon tax is often that it will primarily impact citizens on a low income. However, our experience shows that taxes on energy are already unfairly applied and that a carbon tax would be more socially fair. It is difficult to predict any potential social impacts of a carbon tax, but if the energy tax remains alongside a carbon tax, one could imagine that it would have a significant social impact. It should therefore be phased out alongside the introduction of the carbon and production taxes.

We call on politicians to get off fence on cutting other taxes to make way for a carbon tax. As previously mentioned, we are focusing in particular on the energy tax, but other taxes should also be on the table. A carbon tax must allow people to consume sustainably at an affordable cost. We must avoid it becoming more expensive to be a Dane after the introduction of the carbon tax. That is why we believe that a carbon tax should begin as a low tax that gets increased as other taxes on carbon-intensive products are reduced.

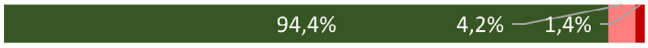
Recommendations

1.1 We recommend a broad carbon tax on the production of goods in Denmark. The carbon tax must work in conjunction with a production tax on imported goods.



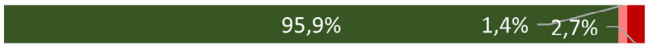
1.2. The production tax must be set based on an estimate of how much CO2 is emitted in the production of imported goods..

1.3. We believe that there should be a fixed fee per tonne of CO2. This should increase in the run up to 2030 and then be reassessed..

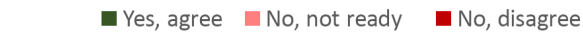


1.4. The Citizens' Assembly finds that carbon-intensive industries should receive a basic allowance in order to remain competitive and to avoid carbon-intensive industries moving abroad.

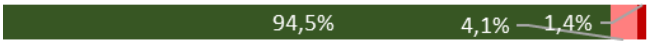
1.5. The roll out of a carbon tax should happen at the same time as the phasing out of the energy tax.



1.6. We find it necessary to offer agriculture a lower carbon tax to begin with, which will then rise in the run up to 2030.



2 Carbon footprint labelling



Consumers find it difficult to make climate-friendly decisions since there is currently uncertainty around the definitions and calculations of climate footprints. There is uncertainty as to whether manufacturers provide the correct information about the content and manufacturing of their products. It is therefore neither possible nor easy for the individual citizen to see and understand the climate footprint of a product.

We are unsure as to whether certifications, declarations and product descriptions can really be trusted: Do companies make them themselves? Are they based on real facts, or do they make questionable comparisons? Life cycle analyses of buildings shall be required by law from 2023. Could this be implemented for all goods?

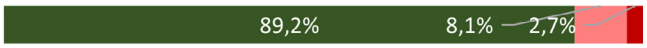
Assessment

It is important to have official certification of sustainable products, otherwise it is easy for manufacturers to say that a product is sustainable, even though it is not. Product declarations must be accurate, transparent, precise, easily understandable and well-documented, much like the “red-yellow-green” label.

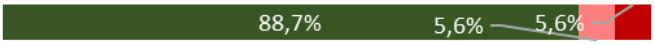
There is no legislation or guidelines against products having too high a climate footprint. It is therefore important to introduce a limited number of trustworthy labelling schemes. In addition to helping consumers make the right choice, the label should help to ensure that the worst products that cannot provide a good climate label disappear from the market once demand for them falls.

Recommendations

2.1 The state shall develop, monitor and continuously update a trustworthy climate label, which makes it easy for consumers to make climate-friendly choices, similar to the current ecolabel.



3 Popular education

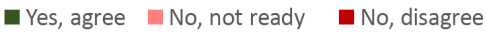


Climate change and the desire to make a difference to reduce our climate footprint is a very real part of citizens' everyday lives. At the Citizens' Assembly, which we consider to be representative, we have learned that we as citizens are not sufficiently informed about climate issues. We are therefore of the view that the general public lacks easily accessible information and accurate knowledge about climate issues. This lack of knowledge makes it difficult to make climate-friendly decisions. We assume this is also the case for knowledge regarding national and local initiatives that have been introduced.

Assessment

It is our assessment that there is goodwill amongst the public to act on an informed basis. Based on this goodwill, there needs to be a public information campaign to raise awareness about what individuals can do to help the climate. There is therefore a need for easily accessible information. Furthermore, it is our assessment that this necessary knowledge can be shared in various ways, such as in the form of a National Climate Day, through local fora for information and dialogue involving, for example, libraries and public education associations. In so doing, we can raise awareness, which also allows us to promote understanding of the climate issues we face. On National Climate Day, fairs and public meetings where experts can give presentations and present models for environmentally friendly measures can be organised. Events and workshops can be organised on a national and local level.

We are of the opinion that a change in the behaviour of the public will happen on a basis of being informed, and that it can be difficult for the public to know which political measures have been introduced. Initiatives must be taken to ensure ongoing dialogue with and information being passed on to the public about climate challenges and political measures. This can be done through expert information, dialogue and "hands on" knowledge so that people can be environmentally conscious in their daily lives. These measures should be organised in locally based fora, including through associations, political and municipal bodies, etc. The local fora will be important since there may be significant differences between how people should act in individual municipalities or local areas, while they also provide more opportunities for ongoing dialogue and information.



Recommendations

National Climate Day

3.1. An annual National Climate Day should be established where focus is placed on informing the public. In the run-up to this Climate Day, there should be nationwide campaigns on TV, radio and other media to get as wide a coverage as possible.

3.2. Public transit should be free on the day so that everyone is able to participate in and attend the various events.

3.3. Events should also be offered online.

Local climate efforts.

3.4. Municipalities should make resources available in the form of venues and expert knowledge for local climate efforts.

3.5. Municipalities should be obliged to launch public information campaigns and events in collaboration with the public and local actors.

4 Sustainable products and a climate-friendly life

There are many things that individuals can do that are beneficial to the environment and themselves. This is what we mean by a "climate-friendly life". Yet, people do not do these things, which raises the question: why not?

Our appliances (e.g. white goods) are thrown away instead of being repaired when they break. Many appliances have built-in redundancy, and many appliances are not produced with longevity in mind. It is difficult to repair appliances when they break, and sometimes they cannot be repaired at all. This is an issue for the climate because it increases consumption, and it is an issue for the individual because it is expensive to replace. It is clearly not easy for individuals to make climate-friendly decisions..

Assessment

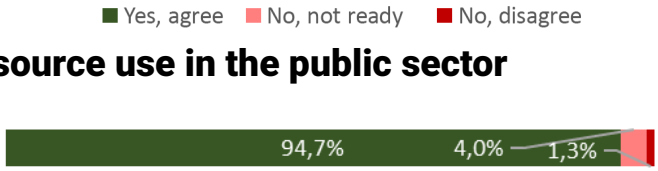
We have to assess that many manufacturers either do not prioritise longevity and easy repair or willfully choose to create products with short lifespans. Therefore, manufacturers must be required to create products with a long lifespan and which can be repaired when they break. Furthermore, requirements are needed around access to manuals and spare parts so that both consumers and repair shops can more easily repairs items..

Recommendations

4.1. Products must be required to be repairable so that they are not just replaced.

4.2. Products must be required to not have built-in redundancy.

Recommendations on Consumption



5 Green and sustainable resource use in the public sector

The public sector is our shared nonprofit organisation. Every year, the public sector spends more than DKK 350 billion on services from private companies. These purchases are governed by rules and frameworks such as the SKI-agreement, public tenders and framework agreements.

The "Forum on Sustainable Procurement" has examined public consumption in order to understand how public sector procurement could be greener. Studies show that products with longer lifespans generally use fewer resources.

Total Cost of Ownership (TCO) and Design for Disassembly (DfD) are two relevant ways of using fewer resources.

TCO is a term that accounts for the purchase price, operation, repair, maintenance and disposal of a product when calculating its price.

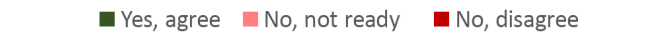
DfD is a principle that accounts for future disassembly, separation and sorting of components and materials for repair and recycling.

Assessment

Public sector procurement is of such a scale that it is an appropriate place to begin a green transition. By adjusting resource consumption and procurement frameworks in the public sector, it will be possible to accelerate the green transition in Denmark. It is the assessment of the Citizens' Assembly that we should use these procurement powers to shift certain societal norms in the climate transition.

Despite the fact that DfD is a method originating from construction, where, for example, walls are put up using screws instead of being glued, we believe that this method can be scaled up so that future product development will be characterised by a more separation-friendly design in general. TCO is a method that is more holistic than a purely purchase price approach. This makes it clearer which resources are being used over time in the public sector.

By implementing greater use of TCO and DfD, we can increase the scale of repairs, reusing and recycling and undertake more sustainable procurement, which together help to optimise resource use.

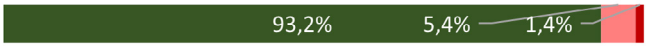


Recommendations

5.1. Public procurement and tendering should use TCO as a measure of the true price of a product

5.2. Public procurement and tendering should use DfD to increase the recycling of product components

5.3. Public property and equipment should be repaired, returned for reuse or recycled



6 Consumption and growth

Economic growth, i.e. growth in gross domestic product (GDP), has traditionally been seen as a positive, improving citizen welfare and creating more material goods, etc. Seen from a lens of climate and the environment, the challenge is that economic growth is closely tied to the growth of consumption.

Until Denmark and the rest of the world are 100% fossil-free, our consumption of goods will have a carbon footprint. Higher consumption of goods leads to a higher carbon footprint. This makes it harder for us to comply with the Paris Agreement when we have a goal of consuming more each year – a goal of economic growth.

The Government's new report "Global Report" states that Denmark's consumption leads to more carbon emissions abroad than at home. Our emissions abroad have unfortunately not fallen since 1990. This is due to two factors:

- We have imported more goods in line with our growth and thus consumption has increased.
- Some of the countries we import a lot from (e.g. China and India) have production that is almost exclusively based on fossil fuels.

The problem is that we demand goods produced in countries such as China and India because they are cheaper. From this point of view, it does not make sense to have a societal goal of more growth, which leads to increased consumption of foreign goods. Other arguments that lead to the same conclusion are:

- "Manufacturing countries" such as China, India and other countries in the global south have climate goals that fall very short from the Paris Agreement.
- It will be more difficult for these countries to reduce their emissions from manufacturing quickly enough if they have to produce more and more goods to satisfy ever increasing consumption in countries such as Denmark.

Another point is that our increasing consumption makes populations in developing countries more vulnerable to the effects of climate change. This is because the raw materials and natural resources for our goods are primarily extracted and produced in developing countries in the global south. Extraction and manufacturing require enormous amounts of water and destroy fertile farmland and natural areas. These resources will become increasingly scarce as the climate crisis intensifies.

Assessment

The Citizens' Assembly notes that increased consumption driven by economic growth threatens not just the climate, but also our environment. Our increasing consumption driven by growth requires more natural resources than the earth can replace (compared to Denmark's budget). We thereby take natural resources from other countries and from future generations. The biodiversity crisis is also driven in great part by increased consumption as species' habitats are destroyed to make way for greater and greater extraction and production of raw materials, natural resources and materials..

The Citizens' Assembly sees an opportunity to address our dependence on increased consumption to tackle several of the most pressing environmental issues of our time.

We observe that society is geared towards economic growth, but that there are a great deal of tools that Danish and international researchers have discovered that will make our society less dependent on economic growth. We believe that too little attention is given to these solutions. Research shows that transforming an economy to no longer being dependent on growth can create a more stable economy, free from the tendency for financial ups and downs, and which can satisfy our needs in terms of welfare and jobs.

Denmark alone cannot influence the scale of the production of the goods we consume. We therefore need to cooperate internationally with countries who have similarly high climate ambitions. An obvious place to start is the EU – agreeing to a common carbon price, as well as on customs mechanisms that would increase the price of goods with a high climate footprint so that they do not out-compete "greener" goods produced by cooperating countries. However, there is also debate around greater international cooperation, involving the EU, USA and China becoming part of such a community. A common carbon price as well as free trade between the EU, China and the USA would safeguard fair competition.

Recommendations

6.1. It is more important that Denmark makes its fair contribution to meeting the 1.5 degree target (for both domestic and foreign emissions) than maintaining continued economic growth. This priority must be taken seriously in economic policy..

6.2 We recommend that, when drawing up economic policy, the Government make a clear distinction between "green" growth, that does not lead to a rise in carbon emissions, and "black" growth (also including imports) and work purposefully to reduce the proportion of "black" growth in our total GDP.

6.3. Any public initiative that may lead to a growth in GDP must be assessed in relation to increased carbon emissions. If this leads to increased emissions, corresponding reductions must be made through other measures.

6.4. The Danish Government must work for the EU to introduce a customs mechanism that makes fossil-fuel produced goods imported to the EU so expensive that they cannot out-compete green goods.

6.5. The Government should establish a commission consisting of experts from different disciplines, who can provide proposals for how Denmark can move away from being dependent on economic growth

6.6. The Government should support research into economic theories and social models that investigate the possibility of making our economy more independent from the need for GDP growth and thereby help make us more economically resilient as a country.

6.7. Denmark should use its status as a leading figure in the climate field and work to establish an international forum to identify the barriers in the financial system to making Western economies in particular less dependent on economic growth, and how to overcome them through international cooperation.

7 Consumption, natural resources and the climate

Our consumption of natural resources in Denmark goes beyond what is sustainable. The organisation Global Footprint Network has developed a measure of when a country's population has used up the natural resources the planet can replenish in the space of a year (compared to the country's budget). In 2021, Denmark reached its resource budget by the 26 March. This means that, after the 26 March 2021 until 2022, we consumed resources that should actually have been for future generations. This "Ecological Footprint" indicator also includes how much CO2 Denmark can emit. However, even if Denmark had zero CO2 emissions, we would still need 2.2 Earths if all the world's citizens lived like Danes. In other words, we are depriving other countries and future generations of natural resources.

Our high consumption of goods is the primary driver of our high resource consumption. The Citizens' Assembly was established to propose solutions as to how we can approach the climate crisis. There are many ways of approaching this, but we believe that the crisis – to as great an extent as possible – must be addressed in ways that not only benefit the climate, but also take on other environmental issues we are facing such as the biodiversity crisis, over-consumption and poor management of natural resources. We can often kill multiple birds with one stone by choosing the right solutions.

Assessment

Denmark's consumption makes direct use of natural resources and land for agriculture, industry, construction and infrastructure both within and outside of our borders. Many goods with a high carbon footprint also require lots of natural resources (such as raw materials) in their production. These include white goods, electronics and cars. Solutions that reduce demand for such goods are beneficial for the climate and saves natural resources. This could include requirements for higher guarantee schemes.

The high consumption of goods by Danes leads to carbon emissions during manufacturing, particularly abroad.

To reduce carbon emissions as effectively as possible, we must deploy measures that reduce demand for goods with the highest carbon emissions. Examples of these would be using differentiated VAT and banning certain types of adverts. Requirements for longer warranties could also be introduced to provide manufacturers with incentives to sell higher quality goods that do not need to be replaced so frequently. It will also reduce demand for natural resources (including raw materials) that go into the production of our goods.

Large amounts of energy and raw materials are used to build roads and new cars. The construction process alone emits a lot of CO2. At the same time, new roads and bridges take up natural resources such as forests and farmland. Research says that the more roads we build, the further people will move from their place of work. This also means that more cars are being bought, which in turn creates a demand for more roads. It is an unending cycle. Seen in this light, we should work to halt the growth of the number of cars on the road because, from all angles, more cars are bad for the environment, regardless of whether they are electric or run on fossil fuels.

There is a close connection between higher income and higher consumption. Given that one in six Danes want to reduce their working hours, this is a win-win situation we can exploit. Lower consumption protects the climate, our natural and our biodiversity.

The richest 10 percent of the global population – where over half of Danes find themselves – are responsible for well over half of the world's carbon emissions. This fact shows how important income is for carbon emissions.

According to many economists, the option to work less hours is one of the most effective measures Danes can use to reduce their carbon emissions.

Some of the most common reasons for wanting to work less hours is that people want more time with their family, leisure time and further education. A significant proportion of the Danes who want to reduce their working hours suffer from work-related stress. Stress costs society DKK 14 billion every year in the form of sick days, premature deaths and costs to the healthcare system. Providing Danes who want it a better chance to reduce their working hours will not only increase their well-being, but also reduce stress-related costs to the state. In addition to being beneficial to the climate and environment, it also has other positive effects.

Germany and the Netherlands are examples of countries where part-time employment is far more common than in Denmark, and where the state has made an active attempt to provide better opportunities around part-time employment.

Based on the above, it is our assessment that the state as an employer and as a party to labour market negotiations with private businesses should work to improve opportunities around part-time employment for those who want it.

Recommendations

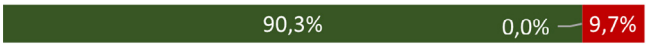
7.1. Politically, work should be done to eliminate overconsumption through the systematic use of a scale that measures the total resource use of Danes' consumption and compares it with what the Earth can regenerate. This is the same principle as followed by "Ecological Footprint".

Such a scale should include:

- all resources used for our consumption within Denmark and abroad
- underlying resource consumption (not just that of the finished product)
- Danes have the same right to natural resources and raw materials as the rest of the world's population
- the Earth's capacity to regenerate resources being calculated on a global scales since our goods come from both home and abroad

7.2. It is more important that we reduce our overconsumption of the world's limited natural resources and raw materials than maintaining continued economic growth. This priority must be taken seriously in economic policy.

7.3. Adverts posted through the letter box must be voluntary, that is, you must actively sign up to receiving adverts



7.4 A legally mandated minimum three-year warranty and an additional two-year right to complaint should be introduced on durable consumer goods (e.g. electronics and white goods)

7.5. At a municipal level, all municipalities should employ someone to be responsible for facilitating, supporting and gathering experience on share systems and other citizen-driven climate initiatives

7.6. Work must be done to halt the growth of the number of cars

7.7. Major road projects, such as motorways and bridges, should be reassessed based on our desire to halt the growth in the number of cars

Recommendations on Agriculture

8 Agriculture, the climate and natural resources

It is essential, including when keeping climate change in mind, that we take better care of our farmland, which is one of Denmark's most important natural resources. Dry summers, such as in 2018, and extreme rainfall are examples of weather phenomena that agriculture will face more frequently as a result of climate change. If our farmland is generally in a good environmental condition, then it will be more resilient to climate change.

Assessment

An important natural resource in Denmark is our fertile farmland. Unfortunately, soil in Denmark is becoming more and more exhausted, and its carbon content is decreasing. This is a problem because exhausted soil with lower carbon content is worse at retaining water. This increases its vulnerability to the droughts and extreme rainfall that climate change is bringing to Denmark. During droughts, the soil is worse at retaining water. During a cloudburst, the soil cannot absorb the water quickly enough.

Thankfully, there are cultivation methods that allow for more climate-resilient agriculture while also leading to carbon savings, benefiting the fertility of the soil and increasing biodiversity. Examples include Conservation Agriculture, agroforestry and permaculture agriculture.

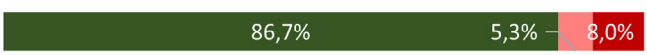
A reduction of livestock agriculture is another solution where we can reap significant gains for the climate and nature. Livestock agriculture and feed production account for almost 90 percent of emissions from Danish agriculture. At the same time, livestock agriculture requires significantly larger areas in relation to the calories produced compared to plant-based agriculture. If we reduce this, we will, in addition to reducing carbon emissions regain large areas of land that can be used for forests and nature, which again are beneficial for the climate and biodiversity.

A common counter-argument to this is that production will just move abroad (leakage). The Danish Environmental Economic Council has calculated that leakage is low. Every time Denmark reduces its meat production by 100 tonnes, it increases by 35 tonnes in other countries. This leads to a large global reduction of 65 tonnes of CO2. The climate efficiency of Danish animal production is on par with other countries. Leakage is therefore also relatively low. The Netherlands has decided that their livestock production should be reduced by over 30% for sake of the climate, biodiversity and the environment. The Netherlands, like Denmark, has a major livestock agriculture sector.

Our high use of insecticides is causing an alarming decline in insects that pollinate our crops, threatening our food security. Again, including from a climate perspective, it makes sense to take better care of our natural resources. Denmark will experience an increasing number of dry summers with lower agricultural yields, as seen in 2018. If, at the same time, we lose more and more pollinators, our agricultural yield will fall even more. The high use of insecticides also leads to a decline in the population of wild plant pollinators. This leads to a degradation of nature and biodiversity. This is also a problem since biodiversity has value in and of itself.

Recommendations

8.1. There should be a conversion subsidy for agricultural methods that systematically follow recognised methods that are beneficial to the climate, biodiversity and the maintenance of soil fertility



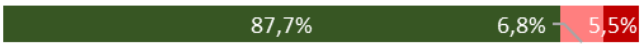
8.2. The Government should work to reduce the use of insecticides by setting a national target that is more ambitious than the one the EU has set.

8.3. The state should buy up cheap farmland and convert it into forests.

8.4. Livestock agriculture should be reduced

Recommendations on Buildings

9 The public sector as a green developer



The Citizens' Assembly on Climate Issues has observed that the public sector has a total of 43 million sqm. of buildings, of which 6.5 million sqm. are state-owned, 5.2 million sqm. are owned by the regions and 31 million sqm. are municipal. There are a total of 45,000 properties.

- 75% of existing buildings are not very energy efficient.
- 80% of existing housing is expected to last until 2050.
- 20% of carbon emissions in Denmark come from existing buildings.

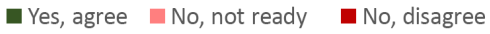
The public sector is this Denmark's largest developer.

- It should be noted that seven out of ten public buildings only have an energy rating of D to G!
- It should also be noted that the state, regions and municipalities do not have a common green construction strategy.

Assessment

It is the assessment of the Citizens' Assembly that if all municipal buildings were upgraded by two energy ratings, it would lead to a reduction of at least 200,000 tonnes of CO2 per year, and for the entire public sector (43,000,000 sqm.) this would lead to a reduction of 250,000-300,000 tonnes of CO2 per year. This is a goal that can be achieved using pre-existing technologies, such as retrofitting insulation, replacing doors and windows, replacing carbon-intensive heating sources, etc. It is considered an inherent condition that a healthy indoor climate also be considered in the solutions employed.

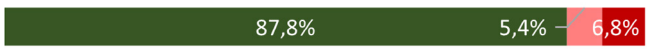
Denmark's largest construction developers (the state, regions and municipalities) should act as a unified green role model through its actions and a common set of rules by upgrading the existing building stock by two energy ratings.



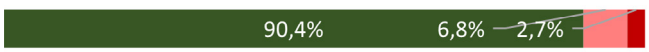
Recommendations

9.1. The Citizens' Assembly recommends that all existing publicly owned buildings (state, regional, municipal) be refurbished by 2030 at the latest so that they are upgraded by two energy ratings..

9.2. Sub-targets for objectives to be achieved by 2025 and 2028 must be drawn up. Therefore, money should be earmarked in all public budgets for energy-related refurbishments.

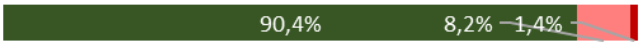


9.3. The Citizens' Assembly recommends that the state, regions and municipalities create common green guidelines in order to carry out these refurbishments of the building stock as there currently are not any such common rules beyond the building regulations.et.



9.4. The Citizens' Assembly also recommends that the same issues and objectives be applied to the private building stock by, for example, 2040. Sub-targets should also be set here. A voluntary scheme should be based on incentives that can motivate private developers to implement these changes. Such incentives could come in the form of subsidies, premiums, grants or an increased tax deduction for energy improvements.

10 Recycling of construction material



The Citizens' Assembly has observed that there is a lack of transparency in relation to the climate footprint of materials and resources used in construction. We are pleased to note that recycling of materials in construction is rising, but many materials are not recycled, even when they can be. Recycled materials have a significantly lower climate footprint compared to newly produced materials. It is our clear impression that there is room for improvement in this area and to combine this with the development and use of newer, more sustainable materials.

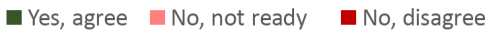
Assessment

We want more focus put on this area. Recycling is more climate and resource friendly than new production, where it is available. The basis of our recommendations is that we want greater focus on the use of recycled materials. A concrete percentage for recycling will boost and speed up the process. We are aware that this could increase the bureaucratic burden on businesses. Generally speaking, we should aim to reduce the bureaucratic process of the green transition and make it more transparent.

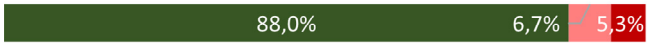
It is our assessment that there is need for more knowledge about the carbon footprint of construction materials, including during their disposal. We have heard that there are several different certifications based on life-cycle analyses. We want a standard life-cycle analysis (LCA) certification for construction materials, and that these should be carried out externally and independently. Furthermore, we believe that there is a need for new sustainable construction materials, which must be supported by more research into this area.

Recommendations

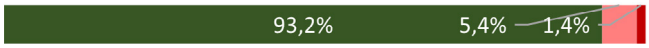
10.1. An expert group should put forward proposals for a percentage of recycled materials to be used in public buildings.



10.2. We have heard that there are many different certifications, and so we recommend that there should be one standard life-cycle analysis certification for all construction materials used in Denmark. The carbon footprint should be transparent, and it should not be carried out by industry itself



10.3. Research supporting the implementation of new technologies and climate-friendly construction materials should be strengthened.



Recommendations on Transport

11 Passenger transport and infrastructure

In autumn 2021, the Citizens' Assembly on Climate Issues has received contributions from a number of experts. Based on these contributions, we have made the following observations related to passenger transport and infrastructure:

- The transport sector is the largest CO2 emitter in Denmark, and if this continues, the transport sector will account for 40% of Denmark's total carbon emissions in the years ahead.
- The Government has set a target of 775,000 electric and hybrid vehicles in 2030, which is estimated to lead to a reduction of 2.1 million tonnes of CO2. Furthermore, the Government will also work to stop the sale of fossil-fuel-based vehicles in the EU by 2030.
- The head of Danish Cyclists' Federation claims that a tripling of current cycling levels would achieve a CO2 reduction equivalent to replacing 1 million fossil-fuel-based vehicles with 1 million electric vehicles.
- Private passenger transport accounts for 86% of all transport in Denmark, and only 14% comes from public transport.
- Carbon emissions from commuting are higher than those from housing. Urban development with a focus on public transport can help to make commuting more efficient.
- 60% of cyclists in cities say that they cycle because it is easy.

Assessment

The overall assessment of the Citizens' Assembly is that current infrastructure is inadequate for the transition to green transport. Based on several expert presentations, it is our assessment that the introduction of a carbon tax is the most effective way to drive this transition. If the energy tax is phased out at the same time, this will prevent any social disruptions (cf. carbon tax subject).

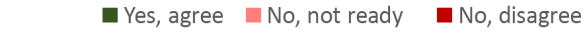
The Citizens' Assembly believes that the Government's target for 775,000 electric and hybrid vehicles on Danish roads by 2030 is not achievable if there is no real charging infrastructure available. To construct a coherent nationwide charging infrastructure, we also need a general expansion of the electricity grid.

Since building public infrastructure is disproportionately expensive, the Citizens' Assembly assesses that focus should be placed on optimising the existing public transport infrastructure rather than establishing a new one. By this we mean, for example, the expansion of bus lanes, replacing diesel trains with electric trains, as well as the electrification of the bus network rather than building new light rail infrastructure.

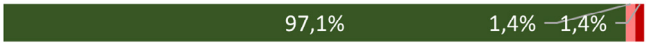
We need to get some private transport moved over to public transport. It should be easy to choose green transport instead of polluting transport. It should be difficult to use a car, and easy to take public transport. Based on this, we believe that the establishment of transport nodes could contribute to better links between urban and rural areas. By nodes we mean a single point with easy access from, for example, motorways and other approaches, where it is easy to leave you car behind and hop on a train or a bus. These should be easily accessible to all transport, including drivers, cyclists and people using public transport so that it is possible to quickly switch between the various modes of transport.

We assess that introducing car-free zones with good public transport and lowering the general speed limit in cities will encourage the use of public transport while also making the use of private transport more difficult. A reduction in public transport fares and a simplification of ticketing systems will, all things considered, make public transport more user friendly and so more accessible. The Citizens' Assembly believes that a steadily increasing focus on moving from private transport in cars to bicycles could contribute significantly to the 70% reduction in carbon emissions.

Recommendations



11.1. Major optimisation of the electricity grid to support charging stations and generally increased electricity consumption..

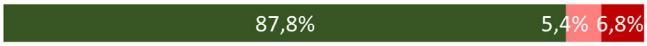


11.2. Standardisation of charging stations to guarantee easy and efficient charging.

11.3. Legal requirements for the amount of charging stations in public (at least 50% of all publicly accessible parking spaces should be dedicated to electric cars by 2030).

11.4. Parking spaces with charging stations may only be used by electric vehicles.

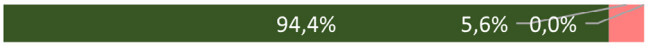
11.5. Introduce car-free zones in cities.



11.6. Reduce the speed limit in cities to reduce carbon emissions.

11.7. Focus on optimising existing infrastructure instead of building new infrastructure..

11.8. Establish transport nodes that facilitate easy transfer between private and public transport.



11.9. Make public transit ticketing systems simpler and reduce ticket prices.

11.10. Continue to develop and improve the existing network of paths and tracks to promote cycling.

12 Cycling and a climate-friendly life

There are many things that individuals can do that are beneficial to the environment and themselves – this is what we mean by a "climate-friendly life". Yet, people do not do these things, which raises (as previously mentioned) the question: why not?

If, for example, we tripled the number of kilometres cycled in Denmark, that would be equivalent to putting 1,000,000 electric vehicles on the roads (Source: Jens Peter Hansen, head of the Danish Cyclists' Federation, 13.11.2020 in "Monitor"). Furthermore, there are many personal benefits to cycling: Improved health, cleaner air, less noise and cheaper transport.

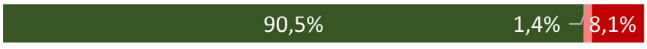
Assessment

A climate-friendly life should be accessible and attractive since this influences people's habits: In 2011, 48% of cyclists in Copenhagen said that they cycle because it is the fastest and easiest option (From "Good, better, best. The City of Copenhagen's Bicycle Strategy 2011-2025"). This figure has since risen to 63% (Kristian Skovbakke Villadsen, Gehl Architects). The Citizens' Assembly therefore wants people to transition from driving to cycling. The climate benefits are significant, and there are also other benefits of cycling more for citizens and society. It is our assessment that to promote cycling, people should have easy access to safe cycle lanes and secure bike parking, such as elevated bike racks that people can easily lock their bikes in.

Recommendations

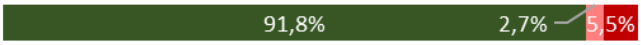
12.1. The Citizens' Assembly proposes that current expansion of bike lanes across the country be accelerated, compared to the agreement between the state and municipalities of 4 December 2020.

12.2. Theft and vandal-proof bike parking should be built near residential areas, workplaces and public transport nodes across the country, with electric bike charging where it is not already available.



Recommendations on the Energy Supply

13 Coherent plan for the reorganisation of the energy supply

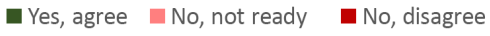


We need a concrete national plan for the reorganisation of the energy supply with short-term objectives so that we ensure that the measures taken have the desired effect and bring us to our objectives. Our view is that there is holistic view in planning. As far as we see it, the conversation primarily revolves around each sector individually.

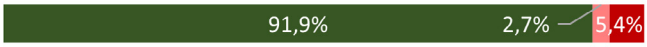
Assessment

It is the view of the Citizens' Assembly that new measures such as within energy storage and the expansion of renewable energies, as well as the expansion of the capacity of the distribution network are being introduced without a coherent or clear overarching plan. Knowledge and advice from, for example, the Danish Council on Climate Change and the Green Business Forum should be given more prominence and used more widely in the drawing up of the Government's plans for the transition of the energy supply from fossil fuels and for the reduction of carbon emissions. Such a coherent plan would provide an overview that could support and promote the most promising measures within this field.

Recommendations



13.1. The state should, here and now (i.e. 2022), draw up a coherent and concrete plan with clear sub-targets for the reorganisation and expansion of the energy supply and the expansion of the distribution network.



14 Energy supply in the short term

There is a significant risk that the demand for renewable energy (especially electricity) will rise dramatically over the coming years and potentially faster than the expansion of generation capacity. Experts have explained that an offshore wind farm now takes ten years to build, but it could be finished in five years if the decision-making process was quicker. New forms of renewable energy generation, beyond solar and wind, are still at experimental phases and will not provide a real generation boost in the short term.

Assessment

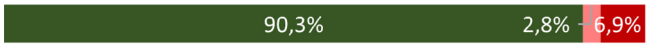
We believe that electricity shortages and serious price volatility may lead to social inequalities and a negative impact on public acceptance of the green transition. According to news coverage in the Danish media, the establishment of many new renewable energy plants, such as wind and solar farms, is being slowed down by local protests or by concern for the environment and nature. According to Politiken's Klimamonitor of 8 December 2020, more than one in five new onshore wind projects have been dropped since 2009.

Based on this, we would like to refer back to some of the work by the first gathering of the Citizens' Assembly, where renewable energy co-ownership is discussed in chapter 18, subsection 18.6: "Instead of a process where the citizens' approval is sought at the final stage of planning large facilities and offering

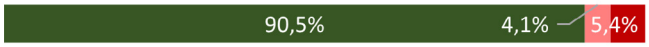
compensation to those living nearby, such projects should start by giving the local citizens influence and co-ownership of the projects. Compensation should be awarded in the form of co-ownership. should be awarded in the form of co-ownership.

Recommendations

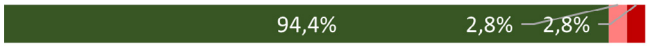
14.1. The state should, here and now (i.e. 2022), create a concrete plan for the rapid expansion of renewable energy generation and distribution.



14.2. Renewable energy must be put on an equal footing with other socially-vital projects (e.g. motorways and railways) so that there is a framework for implementing these projects, even when there is local opposition.



14.3. Citizens of municipalities wanting to set up a new renewable energy plant should be involved sooner in the planning phase to reduce potential opposition and to include local knowledge about its placement in the landscape.



14.4. Compensation for any inconveniences related to the setting up of a new renewable energy plant should be offered in the form of co-ownership.

15 Geothermal energy and heat pumps

In the short term, it seems that utilising geothermal energy from beneath the earth (1-3 km down) is an extremely overlooked, yet green and renewable source of energy. Geologically speaking, Denmark has the right conditions, which are also well-documented, to use this source of energy to a far greater extent than is the case today. Additionally, it is weather independent and will harmonise well with the Danish district heating system.

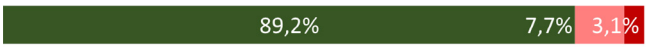
One hindrance to its adoption is that it has traditionally been left up to municipalities and regions to deal with. The necessary professional know-how for this field is complex and is not available at a local level. The costs and risks of trial drills for final confirmation of a productive underground heat reservoir are also too great for the municipal level. In the short-term, increased support for and expansion of heat pumps (air-air, air-water, geothermal-water) together with improved insulation of homes could reduce carbon emissions relatively quickly. Heat pumps are, like geothermal energy, lasting solutions.

Assessment

Geothermal energy is clearly underrepresented in both technical and political agendas around Denmark's green energy policy. This is primarily due to the fact that its development mainly takes place at a municipal level. This represents a structural barrier to the adoption of a well-known energy technology with significant potential in both the short and the long-term, particularly when coupled with district heating plants. Other opportunities for the short-term are an increased adoption of heat pump technology.

Recommendations

15.1. The Citizens' Assembly recommends a change in the structural conditions for the adoption and financing of geothermal energy so that it takes place on the national level and forms part of a national plan for the transition of the energy system away from fossil fuels.



15.2. We recommend an increased effort for the adoption of heat pumps in housing stock. This could be done through increased financial support, such as through lower electricity taxes on all electricity consumption for heat pumps, not just for consumption over 4,000 kWh.

16 Use of CCS

The Danish Parliament unanimously approved the use of CCS in June 2021. However, a strategy, economic plan and legislation in this area are still lacking. According to experts, there are good storage opportunities for CCS both at home and abroad. Geological surveys of storage opportunities in Denmark have already been carried out, but there is still a lack of development of carbon capture methods. We have also heard that there are good opportunities to use existing infrastructure to transport carbon, that underground storage of carbon is safe and secure, and that there is minimal risk of leakage or damage to the surrounding environment.

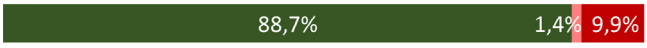
Assessment

The Citizens' Assembly is of the opinion that the use of CCS may be a necessity to achieve the climate goals by 2030. Carbon reducing measures that are currently in use are not enough to achieve our climate goals according to our knowledge and expert opinion. We believe that rapid and decisive action is needed.

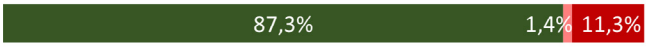
The Citizens' Assembly has already agreed on the use of CCS, but as far as we understand it, there is still no concrete plan for the roll-out and use of CCS. Even though the Citizens' Assembly supports the development and use of CCS, we believe that it is absolutely necessary that CCS is not used as pretext for doing nothing or an argument for not reducing carbon emissions from fossil fuel energy sources. We are aware that the process for CCS is energy intensive, and it should therefore be ensured that there is enough green energy for the CCS process, including in the short term.

Recommendations

16.1. The Government should draw up a plan and legislation for the use of CCS as soon as possible and before 2024..



16.2. Financial resources should be made available for implementation and technological development, such as for test facilities.



16.3. A correspondingly high carbon tax should be introduced by 2025. This will also make itcheaper and more economically attractive to deploy CCS instead of emitting carbon directly into the atmosphere.

17 Financing a robust energy supply in the short term

Something must be done now. There are high expectations for new technologies such as CCS, but there is great uncertainty around whether these technologies will work, and if so, when. If Denmark wants to achieve its 2030 climate goals, it must act now and set multiple concurrent initiatives into motion.

We have observed that parts of the current framework are designed in such a way that they stand in the way of investment into emission reductions. Since the Second World War, there has been general economic growth in Denmark, albeit with decreasing trend in the last 10-15 years. The Danish economy is strong.

Assessment

When it comes to investments in short-term but necessary solutions, many investments from private actors, pension funds, etc. are excluded. The state should therefore be ready to step in so that the necessary investments are made at the necessary speed. The Citizens' Assembly on Climate Issues assess that there is space in public budgets to invest in the development of new technologies to reduce carbon

emissions. The state should act as facilitator/investor in the development of a sustainable energy supply in the period before technologies are profitable (as has happened with onshore wind energy).

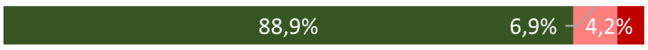
Generally speaking, it is the assessment of the Citizens' Assembly that there is a need to increase state investment at this early stage of the transition. This could be done by gathering the management of investments together so that they are coordinated and efficiently deployed. Some points that may characterise these efforts are:

- Establishing a task force responsible for assessing, prioritising and evaluating projects and investments.
- An increased willingness to invest in high-risk projects, though with suitable diversification. The risk is thereby spread out while accepting that some projects will fail.
- Changed project cultures so that failing projects are halted quickly ("fail fast"). This could be done, for example, through phased projects with fixed timeframes and ongoing reevaluations.
- Projects that could be covered by this project methodology are:
    - Maturation of CCS methods
    - Wave energy
    - Energy storage
    - "Small" nuclear power plants (new nuclear energy methods)
    - More efficient insulation
    - ... and all the other good projects we do not know about

Much legislation is designed to address concerns other than emissions reductions and may therefore stand in the way of climate-positive investments. Legislation in a number of areas should therefore be adjusted so that it encourages and motivates investment in renewable energy, energy savings, etc. These could include supply rules, district heating rules, subsidy rules and rules around local planning.

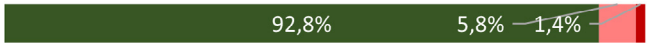
Recommendations

17.1. The state must appoint an impartial task force responsible for initiating and managing projects that promote carbon savings and other investments that ought to be made faster than markets can drive them.

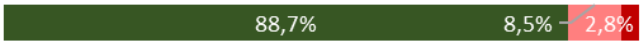


17.2.Existing legislation and instruments should be changed so that they at best promote carbon savings and in no way place roadblocks in the way of carbon savings.

17.3. A carbon tax should be introduced, as described in the introductory chapter. As it is gradually phased in, it could help finance short-term investments.



18. Framework for research and innovation



Research pathways must be more directed if the objectives of a development pathway are to be achieved. The development pathway should step up a gear if the climate "hockey stick" is to be shortened. An acceleration of research will bring forward the moment at which we can "swing the hockey stick" and hit "the puck into the goal" in order to implement the Climate Action Plan.

However, there are many barriers in the way of getting research and development right:

- Administration and applications for research funds is troublesome.
- There is a lack of focused research with the associated necessary facilities in key areas.
- Research is too rarely defined from a user perspective (the end user).
- One-sided priority of technological research happens at the expense of basic research, which is also
- necessary for the green transition.
- Research is divided between many actors and across many levels (e.g. private companies and the state).
- It appears that there is no coordination across disciplines and/or international borders in all areas of research.

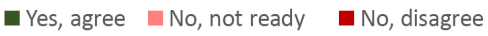
Assessment

It is the opinion of the Citizens' Assembly that if sustainability (social, economic or climate) is taken into consideration in all research, this would contribute positively to a paradigm shift. Uncoordinated efforts and prioritisation of research funds leads to wasting resources in the form of delayed research, development and implementation. This can result in delayed or incorrect prioritisation of research in areas that do not address the climate crisis. If resources are pooled across national borders, they could be used more efficiently. Focusing resources (humans, facilities, financing, etc.) can accelerate the necessary development and implementation of new technologies and reduce the risks of poor investments.

Basic research is fundamental for all further research, including for technology. It is also necessary to identify the areas where end users, i.e. consumers, farmers or businesses, have the greatest need for new research, knowledge and development. Test facilities may be a condition for developing and testing new or improved technologies.

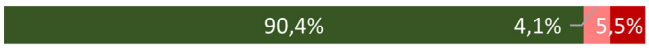
Administration of research funds can be restrictive/demotivating, especially if researchers need to expend a lot of time on administrative tasks and applying for research funds instead of concentrating on their core competence as researchers.

Recommendations



18.1. Steps should be taken to ensure that all research in all fields account for sustainability in a broad sense: e.g. social, human, economic or climate.

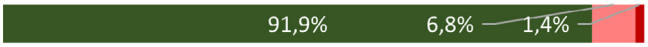
18.2. The Danish Council on Climate Change should be asked to identify the most important key areas for intensive research efforts in the area of climate change.



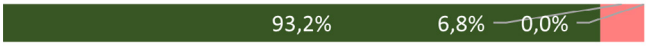
18.3. Denmark should, in cooperation with the EU (and preferably the entire world), coordinate research within the area of climate with the aim of optimising research resources, including improving knowledge sharing. This should be done through the establishment of fora to which research across national borders are appointed to research selected climate solutions.

18.4. A pool should be made available for innovative climate initiatives and the development of climate technologies. The pool should be accessible to both small and larger actors and measures. Through the pooling scheme, initiators (i.e. end users) should be put in contact with researchers and/or industry, who can provide the necessary calculations, further development, etc. The search for and reporting of funds should be rapid and manageable. The knowledge developed should be open source.

18.5. Financing a stable, long-term framework for basic research as well as for other research and development should be guaranteed.



18.6. When beginning research in specific areas, decisions should be taken on financing and the establishment of test facilities (potentially across national borders).



Appendix

1.Appendix – The Citizens' Assembly's recommendations, first gathering

Recommendations on popular education, behaviour and participation

1. Political action

1.1 We recommend that politicians be more proactive and bold, even if it comes at the expense of votes. There is a need to listen more to the experts – especially impartial experts – and push harder to implement the measures and policies that are necessary. We need action NOW! It is more important to listen to the experts – such as the Danish Climate Council – than laymen (which therefore technically includes the Citizens' Assembly).

1.2 It is important to get many minor initiatives underway (many small streams...), covering companies, citizens and other sectors, as less effort would therefore be involved for each initiative. Politicians should keep their eyes open for opportunities to promote and support good local initiatives, e.g. by removing obstacles in rules and administrative procedures.

1.3 There should be a public debate on the possibilities that a green constitution could lead to. This debate could draw upon experiences from other countries where the political responsibility for the environment, nature and climate has been enshrined in their constitutional framework and whether this has proved beneficial.

1.4 The Citizens' Assembly believes that the climate objectives must be achieved, but we are concerned about whether they can be achieved due to policies that shift from one government to the next. Our appeal is accordingly for broad and effective political agreements that can be upheld even after elections.

2. Citizen participation and popular education

2.1 The establishment of a permanent Citizens' Assembly as part of the Danish Council on Climate Change.

2.2 Local citizens' assemblies on climate issues in each of the country's municipalities, with a view to supporting local agendas and debates. This will build a framework that allows those citizens who want to get engaged to make their voices heard and thereby get the best climate councils that are based in the local communities they are drafting proposals for.

2.3 Climate objectives at the municipal level with citizen participation on how to achieve those objectives.

2.4 In general, the Citizens' Assembly recommends that the Government should ensure sound communication to and with the population. This communication should be simple and straightforward so that everyone understands what kind of behavioural changes are necessary, how these changes will be implemented and why they are needed.

2.5 The Citizens' Assembly recommends a greater degree of climate education in primary and lower secondary education (folkeskolen) and youth educational programmes as a general and mandatory part of early education curricula. There should be more education on climate-friendly diets in the subject home economics. Climate education should also cover in depth why it is so difficult for societies and the international community to tackle the climate crisis in relation to other crises, i.e. not primarily about the scientific aspects of the climate crisis.

2.6 There is a need for various awareness-raising campaigns such as: Awareness-raising radio and TV programmes, debate programmes, funding for educational material, funding for film, theatre, visual arts, non-fiction, presentations, festivals, news broadcasting and an organ that poses questions.

2.7 Information about the calculation basis and full transparency on what our total emissions are and how we can reduce them based on scientific evidence. This could include information on the CO2 that is not included in our Danish emissions because some imported goods are produced abroad (such as soy-based animal feed from rainforest land in South America, which is used as feed in many conventional pig farms in Denmark).

2.8 The calculation basis should be fully synchronised and include all factors. In the long-term, it could be used for standardised labelling of packaging, groceries, etc.

2.9 Public libraries should take an active role in popular education and enter into collaborations with local media on local debates and news broadcasting. The efforts of public libraries should also be linked to efforts that support citizen-led initiatives and/or participation in specific sustainable adaptation issues, as concrete action can help make sense of the otherwise fairly abstract issues relating to climate and sustainability.

3. Behavioural changes with a focus on material consumption

3.1 Our national accounts should be measured on factors other than solely economics: Life quality (social groups, good health, a sense that one is making a difference, freedom), longevity, sustainability, natural resources. Statistics Denmark has already developed and calculated a green GDP model, welfare goals and resource consumption. The Government should accordingly publish an annual status report on these factors in connection with the publishing of the finance act with a view to increasing awareness of and providing an incentive for positive development.

3.2 The results from the annual status report can be used to initiate targeted information campaigns with positive messages as a way to change consumer ideals.

3.3 Consumers need to have the tools to be able to see where they can reduce their carbon footprint.

3.4 Provide discounts for appropriate consumer behaviour, similar to the low electricity fees consumer benefit from when using electricity at night.

4. Climate declaration

4.1 Establish a joint climate declaration with associated labelling (starting nationally and expanding to the EU/global level) which – just as the nutrition labelling indicates nutritional content – indicates how much a given product impacts the environment and climate. For example, this could be in relation to how much CO_2 was emitted in connection with the production of t-shirts from Portugal or China, minced meat from Denmark or Poland or cucumbers from Spain.

4.2 This declaration should be followed up with an awareness-raising and information campaign targeting consumers, e.g. in the form of raising awareness among young people in schools, which could lead to behavioural changes.

Recommendations on funding and levies

5. Long-term investments from state and pension companies

5.1 The Citizens' Assembly believes that the Danish state and pension companies should take responsibility for investments that are necessary yet not driven by market forces. The state/public sector should invest in commercial initiatives as well as provide support for new climate solutions.

5.2 The state's investments should not be limited to the proceeds of a carbon tax, but the proceeds of such a tax should be included in the investments.

5.3 The state's investments should focus on areas that offer considerable potential for the climate transition, such as transport and the development of solutions for the agricultural sector, which are two areas where major progress can be achieved by developing and implementing new solutions. This should not be seen as being in conflict with also supporting/investing in solutions with commercial prospects and which will make Denmark wealthier, e.g. through exporting the solutions; one should not exclude the other.

5.4 The Citizens' Assembly recommends that pension companies should invest in the green transition. The should have a clear target for how large a share of their funds should be deployed towards green investments.

5.5 Pension companies should be allowed to make higher-risk investments when it comes to green investments. The risk level requirements for that type of investments should be reassessed and perhaps eased.

6. Carbon tax, social balance and citizen participation

6.1 The Citizens' Assembly strongly recommends the introduction of a carbon tax at the national level as soon as possible with a view to reaching our climate goals for 2030 and 2050. The carbon tax system should be primarily based on taxes levied at the production stage at the source of the emissions.

6.2 The Citizens' Assembly recommends that the Danish Parliament works to ensure social balance in the development and implementation of a carbon tax. It should be an objective to ensure that the most disadvantaged in society will not end up having to pay more in taxes than they already do. Accordingly, the new taxes must be counterbalanced by reductions or eliminations of present costs that do not benefit the green transition.

6.3 The Citizens' Assembly recommends that the Danish Parliament ensures effective communication with a 'green thread' vis-á-vis citizens and companies in the development and implementation of a

carbon tax. We recommend that the Government ensures citizen participation, co-responsibility and an ongoing debate so that citizens of every strata in society are included in the carbon tax debate.

6.4 The Danish Parliament should inform citizens about what is needed to achieve the climate goals, why it works and who should do it. Communication, education and a pedagogical approach and explanation is important to ensure popular support. The effect that a carbon tax will have on the green transition in relation to private individuals and companies should be clarified.

6.5 If the green transition is to succeed, broad popular support is crucial. Civic engagement should be facilitated to cover all of Denmark and organised in such a way that it creates an opportunity for ongoing dialogue between experts, politicians and citizens.

7. Carbon tax: Contribution to a green tax reform

7.1 We strongly recommend introducing a tax on the emission of greenhouse gases – a so-called carbon tax. This should be done through the development and implementation of a carbon tax system (green tax reform) that includes long-term considerations for how we can achieve Denmark's climate goals. At the same time, this long-term focus should ensure that the tax system is straightforward to citizens and companies in Denmark.

7.2 The Citizens' Assembly believes that in order to ensure the success of a carbon tax system, the current tax system must first be analysed to understand the basis for a carbon tax.

7.3 The Citizens' Assembly believes that the carbon tax system should mainly be based on taxes levied at the production stage/source of emissions.

7.4 It is important that "black energy" is taxed rather than green energy.

7.5 A lower-limit allowance for emissions should be reviewed. We would like to see a lower-limit allowance to be set as low as possible so that companies remain motivated to restructure their production processes while not being so low that we risk carbon leakage.

7.6 The Citizens' Assembly recommends incorporating the possibility of a reduction in the carbon tax for companies investing in their own green transition.

7.7 There should be a focus on the fact that all companies will have to undergo a transition period, allowing each company time to ensure a long-term sustainable transition.

7.8 The complexity of individual industries and the timeframe for transition must be taken into account.

7.9 Efforts should be made to improve opportunities for (low-interest) loans for companies investing in climate improvements to their production or facilities.

7.10 Overall, consumption taxes should be kept to the same level as now and equalised between consumption/product groups (example: make hydrogen and electric cars more affordable and make diesel and petrol cars correspondingly more expensive).

7.11 Efforts should be made to improve opportunities for (low-interest) loans for citizens investing in climate improvements, e.g. to their homes.

7.12 Instead of levying taxes on the consumption stage (where unsustainable products are consumed/purchased), the Government should increasingly focus on awareness-raising and nudging to change consumer behaviour that has a negative impact on the climate.

8. Taxes on carbon-intensive industry

8.1 As far as possible, a universal tax should be introduced, albeit with differentiation between industries as needed.

8.2 The Citizens' Assembly recommends introducing an incentive in the form of a CO2e-reduction incentive that repays a portion of a company's tax liability if they succeed in reducing their CO2e emissions.

Recommendations on agriculture, land and resources

9. Bioeconomic solutions

9.1 Denmark should be a pioneering country in relation to biomass recycling, and the Government should accordingly fund research aimed at promoting biomass production and utilisation. Additionally, the Government should create a framework that allows companies to enter into partnerships with research institutions to a greater extent than is the case today.

9.2 Denmark should avoid importing biomass and instead use the biomass we are able to produce domestically. Politicians should therefore find a solution as soon as possible to how we can avoid importing biomass.

9.3 Residual material from agricultural production, households and industry should circulate in the bioeconomy. Legislation should be drafted for businesses and agriculture which regulates and monitors the use of residual material/biomass.

10. Bioplastics action plan

10.1 The Government should draft a national action plan for phasing out the use of fossil-based plastics in favour of adopting bio-based plastics or other materials.

10.2 The Government should accelerate efforts on developing incentive structures that make it attractive to utilise plastics based on biomass over plastics based on fossil resources, such as through taxes. Alternatively, the Government could consider banning or limiting the use of plastics made from fossil resources.

10.3 The industry/manufacturers should be held responsible for their products and subjected to clearer labelling requirements.

10.4 Companies should be subjected to taxes and responsibility for production and recycling.

11. Standardisation of waste sorting

11.1There should be a strong collaboration across municipalities and the Danish state on waste sorting.

11.2 The Government should set uniform standards for municipalities and companies, including for packaging. Municipalities should develop better waste sorting infrastructure (e.g. incineration plants or waste/recycling stations) that makes waste sorting simpler for the individual citizen.

11.3 Municipalities should provide more information to citizens with a view to changing their waste sorting habits. Citizens should regularly receive information about the impact of our waste sorting.

12. Agricultural land

12.1 The "harmony rules" should be amended to avoid standing in the way of designating land for other uses such as nature simply because the farmer needs to be able to document having sufficient land for their livestock. It should be possible to deliver liquid manure to a biogas plant immediately, which would also result in a reduction of methane emissions from liquid manure tanks. The number of livestock could thereby be decoupled from access to land, allowing livestock to be produced in areas where it makes the most sense to do so.

12.2 A more aggressive – possibly compulsory – model for rewetting peat soils should be implemented, both in terms of the speed of rewetting and total land area; ideally up to the 170,000 hectares recommended by the Danish Council on Climate Change. Experts have agreed on the necessity of such action for years, without any real progress being made.

12.3 It should be examined what peat soils can be used for after being rewetted, such as for free-range grazing animals, renewable energy facilities, energy forestry, free nature, etc. This should be included in the assessment on whether the land should be bought from the farmer or continue to be used for some form of agricultural production.

12.4 A large part of the land currently used to produce animal feed should be converted to produce plant-based foods for people or converted to clover grass, e.g. for the production of "grassmilk".

12.5 The Citizens' Assembly also recommends the institution of measures to reduce the import of animal feed such as soybeans to avoid carbon leakage. One potential solution could be via a carbon levy on animal feed that does not stem from CO2e-neutral production.

12.6 The demand for plant-based foods should be strengthened, e.g. through incentive schemes or taxes on animal-based products. This would reduce meat consumption in Denmark, which would in turn have a beneficial impact on our national greenhouse gas emissions.

12.7 Per hectare subsidies should be converted from pure land subsidies to subsidies for efficient (and climate-friendly) production.

12.8 Research on efficient and sustainable forms of production that can also be adopted in other countries should receive further support with a view to increasing sustainable food production.

13. National strategy for land use

13.1 Prepare a national strategy for land use.

13.2 The strategy should establish clear goals for how Danish land should, in percentage terms, be used in the future with a view to meeting the needs for more nature, woodland, area for extracting renewable energy, biomass, etc.

13.3 This strategy should have clear ambitions for a positive change in land use in Denmark year by year, and if there is to be any kind of hockey stick effect in this regard, the efforts should be planned sooner rather than later.

13.4 The strategy should support a goal to increase the overall amount of land we have at our disposal by using land for multiple purposes at once (e.g. through vertical agriculture, using land both for grazing and green energy, wind turbines in intensively cultivated fields or using rooftops for gardens and solar farms).

13.5 This strategy should ensure that biodiversity is supported to the greatest extent possible in all measures, and the impact of initiatives should be assessed similarly to an EIA.

13.6 The implementation of the strategy should be executed locally, where decision-makers have the greatest insight into how to manage local areas and to ensure local backing and ownership of the strategy.

13.7 Introduce an incentive scheme for land use that makes it attractive to use land in accordance with the strategy.

13.8 The incentive scheme should be based on subsidies or tax exemptions or linked to permits for the use of land for other purposes such as wind turbines or solar panels.

13.9 It should be made attractive to use rooftops for solar panels rather than using agricultural land for the same purpose.

14. Agriculture with a smaller carbon footprint

14.1 Denmark should reduce its meat production.

14.2 Make use of the new dietary recommendations to minimise meat consumption in Denmark.

14.3 Offer climate consultants/expertise to farmers (both nationally and abroad) to ensure they receive the necessary knowledge to make an effective transition to more climate-friendly food production.

14.4 The state must provide support and research funding to enable agricultural intensification (new types of crops, fertilizers and feed).

14.5 Introduce an 'intelligent' meat tax, i.e. a tax on the production stage so that it becomes more expensive for agricultural enterprises that are not as climate-friendly.

Recommendations on transport

15. Transition to electric transport

15.1 Both reductions and increases in taxes and levies should be viewed in relation how much a car pollutes. That is, cars that pollute more should 'pay' for cars that pollute less until the logistic (S-) curve breaks and the market is sufficiently saturated with electric cars. For example, this could be implemented through a form of sunset clause for exemption of levies on electric cars, so that petrol/diesel-fuelled cars remain expensive while electric vehicles gradually end up contributing taxes and levies to the Treasury in the same way as normal cars do today.

15.2 Similarly, fixed parking fees for private citizens as well as businesses could be generally raised on cars that pollute, as is currently the case in cities such as Copenhagen.

15.3 However, the design of these taxes and levies should avoid creating distortions in relation to being able to purchase and use electric cars; electric cars should be affordable for every income strata, even though people with higher incomes use cars to a greater extent.

15.4 All petrol/diesel-fuelled distribution transport within large cities should be taxed by environmental labelling by 2030 in relation to their degree of pollution.

15.5 Electric cars could be exempted from such taxation. Electric cars could be exempted from such taxation. For example, a form of CO2 labelling should be introduced (akin to the energy labelling we have today) to help consumers make an informed choice. Such an initiative would not even have to be restricted to cars. The cradle- to-grave perspective as well as energy consumption in terms of load on the electricity grid are also examples of factors that labelling schemes could be developed for.

15.6 An increased scrapping premium for petrol/diesel cars should be granted up to 2030, the idea being once again to make the incentive to switch to an electric car even more favourable.

15.7 Charging infrastructure should be expanded in such a way as to ensure an even distribution of accessibility, even in big cities.

15.8 Requirements should be placed on private and public sector workplaces to provide a number of charging stations in proportion to their number of employees.

15.9 Requirements should also be placed on electric charging station providers to eliminate payment models that require customers to have one subscription per provider (and their associated stations), making the choice of where to recharge an electric vehicle as free as it is today with petrol/diesel cars and filling stations.

15.10 Charging station providers should also be required to allow for every type of plug to be used at every charging station.

15.11 All public transport, the public sector's use of vehicles and taxis should be electrified no later than 2030.

15.12 The Government should launch a public information campaign that addresses all aspects of people's scepticism and uncertainties about switching to electric cars.

15.13 Requirements must be established for transparency in the production as well as recycling of electric cars, including appropriate production of batteries. Without this transparency, makers of electric cars should be prohibited from selling their cars in Denmark.

15.14 In addition, the Government should provide significant funding towards research on the recycling of materials used in electric cars.

16. Flexible public transport as an appealing choice

16.1 Public transport should be a natural choice due to being cheaper, superior and the most environmentally friendly option. The Citizens' Assembly's general recommendations are accordingly that public transport should be revised with a view to making it more flexible. We need more solutions with lower user fees without compromising on flexibility.

16.2 The Citizens' Assembly believes that public transport should be optimised and made more appealing and easily available, both outside and inside cities; e.g. with free parking outside the cities and free collective transport into cities from such parking areas (park and ride).

16.3 Outside major cities, bus routes need to be more direct, with shorter transport times and coordinated with each other.

16.4 Minibuses should be employed in appropriate areas instead of large, half-empty buses.

16.5 Flextrafik should be marketed better and to everyone in areas that lack well-functioning public transport.

16.6 The price of public transport – if not free of charge – should be based on distance and not regional borders.

16.7 One could also consider testing driverless electric flex-buses.

16.8 Public transport should run on electricity or hydrogen, as public transport should serve as a precedent for how electrification should work in practice.

16.9 Efforts to educate the public on green transport options should take place at the national, regional and municipal level.

16.10 An app that provides a comprehensive overview of carpooling options (such as GoMore), public transport and flex-traffic should be developed. The app should be available on mobile phones.

17. Climate-friendly freight transport (e.g. PtX)

17.1 Political initiatives aimed at supporting green development in the area of transport are needed. First and foremost, the Government should provide public sector funding for the development and research of new technologies that appear to have promise today, i.e. biofuel and PtX (e-fuels). There should also be a more long-term plan with public funding designated for research and development of hitherto undiscovered technologies that show long-term potential.

17.2 There should be a financial incentive to use biofuel, electricity or PtX. This would allow for part of the lorry transport to transition over to trains, electric lorries or more climate-friendly methods. One possibility could be creating a system where a fee is charged depending on how much CO2 is emitted in connection with the long-distance transport of goods. Another possibility could be a financial incentive for freight and logistics companies to use biofuel and PtX (e-fuels), thereby creating an incentive to transition to greener solutions and ensuring that the risks are not solely borne by the freight and logistics companies.

17.3 Public procurement by the state, regions and municipalities should also serve as pioneering role models in this area. We therefore recommend that public authorities should ensure that their procurements are transported in a climate-friendly manner.

17.4 We recommend taking initiatives to develop railway transport with a view to making it competitive, thereby moving heavy transport off the roads and onto the railways in the long term. This would ensure that long-distance transport with lorries that cannot be electrified is minimised to the greatest possible extent, as the stretch from the railway station and the final delivery point will be a shorter distance where smaller and electrified lorries could presumably be used.

17.5 We recommend establishing unloading hubs outside the cities so that goods can be transported into cities in a more climate-friendly manner, e.g. via electric vans.

Recommendations on technical facilities in/as part of the landscape

18. Renewable energy co-ownership

18.1 There should be more opportunities for citizens to buy stakes in offshore wind farms and other large facilities that can supplement the opportunity to purchase shares in large energy companies (independently or via their pension contributions). For example, citizens could be given the opportunity to acquire a stake in the investments. This would also be a way of getting citizens involved in the planning of such projects.

18.2 Municipalities should also be able to purchase a stake in renewable energy facilities, including municipalities that do not have the land to erect wind turbines locally. In general, there should be more possibilities for citizens, municipalities, associations, etc. to invest in offshore wind farms and other facilities instead of merely having wind turbines in their local area.

18.3 More wind projects akin to the ones in Hvide Sande should be prioritised, where the wind turbines by the harbour provided opportunities to develop the harbour and local area. It should also be made mandatory for the development associated with such projects to be sustainable.

18.4 As a way of mitigating the loss of biodiversity and nature that renewable energy facilities result in, profits from state-owned facilities in municipalities should be spent on nature areas that benefit biodiversity and the local citizens' outdoor recreational lives. The type of nature areas should be decided at the local level.

18.5 The Parliament/Government should investigate whether any models can be developed that would allow the Danish state to invest in renewable energy in a way that the profits end up in the public purse (assuming they are not passed on to the municipalities) rather than with private energy companies.

18.6 Instead of a process where the citizens' approval is sought at the final stage of planning large facilities and offering compensation to those living nearby, such projects should start by giving the local citizens influence and co-ownership of the projects. Compensation should be awarded in the form of co-ownership.

18.7 The landowners' association, cooperative association and/or local community should have the opportunity to use their financial resources to purchase a stake in major renewable energy projects. The returns should be used for green areas with a view to encouraging biodiversity or outdoor recreational activities.

18.8 Support initiatives for the local establishment of renewable energy so that a portion of the operational profits remain in the local area, ensuring the citizens have a more positive view of such projects when they are not large, unfamiliar and 'outside' businesses erecting wind turbines and funneling the profits somewhere outside the local communities.

19. Placement of technical facilities in/as part of the landscape

19.1 An overall national plan for how to roll out the establishment of renewable energy facilities so that the energy is produced close to where it will be consumed.

19.2 Legislation in the area of solar thermal collectors should be amended to avoid creating unnecessary expansions of the electricity grid and wasted power. In addition, subsidies should not be granted to solar thermal collectors when it does not make socioeconomic sense to do so (e.g. in the case of small solar thermal collectors on private homes that produce energy when people are not home versus factories that consume the power during daytime hours for production). There are also examples of solar panels being installed on buildings and existing industrial building roofs.

19.3 The Citizens' Assembly recommends that consideration be given to locating green facilities along existing infrastructure such as motorways, railways, etc. It would be helpful to determine the location of such facilities in consultation with local citizens' groups based on where they believe the facility would create the least possible nuisances for the local community. A real-life example of such an approach is Hvide Sande, with wind turbines close to the city and placed on/by the harbour.

19.4 The Danish Parliament should set targets for municipalities regarding their contribution to the production of renewable energy, ideally with an option to 'trade' such an obligation between municipalities. The Danish regions should have a role in ensuring that each region also supplies the necessary amount of renewable energy.

19.5 Municipalities should be obligated and incentivised to prepare a roadmap/action plan for achieving energy targets – with sub-targets. Municipalities should be given the flexibility to determine on their own how to achieve their sub-targets. The action plan should be developed jointly with local citizens. Local co-ownership should be a requirement.

19.6 The Danish state should pass legislation prohibiting pension companies from investing in fossil fuels after a certain year. This would make citizens feel that they will benefit from renewable energy and result in less local resistance to – and better placement of – renewable energy facilities.

19.7 A green central register: In order to make it easier to place such renewable energy facilities, experts should develop an interactive online tool that would allow everyone to check how sustainable (socioeconomically and environmentally) it would be to place a new renewable energy facility in a given location. I.e. the tool should display Denmark's land areas as well as the electricity grid. Additionally, it should be able to calculate what the extra cost would be to society if one were to expand the electricity grid in connection with the establishment of a new facility somewhere, versus how much the power generated benefits the location the user has selected on the map of Denmark. This would allow municipalities, citizens, companies, investors, etc., to see whether developing renewable energy facilities is more sustainable (environmentally and socioeconomically) in one location versus another, or whether, for instance, it would make more sense to establish a single large facility or two smaller ones in two different locations.

2.Appendix – The Citizens' Assembly Concept

This concept note outlines the overall concept of the Citizens' Assembly on climate issues. It includes a description of the purpose and organisation of the Citizens' Assembly, methodological considerations, the first and second phase of Citizens' Assembly gatherings as well as information on follow-ups and the public availability of material, etc. The concept is based on a report prepared by the Danish Board of Technology as well as the OECD's guiding principles for citizen participation.

Purpose and organisation

The Citizens' Assembly will consist of 99 citizens selected on the basis of some simple criteria such as age, gender, geography, education and income. Their task will be to debate citizen-level dilemmas associated with the green transition as well as provide input and recommendations to the drafting of the climate action plans. This process will take place via a number of Citizens' Assembly gatherings, which will host relevant experts who can educate them on a variety of issues prior to their discussion, where they reach a final conclusion by vote. Thereafter, the Citizens' Assembly presents its conclusions and recommendations to the Minister for Climate, Energy and Utilities (hereinafter referred to as the minister) as well as the Danish Parliament's Climate, Energy and Utilities Committee (CEU Committee).

Credibility-building guarantors

The Danish Ministry of Climate, Energy and Utilities (MCEU) is the coordinating secretariat for the Citizens' Assembly. With a view to ensuring integrity and transparency in accordance with the OECD's principles, three guarantors will be established:

1. An expert panel consisting of 4-6 experts who can ensure the quality and balance of expertise on themes, information material and questions to the Citizens' Assembly.

2. An expert on citizens' assemblies and citizen participation who can provide guidance to ensure that each step of the method is carried out to a high standard in detail.

3. An external overall facilitator for the Citizens' Assembly's gatherings.

Method for selecting and recruiting citizens

Random representative sample

Statistics Denmark will carry out the selection of citizens with the aim of achieving approximate representativeness between the Citizens' Assembly's members and the population of Denmark as a whole. The MCEU is currently in dialogue with Statistics Denmark regarding the exact method and process for recruiting citizens. The method will ensure autonomy and approximate representativeness.

Dropout

Statistics Denmark will also be asked to prepare a group of alternates that should be as representative as possible and which can be contacted in the event of any dropouts.

Time period

The members of the Citizens' Assembly will be the same people in the first and second phase outlined in this concept note.

Subjects and themes

Subjects and themes that the Citizens' Assembly will address in the first phase should be ones that directly impact ordinary citizens ("citizen-level"). In accordance with the OECD's principles, a subject should be chosen that is relevant to the general population, after which the specific questions to the citizens on the subject should be formulated clearly and distinctly in neutral language. Dialogue with the OECD as well as experiences from other countries shows that this is an important component in enabling a debate that results in concrete recommendations from the citizens.

The framework for the first gathering will be the guiding principles of the Danish Climate Act. These entail that Denmark's climate efforts should be conducted with consideration for sound public finances, cost-effectiveness, employment, sustainable business development and Danish competitiveness as well as ensuring that Denmark is a pioneering country in the international fight against climate change so that we can inspire and influence the rest of the world. Denmark has not only a historical, but also a moral responsibility to take the lead.

Material will be prepared for the first gathering. At the same time, a list of other themes that directly impact ordinary citizens will be created for the Citizens' Assembly to prioritise at the first gathering. The themes that the Citizens' Assembly chooses to give the highest priority will form the basis for future gatherings.

First phase of the Citizens' Assembly

2020 will be organised so that the Citizens' Assembly will debate concrete dilemmas over the course of three gatherings.

The first phase is outlined in chronological order below:

- A main theme will be selected along with a number of other themes believed to directly impact ordinary citizens and which are relevant to the drafting of the climate action plans as well as other current political agendas. This will ensure that the Citizens' Assembly's conclusions and recommendations are applicable to concrete climate policy agendas.

- Information material will be prepared which inform the members about challenges and potential solutions in relation to the subject. The material will be prepared in collaboration with the expert panel.

- A number of tasks/questions will be formulated for the citizens in relation to the main subject and themes.

- This information material and tasks will be sent to the Citizens' Assembly.
- The first gathering of the Citizens' Assembly will be held over a weekend. In addition to completing/formulating answers to the tasks/questions, the Citizens' Assembly will be tasked with prioritising the themes for further consideration at the next gathering.
- This will be followed by a status report to the CEU Committee and the minister.
- Supplementary information material on the highest priority themes from the first gathering will be prepared in collaboration with the expert panel, after which it will be sent to the Citizens' Assembly.
- The second gathering of the Citizens' Assembly will be held over a weekend, where a number of the prioritised themes from the first gathering will be considered.
- The result of the second gathering will be communicated to the minister and CEU Committee a few days after during a three-hour seminar at Christiansborg. 9 members selected from the Citizens' Assembly will be present at the seminar to present the results for discussion.
- Supplementary information material on the remaining prioritised themes will be prepared in collaboration with the expert panel, after which it will be sent to the Citizens' Assembly.
- The third gathering of the Citizens' Assembly will be held over a weekend to address the subjects that were prioritised at the first gathering but which there was not time to consider at the second gathering.
- A few days after the meeting, a three-hour seminar (plus time for networking) at Christiansborg will be held, attended by the minister, CEU Committee and other relevant societal stakeholders. All 99 members of the Citizens' Assembly will be invited to present their results for discussion.

Second phase of the Citizens' Assembly

The second phase of the Citizens' Assembly consists of two weekend meetings in 2021. The contents will be determined on the basis of experiences with the meetings in 2020.

Follow-up

The members will be asked to anonymously evaluate the gatherings. An additional follow-up mechanism has been planned in the form of the seminars with a view to ensuring that the Citizens' Assembly's results are listened to by the politicians. The further follow-up will depend on the specific recommendations submitted by the Citizens' Assembly. There are no plans for subsequent follow-ups in the form of the comply or explain principle, but the minister can provide written feedback on specific measures on which the Citizens' Assembly has provided its recommendations and positions. In addition, the Danish Parliament's CEU Committee intends to discuss the Citizens' Assembly's recommendations and allow their discussion to be reflected in a report from the Committee.

Compensation

It is important for the Citizens' Assembly to be both representative and inclusive. In connection with the OECD's recommendations, members of the Citizens' Assembly will accordingly be compensated for their participation in the gatherings.

Transport costs

The MCEU will cover up to DKK 700 in transport costs per gathering for each member. Members will be refunded their exact expenses on transport upon providing their receipts to the MCEU. Compensation will be awarded after each gathering has been held. Citizens are encouraged to use public transport, although some will not have that possibility due to geographical or other circumstances. Transport in a member's own car is accordingly covered according to current rates issued by the Employee and Competency Agency (Medarbejder og Kompetence Styrelsen), which is DKK 1.96 per km. Transport in one's own car is also subject to the limit of DKK 700 per gathering. Flights and taxi rides are not covered.

Remuneration for participation

Each member of the Citizens' Assembly receives DKK 1,000 in remuneration for participating in the first Citizens' Assembly gathering. It is expected that there will be three Citizens' Assembly gatherings in 2020 and an additional two gatherings in 2021. The total remuneration in 2020 is accordingly DKK 3,000 per member and DKK 2,000 per member in 2021.

Remuneration is only granted to members who attend the Citizens' Assembly gatherings. If, for instance, a member only attends one or two gatherings, they would only be eligible to receive DKK 1,000 or 2,000, respectively.

Payment of the remuneration for 2020 gatherings is disbursed as a lump sum after the third Citizens' Assembly gathering.

Other expenses

The MCEU also covers expenses for meals and hotel accommodation for the 99 members of the Citizens' Assembly. The MCEU is responsible for ordering meals and accommodation. Citizens will therefore not be required to submit receipts for meals and hotel accommodation.

Citizens' anonymity

Respect for the citizens' privacy and desire for anonymity is a key principle of the OECD's recommendations for citizen inclusion. The citizens' names will therefore not appear in external material published on the Citizens' Assembly. The members of the assembly are free to publicise their membership of the Citizens' Assembly, but are not actively encouraged to do so.

Public accessibility

Public accessibility of material and insight into the gatherings is a key element to ensuring transparency. Among other things, the OECD's principles prescribe that material and a visual insight into the Citizens' Assembly's gatherings be made publicly accessible. The Citizens' Assembly's presentation of results and recommendations to the minister and CEU Committee will be live-streamed similarly to how ministerial consultations are live-streamed today. However, the gatherings themselves should be held anonymously in order to secure the citizens' anonymity and ensure that their discussions are not influenced by other actors. The information material as well as the questions from gatherings are also published after each event.

Updated 29 June 2020

3.Appendix – Code of Conduct for the Citizens' Assembly

Code of Conduct for the Citizens' Assembly

Transparency

The Citizens' Assembly is fully transparent. All presentations are recorded, and material used at the gatherings will be freely available once a gathering has concluded.

Respect

It is important that the members of the Citizens' Assembly can freely and safely contribute and express their views without fear of personal attacks. The discussions during the Citizens' Assembly's gatherings are not recorded, and no individual members will be quoted without their prior consent.

Equality

All the Citizens' Assembly's members have equal access to make their voice heard and speak if they wish.

Justice

It is important that the full spectrum of views is heard on each subject and that orientation material provided to the members of the Citizens' Assembly is of the highest quality.

Speakers

The Citizens' Assembly must be presented with several aspects of the same issue. When choosing speakers, the counter-expert principle applies.

Subjects

A list will be prepared on subjects that the Citizens' Assembly should prioritise at the first gathering. The subjects that the Citizens' Assembly chooses to give the highest priority will form the basis for future gatherings.

Voting

Voting, if necessary, is done by secret ballot among the members present. Votes are monitored by the main facilitators and at least two members of the Citizens' Assembly.

Publication of recommendations

The Citizens' Assembly's recommendations will be made public.

4.Appendix – The Citizens' Assembly's expert panel

The concept for the Citizens' Assembly states that it would be appropriate to establish three guarantors to ensure credibility and transparency in accordance with the OECD's guiding principles on citizen participation.

1. An expert panel consisting of 4-6 experts who can ensure the quality and balance of expertise on themes, information material and questions to the Citizens' Assembly

2. An expert on citizens' assemblies and citizen participation who can provide guidance to ensure that each step of the method is carried out to a high standard in detail

3. An external overall facilitator for the Citizens' Assembly's gatherings

The concept and programme for the Citizens' Assembly was developed in collaboration with the MCEU and the Danish Board of Technology, which is also responsible for planning and facilitating the meetings in this second gathering of the Citizens' Assembly.

The expert panel for the Citizens' Assembly on Climate Issues and the expert on citizen participation were jointly appointed by the Ministry of Climate, Energy and Utilities and the Danish Board of Technology with the aim of having both broad expertise and different perspectives represented on the panel.

The panel's primary task has been to help the Danish Board of Technology to identify suitable presenters for the Citizens' Assembly's meetings. The panel did not formulate questions or produce information material since the information material from the first gathering was used and since it was the Citizens' Assembly that defined all the subjects for the second gathering.

The expert panel

Lars Gårn Hansen
Professor and Environmental Economist at the Department of Food and Resource Economics, University of Copenhagen

Søren Hermansen
Director, Samsø Energy Academy

Ninette Pilegaard
Deputy Head of Division, Head of Section, Department of Technology, Management and Economics, Technical University of Denmark

Kenneth Karlsson
Co-founder and Partner Energy Modelling Lab

Rikke Lundsgaard
Agricultural Policy Advisor at Danmarks Naturfredningsforening

Camilla Haustrup Hermansen
Deputy CEO, Plus Pack A/S

Expert in citizen participation:

Edward Andersson
Edward Andersson Participation and Democracy Consultant, Malmö, Sweden

5.Appendix – Selection of The Citizens' Assembly

DANMARKS STATISTIK

17 January 2022 NGE
DST Survey

The Citizens' Assembly on Climate Issues: Data collection and selection

For documentation

In July and August 2021, a cross section of the Danish population was contact with a view to identifying individuals who would be interested in participating in the Citizens' Assembly on Climate Issues under the auspices of the Danish Ministry of Climate, Energy and Utilities (MCEU). The Citizens' Assembly is a working group of 99 ordinary Danes tasked with discussing climate-related issues over the course of a number of meetings planned for autumn 2021.

Two processes were involved in the selection of members for the Citizens' Assembly. 1) An extract of a simple random sample of 10,000 people from the current adult population of Denmark, all of which were invited to express interest in participating in the Citizens' Assembly. 2) The selection process itself, where we took a stratified sample of 99 persons and 99 alternates (from those who had expressed interest) who reflect the Danish population as representatively as possible.

In a questionnaire survey among the Danish population, there is a skewed dropout rate when examining a long list of parameters. Older persons are more likely to respond than younger generations, and women are more likely to respond than men. Additionally, the level of education among the respondents often has a positive effect on the response rate. The selected approach of extracting a stratified sample among those who signed up is to ensure that the distribution among the members of the Citizens' Assembly is as representative as possible of the general Danish population.

The overall approach to the selection of the Citizens' Assembly is therefore largely unchanged from that of the approach for the 2020 Citizens' Assembly. There are some differences between the two approaches worth mentioning. The 2021 Citizens' Assembly also includes people who were part of the 2020 Citizens' Assembly and who agreed to come back to the new Assembly. This was done to ensure better stability and recognition among the participants of the Citizens' Assembly. Additionally, the sample was doubled and people were also contacted by telephone as a part of the recruitment. Both of these measures were taken to ensure a more broad selection framework for the 2021 Citizens' Assembly.

Data collection

SRS from the Civil Registration System

10,015 persons with an address in Denmark were selected from the Danish Civil Registration System, i.e. the current population in Denmark. The selection was performed as a simple random sample (SRS).

When drawing a sample of so many people, the outcome in 99 percent of cases will be a sample that adheres to the proportions of the selected population on a large number of parameters, including gender, age, region, income group, education group, ethnic origin and family type. We call this a universally representative sample, as our samples fit a wide range of background variables and not solely gender, age and geography, which is a somewhat narrow albeit oft-used measure of representativeness.

The questionnaire

A brief online questionnaire was set up for the respondents providing a brief explanation on the Citizens' Assembly and asking whether they wished to take part in it. Those who answered "Yes" were asked to submit their contact information (name, email address and telephone number) and consent to their contact information being forwarded to the MCEU.

If the respondent chose "No", this answer was followed up by a further question about why they did not want to participate. The question for those who chose "No" was included to improve understanding about people who do not want to participate in order to better meet the needs of large portion of a sample in any future recruitment.

About the data collection process

In the data collection process, the persons in the sample were contacted through enquiries primarily sent as Digital Post to their e-Boks (a secure e-mail service in Denmark). In cases where the respondent was not registered to receive Digital Post, we instead sent a letter in the mail. A total of three enquiries were sent to the sample group. In cases were it was possible to find a telephone number, telephone contact was used as a means for inviting people to participate.

The sample enquiries included a direct link to the registration for the Citizens' Assembly, and there was also a link for people who did not want to participate.

1st enquiry

The first enquiry with an invitation to the survey was sent on 27 July 2021. The invitation was sent to 10,015 persons. 9,303 received a letter by Digital Post on 27 July, while 712 people who were not registered for Digital Post instead received a letter in the mail on 29 July.1

1st reminder

On 2 August, a reminder was sent to 8,693 persons who had not responded to the invitation. 7,981 were sent by Digital Post and 712 letters by mail.

2nd reminder

1 The procedure for sending Digital Post means that there will be some overlap of people who receive Digital Post and regular mail. The number of Digital Post and regular letters do not add up to the total number of the sample.

On 17 August, the second reminder was sent to 2,427 persons for whom it was not possible to find a telephone number. On 20 August, 6,439 reminders were sent by Digital Post to those for whom a telephone number was found.

Telephone contact

Between 7-30 August, people were telephoned with an invitation to fill out the questionnaire.

Data collection results

At the time of the selection of the Citizens' Assembly, a total of 818 completed responses were received, of which 487 were positive, and 331 were negative.

Do you want to participate in the new Citizens' Assembly?

Yes	487
No	331
Total	818

In addition, 2,224 people clicked through the link for people who did not want to participate and explained that they did not want to take part.

Selection for the Citizens' Assembly

The 2021 Citizens' Assembly is composed of people from two sources: 1) Members of the 2020 Citizens' Assembly, and 2) persons who registered as part of the random sample of the Danish population for 2021 group.

Members of the 2020 Citizens' Assembly were contacted after the 2020 gatherings by MCEU and are those who responded positively to participating in the 2021 Citizens' Assembly. A list of these individuals was then sent to DST Survey, which matched them with their most recent address so that the returning group was included in the selection population with updated information on their region and age. A list of 40 people was sent to DST Survey. The list was compiled by MCEU, and DST Survey did not take part in the collection of responses from returning members.

The 2021 random sample yielded 481 positive responses.

From the beginning, the aspiration was for the Citizens' Assembly to reflect the current Danish population on as many parameters as possible, i.e. that the Citizens' Assembly should follow the same proportions as the current Danish population in terms of the distribution of gender, age, residence, ethnic origin, education, income and family type.

Among the responses we received, we observed some skewed proportions in relation to the population. As with the 2020 Citizens' Assembly, most of the responses came from the group of middle-aged persons. It also seems that income (disposable income) for the group of persons who answered "Yes" is higher than

for the rest of the sample. Some of those skewed proportions can be mitigated through selection with the help of a stratified sample.

For the selection of the 2020 Citizens' Assembly, it was clear that it would be a major challenge to form a Citizens' Assembly that fully represented the current population of Denmark across all the aforementioned parameters. The number of members in the Citizens' Assembly (N=99) alone makes the expectation that it is possible to extract a sample composed of the same proportions as the sample population highly improbable.

Following a number of analyses and test runs of various selection models, attempts to create stratification variables, etc., we determined that it was possible to get gender and region to match the population distributions but that it would be necessary to create a rough division of age: young, middle-aged and elderly.

It was not possible to include additional parameters in the stratification, e.g. family type and education, as that would result in disproportionality in terms of gender and region. The dataset was not able to support a more detailed distribution.

The strata for selection were accordingly gender * age group * region. Age was grouped into 3 groups. Thus, a total of 30 strata were created, from which a number of persons corresponding to the proportions in the population were selected.

The starting point for the selection of the Citizens' Assembly was first the selection of 40 returning members and then the remaining places were filled by persons from the 2021 random sample. The selection was made according to the 30 strata. After this, the 99 alternates were selected from the remainder using the same stratification.

6.Appendix – PROGRAMME

Programme for the weekend meeting of the Citizens' Assembly, 30-31 October 2021

Saturday, 30 October

9:30-10:00	Check-in, tea/coffee
10:00	Welcome and the programme for the weekend/Lars Klüver and Gy Larsen, the Danish Board of Technology Welcome by Dan Jørgensen, Minister for Climate, Energy and Utilities
10:30	What is a citizens' assembly? What is its role? What do we expect of ourselves? What happened in phase 1? What will happen in phase 2? Presentation Popcorn in 5 pots The tables will consider: What do we want to achieve in phase 2? Gather ideas together: Expectations and hopes for phase 2
12:15	Who are you?
12:30	Lunch
13:30	Organisation of the work Theme-based groups – how many, composition, planning Editorial groups – role, working form, reporting format, responsibilities Self-facilitation – rules for good group work, What if something goes wrong? Principle of drawing lots and voting Experience groups of new + former members Introduction to the IT systems we work with Role of the expert panel Role of the contact group – five members, one from MCEU and one from the Danish Board of Technology
14:30	Break and Who are you?

15:00 Mandate and influence of the Citizens' Assembly

Group work: What can the Citizens' Assembly do to improve its influence? Plenary debate

15:45 Break

16:15 Overall – what ***could*** phase 2 focus on (we will save ***should*** until tomorrow)?

What were the conclusions of the first phase of the Citizens' Assembly on Climate Change? What was not ready at that point?

Should a bridge be built between the first and second phases? Should completely different things be done?

Presentations, group debate, assembly

17:30 End of today's programme.

19:00 Dinner

Sunday, 31 October

9:00 Who are you?

Good morning, and what will we do today?

9:15 What could phase two focus on?

Continued group discussions and preparation of presentation

10:15 Break

10:30 What ***should*** phase two focus on?

The groups will present their proposals (exhibition) Exhibition visit

Group summaries and plenary debate 12:30 Lunch – experience groups get together

13:30 Choose three themes and potential sub-themes – split across groups

14:00 Specification of themes, sub-themes and the types of knowledge and presentation wanted Work in theme-based groups

15:00 Break

15:30 Group presentations

Additional ideas from other groups Summary and potential voting

16:45 Start of evaluation of the weekend 17:00 Thank you for today and get home safely

Programme for the evening meeting of the Citizens' Assembly on Climate Issues on the selected themes

3 November 2021

17:00	Skype check-in
18:00	Opening of the meeting. Presentation of the programme and of the purpose of the evening in the overall programme for the Citizens' Assembly
18:10	Presentation: The role of the Citizens' Assembly in the climate transition – consumption and behaviour. Rune Baastrup, Director of DeltagerDanmark. Q&A with Rune
18:30	Presentation: The economics of the climate transition. Lars Gårn Hansen, Environmental Economist and Professor of Environmental Economics, University of Copenhagen. Q&A with Lars
18:50	Break
19:00	Presentation: Climate-friendly cities and homes. Ellen Højgaard Jensen, Director of the Danish Town Planning Institute. Q&A with Ellen
19:20	Presentation: Robust, sustainable energy systems. Anders Winther Mortensen, Energy Analyst at Energinet.dk. Q&A with Anders
19:40	Break
19:50	The Citizens' Assembly works in editorial groups, what points will you remember or pass on to other groups?
20:45	Presentation about the methodology of writing the introduction to the report of the Citizens' Assembly. The Danish Board of Technology
20:55	Conclusion and opening of the meeting evaluation
21:00	Thank you for this evening – see you in a week, where the subjects is "Robust and sustainable energy systems"

Programme for the evening meeting of the Citizens' Assembly on Climate Issues

Energy supply. 10 November 2021

17:30	Skype check-in
18:00	Welcome and Programme
18:05-18:55	Presentation – 10-15 minutes
	1) Overview of new technologies – Marie Münster, Professor Energy System Analysis, Technical University of Denmark (15 minutes)
	2) Presentation of the different types of CCS – Carsten Møller Nielsen, Reservoir Engineer GEUS (10 minutes)
	3) Danish framework and strategies for research, innovation and business – René Flege Højmark, Chief Consultant, Danish Society of Engineers (10 minutes)
18:55	Break
19:05-19:50	Panel – 5 minute presentations each – followed by a debate and Q&A
	1) The role of energy savings in a robust, sustainable energy system – Bendt Bendtsen, President of Synergi
	2) New nuclear power in the future energy supply – Theis Palm, CEO Atomkraft Ja Tak
	3) The likelihood and significance of CCS, P2X, nuclear power – Brian Vad Matthiesen, Professor at Aalborg University
	4) How to best optimise the resilience, speed and economics in the energy supply transition – Kenneth Karlsson, Director Energy Modelling Lab
19:50	The Citizens' Assembly alone
	a) Decision on editorial group for the introductory chapter
	b) Information on how the meeting is evaluated in EngageSuite
	c) Start of group work – including ending the meeting yourselves at 21:00
20:00	Break and check-in for the groups
20:10	Group work begins
	Notes, problems, recommendations that you think the "Robust, sustainable energy supply" group should work on further
21:00	Groups end the meetings themselves (We will not return to plenary group)

Programme for the evening meeting of the Citizens' Assembly on Climate Issues

Housing and Urban Development. 17 November 2021

17:30	Skype check-in Link: https://meet.statens-it.dk/kefm.dk/emand/007GMN8R
18:00	Welcome and programme overview
18:05-18:55	Presentation, 10 minutes each, plus questions – c. 50 minutes total:
	1. Transport and more climate-friendly mobility – Kristian Skovbakke Villadsen, Partner and Director, Gehl Architects (10 minutes)
	2. Housing and neighbourhoods in a climate perspective – Lau Raffnsøe, Technical Director, Green Building Council (10 minutes)
	3. The most climate-friendly types of housing/the climate footprint of major cities – Simon Kjær Hansen, Director, Copenhagen Center for Public Policy (10 minutes)
18:55	Break
19:05-19:50	Panel presentations, 5 minutes each, followed by a debate and Q&A. Around 45 minutes total:
	1. Cities of the future and municipal climate plans – Anna Esbjørn, Programme Director, CONCITO
	2. Climate perspective in ecological new builds and renovation – Lars Jørgensen, President, Landsforeningen Økologisk Byggeri
	3. Rural and urban – the geography of municipalities and the differences in their climate challenges – Mette Skovbjerg, Chief Consultant, Local Government Denmark
19:50	The Citizens' Assembly alone
	a) Brief reminder on how to evaluate in EngageSuite
	b) Start of group work – including ending the meeting yourselves at 21:00
20:00	Break and check-in for the groups 20:10 Group work begins
	Notes, problems, recommendations that the "Housing and urban development" group should work on further.
21:00	Groups end the meetings themselves (We will not return to plenary group)

Programme for the evening meeting of the Citizens' Assembly on Climate Issues

Consumption and Behaviour. 24 November 2021

17:30 Skype check-in

18:00 Intro and welcome

18:05 Presentation

1. Jens Friis Lund, University of Copenhagen – Growth or counter-growth and resource consumption

2. Jesper Jespersen, Roskilde University – Positive economic incentives beyond taxes and tariffs

3. Rune Buchdal Nielsen, Ministry of Environment of Denmark – The public sector as a driver of a sustainable transition

19:00 Panel debate

Consumption and behaviour – What can be achieved by informing/advising/educating citizens, and how can we best do this?

1. Rasmus Willig, Roskilde University – A climate-friendly life and the barriers to it!

2. Charlotte Thy, Bureau Veritas – Climate labelling and greenwashing

3.Jakob Wichmann, The Footprint Firm – Opportunities and incentives for the transition of the private sector

4. Mette Trier Damgaard, Aarhus University – The state and the public's potential to be nudged

20:00 The Citizens' Assembly working alone

Notes, problems, recommendations that the "Consumption and behaviour" group should work on further.

21:00 Groups end the meetings themselves (We will not return to plenary group)

PROGRAMME FOR THE WEEKEND MEETING OF THE CITIZENS' ASSEMBLY, 27-28 NOVEMBER 2021

Saturday 27 November 2021

9:00	Check-in and tea/coffee
9:30	Welcome, programme, tasks for the weekend
9:45	In the theme-based groups – Define the subjects for the groups (6-8/group)

- Editorial groups: What should we write about – 1-2 themes per editorial group
- Theme-based group: Feedback
- Editorial groups: Agreement on "points" in the "Assessment/problem" chapter
- Editorial groups: Brainstorm recommendations
- Each theme group chooses one to present and two to take notes on

12:00	Lunch
13:00	Plenary feedback

- Editorial groups selected 3-and-3
- Feedback on the theme "Robust, Sustainable Energy Supply"
- Feedback on the theme "Housing and Urban Development"
- Feedback on the theme "Behaviour and Consumption"

15:00	Break
15:30	Questions with experts – online
16:30	Editorial groups: Take a note of the changes you want to make in Assessment and Recommendations
17:00	Break before dinner
18:00	Dinner

Evening: Potential volunteer work with subject texts in Editorial groups

Sunday 28 November 2021

9:00 Good morning and the tasks for Sunday

9:15 In the theme-based groups – Write recommendations as a full text

- Editorial groups: Recommendations as full texts in all of your topics
- Theme-based groups: Gather all recommendations into a single document 10:30 Plenary: Temperature taking for the recommendations

12:00 Lunch

13:00 Theme-based groups: Full text of all subjects

- Editorial groups write
- Time-out in theme-based groups when the Editorial Group needs feedback

15:00 Break

15:30 Theme-based groups continue

- Last texts finalised
- Plan what to do with "unfinished" texts,

16:30 Plenary Assembly

- What is ready, what is not ready?
- The next 14 days: Editorial groups can hold online meetings where the texts are finalised
- The Danish Board of Technology fine-tunes the finalised texts 17:00 Thank you!! Get home safe. Packed lunch delivery

PROGRAMME FOR THE EVENING MEETING, 15 DECEMBER 2021

Voting (instructions for the meeting sent via email to the Citizens' Assembly)

Dear members of the Citizens' Assembly on Climate Issues

You have attached all of your work in the order we will use for the final report. So now you know what to use this weekend 😊.

This is the document you will need for 15/12, 18:00-22:00 (we'll try to plan an earlier finish), where you will vote on 1) each subject, 2) each individual recommendation· We recommend that you take notes in the document about how you intend to vote so

you aren't completely unprepared for what will be a rather hurried meeting on 15 December. It's a good idea to print the document out so you can easily follow your notes as the meeting goes on.

You will be split into four random groups at the meeting. Each group will follow exactly the same timetable, starting with topic 1 and ending with topic 21.

For each one, you will have to opportunity to vote in the following ways:

- Yes
- No, I disagree
- No, I do not think it is ready
- Don't know/Blank

The Danish Board of Technology will make sure everyone gets to speak. We will simply work from a list. For each vote, some of you will be asked to share your thoughts on the issue at hand so everyone gets different perspectives on the issue before you vote.

Votes are cast in EngageSuite unless you have notified us by tonight that you would like a paper vote· As described in a previous email, the ballot paper will be sent by post together with a response envelope· Voting in EngageSuite is similar to how we do evaluations.

We have systems in place to ensure that you only vote once regardless of whether you vote in EngageSuite or by paper. If you vote both ways, your EngageSuite vote will be the one that is counted.

Voting in EngageSuite will remain open until 16 December at midnight. So if you can't keep up with the meeting, or if you want to think about something a little but more

before you vote, then you can still vote on the next day· Voting opens once the meeting begins·

All that's left to say is happy reading and enjoy your deliberations. You are allowed to be proud on behalf of the Citizens' Assembly along the way.

The very best regards from the team at the Danish Board of Technology

7.Appendix – Meeting Attendance

Meeting attendance of the Citizens' Assembly

The members of the Citizens' Assembly have been registered for their attendance, both in-person and online. For in-person meetings, there was a check-in in the morning, and for online meetings, the list of participants was checked twice during the meeting.

85 of the 99 selected participants were present at the first weekend meeting. It was decided not to use alternates.

See also Appendix 5 describing the selection of the members of the Citizens' Assembly.

Date	Attendees	Type
30 October 2021	85	Physical weekend meeting, Copenhagen
31 October 2021	80	Physical weekend meeting, Copenhagen
3 November 2021	80	Virtual online meeting
10 November	81	Virtual online meeting
17 November	73	Virtual online meeting
24 November	78	Virtual online meeting
27 November	69	Physical weekend meeting, Aarhus
28 November	67	Physical weekend meeting, Aarhus
15 December	69 76 voting	Voting online meeting with voting*

*Members of the Citizens' Assembly also had the option of a postal vote or online vote up to 24 hours after the meeting.

8.Appendix – Voting Results

Preface: The Citizens' Assembly

Yes: 72, No: 1, No, not ready: 3, Don't know/blank: 0, Total: 76

Ind1 Yes: 73, No: 0, No, not ready: 3, Don't know/blank: 0, Total: 76

Ind2 Yes: 71, No: 3, No, not ready: 1, Don't know/blank: 1, Total: 76

Ind3 Yes: 65, No: 1, No, not ready: 10, Don't know/blank: 0, Total: 76,

Ind4 Yes: 66, No: 2, No, not ready: 6, Don't know/blank: 1, Total: 75To

1. Carbon tax

Yes: 70, No: 0, No, not ready: 2, Don't know/blank: 0, Total: 72

1.1 Yes: 70, No: 0, No, not ready: 2, Don't know/blank: 3, Total: 75

1.2 Yes: 57, No: 3, No, not ready: 12, Don't know/blank: 2, Total: 74

1.3 Yes: 67, No: 1, No, not ready: 3, Don't know/blank: 3, Total: 74

1.4 Yes: 54, No: 11, No, not ready: 6, Don't know/blank: 3, Total: 74

1.5 Yes: 70, No: 2, No, not ready: 1, Don't know/blank: 1, Total: 74

1.6 Yes: 51, No: 18, No, not ready: 5, Don't know/blank: 1, Total: 75

2. Carbon footprint labelling

Yes: 69, No: 1, No, not ready: 3, Don't know/blank: 0, Total: 73

2.1 Yes: 66, No: 2, No, not ready: 6, Don't know/blank: 0, Total: 74

3. Popular education

Yes: 63, No: 4, No, not ready: 4, Don't know/blank: 2, Total: 73

3.1 Yes: 57, No: 7, No, not ready: 6, Don't know/blank: 3, Total: 73

3.2 Yes: 44, No: 17, No, not ready: 4, Don't know/blank: 7, Total: 72

3.3 Yes: 51, No: 13, No, not ready: 4, Don't know/blank: 3, Total: 71

3.4 Yes: 56, No: 7, No, not ready: 6, Don't know/blank: 3, Total: 72

3.5 Yes: 58, No: 7, No, not ready: 5, Don't know/blank: 2, Total: 72

4. Sustainable products and a climate-friendly life

Yes: 63, No: 4, No, not ready: 5, Don't know/blank: 2, Total: 74

4.1 Yes: 52, No: 10, No, not ready: 10, Don't know/blank: 3, Total: 75

4.2 Yes: 60, No: 3, No, not ready: 9, Don't know/blank: 3, Total: 75

5. Green and sustainable resource use in the public sector Yes: 71, No: 1, No, not ready: 3, Don't know/ blank: 0, Total: 75

Yes: 68, No: 1, No, not ready: 5, Don't know/blank: 1, Total: 75

5.1 Yes: 65, No: 2, No, not ready: 6, Don't know/blank: 2, Total: 75

5.2 Yes: 69, No: 1, No, not ready: 4, Don't know/blank: 1, Total: 75

6. Consumption and growth

Yes: 40, No: 7, No, not ready: 21, Don't know/blank: 4, Total: 72

6.1 Yes: 44, No: 11, No, not ready: 13, Don't know/blank: 4, Total: 72

6.2 Yes: 48, No: 7, No, not ready: 14, Don't know/blank: 3, Total: 72

6.3 Yes: 44, No: 9, No, not ready: 17, Don't know/blank: 2, Total: 72

6.4 Yes: 38, No: 11, No, not ready: 18, Don't know/blank: 6, Total: 73

6.5 Yes: 36, No: 20, No, not ready: 13, Don't know/blank: 4, Total: 73

6.6 Yes: 48, No: 12, No, not ready: 10, Don't know/blank: 3, Total: 73

6.7 Yes: 43, No: 15, No, not ready: 12, Don't know/blank: 2, Total: 72

7. Consumption, natural resources and the climate

Yes: 50, No: 5, No, not ready: 15, Don't know/blank: 1, Total: 71

7.1 Yes: 40, No: 8, No, not ready: 22, Don't know/blank: 4, Total: 74

7.2 Yes: 48, No: 8, No, not ready: 15, Don't know/blank: 4, Total: 75

7.3 Yes: 65, No: 7, No, not ready: 0, Don't know/blank: 2, Total: 74

7.4 Yes: 54, No: 11, No, not ready: 4, Don't know/blank: 4, Total: 73

7.5 Yes: 45, No: 13, No, not ready: 9, Don't know/blank: 8, Total: 75

7.6 Yes: 41, No: 19, No, not ready: 9, Don't know/blank: 6, Total: 75

7.7 Yes: 38, No: 18, No, not ready: 9, Don't know/blank: 9, Total: 74

8. Agriculture, the climate and natural resources

Yes: 58, No: 4, No, not ready: 10, Don't know/blank: 2, Total: 74

8.1 Yes: 65, No: 6, No, not ready: 4, Don't know/blank: 0, Total: 75

8.2 Yes: 64, No: 1, No, not ready: 8, Don't know/blank: 2, Total: 75

8.3 Yes: 58, No: 5, No, not ready: 9, Don't know/blank: 3, Total: 75

8.4 Yes: 54, No: 12, No, not ready: 4, Don't know/blank: 4, Total: 74

9. The public sector as a green developer

Yes: 64, No: 4, No, not ready: 5, Don't know/blank: 2, Total: 75

9.1 Yes: 64, No: 6, No, not ready: 4, Don't know/blank: 1, Total: 75

9.2 Yes: 65, No: 5, No, not ready: 4, Don't know/blank: 1, Total: 75

9.3 Yes: 66, No: 2, No, not ready: 5, Don't know/blank: 2, Total: 75

9.4 Yes: 54, No: 5, No, not ready: 14, Don't know/blank: 2, Total: 75

10. Recycling of construction materials
Yes: 66, No: 1, No, not ready: 6, Don't know/blank: 0, Total: 73

10.1.Yes: 60, No: 5, No, not ready: 6, Don't know/blank: 3, Total: 74

10.2.Yes: 66, No: 4, No, not ready: 5, Don't know/blank: 0, Total: 75

10.3.Yes: 69, No: 1, No, not ready: 4, Don't know/blank: 1, Total: 75

11. Passenger transport and infrastructure

Yes: 63, No: 0, No, not ready: 7, Don't know/blank: 1, Total: 71

11.1.Yes: 67, No: 1, No, not ready: 1, Don't know/blank: 4, Total: 73

11.2.Yes: 72, No: 0, No, not ready: 0, Don't know/blank: 2, Total: 74

11.3.Yes: 54, No: 6, No, not ready: 4, Don't know/blank: 8, Total: 72

11.4.Yes: 56, No: 8, No, not ready: 6, Don't know/blank: 4, Total: 74

11.5.Yes: 65, No: 5, No, not ready: 4, Don't know/blank: 0, Total: 74

11.6.Yes: 51, No: 18, No, not ready: 4, Don't know/blank: 0, Total: 73

11.7.Yes: 60, No: 5, No, not ready: 8, Don't know/blank: 8, Total: 74

11.8.Yes: 68, No: 0, No, not ready: 4, Don't know/blank: 2, Total: 74

11.9.Yes: 59, No: 5, No, not ready: 10, Don't know/blank: 0, Total: 74

11.10.Yes: 69, No: 2, No, not ready: 2, Don't know/blank: 0, Total: 73

12. Cycling and a climate-friendly life

Yes: 65, No: 5, No, not ready: 3, Don't know/blank: 0, Total: 73

12.1.Yes: 62, No: 2, No, not ready: 9, Don't know/blank: 1, Total: 74

12.2.Yes: 67, No: 6, No, not ready: 1, Don't know/blank: 0, Total: 74

13. Coherent plan for the reorganisation of the energy supply
Yes: 67, No: 4, No, not ready: 2, Don't know/blank: 0, Total: 73

13.1.Yes: 68, No: 4, No, not ready: 2, Don't know/blank: 0, Total: 74

14. Energy supply in the short term

Yes: 66, No: 3, No, not ready: 2, Don't know/blank: 1, Total: 72

14.1.Yes: 65, No: 5, No, not ready: 2, Don't know/blank: 2, Total: 74

14.2.Yes: 67, No: 4, No, not ready: 3, Don't know/blank: 0, Total: 74

14.3.Yes: 67, No: 2, No, not ready: 2, Don't know/blank: 3, Total: 74

14.4.Yes: 61, No: 4, No, not ready: 5, Don't know/blank: 4, Total: 74

15. Geothermal energy and heat pumps

Yes: 62, No: 2, No, not ready: 5, Don't know/blank: 4, Total: 73

15.1.Yes: 58, No: 2, No, not ready: 5, Don't know/blank: 9, Total: 74

15.2.Yes: 47, No: 6, No, not ready: 17, Don't know/blank: 7, Total: 74

16. Use of CCS

Yes: 60, No: 7, No, not ready: 3, Don't know/blank: 4, Total: 74

16.1.Yes: 63, No: 7, No, not ready: 1, Don't know/blank: 3, Total: 74

16.2.Yes: 62, No: 8, No, not ready: 1, Don't know/blank: 2, Total: 73

16.3.Yes: 56, No: 7, No, not ready: 7, Don't know/blank: 4, Total: 74

Financing a robust energy supply in the short term

17. Yes: 50, No: 5, No, not ready: 18, Don't know/blank: 1, Total: 74

17.1 Yes: 64, No: 3, No, not ready: 5, Don't know/blank: 1, Total: 73

17.2 Yes: 62, No: 1, No, not ready: 8, Don't know/blank: 2, Total: 73

17.3 Yes: 64, No: 1, No, not ready: 4, Don't know/blank: 3, Total: 72

18. Framework for research and innovation
Yes: 63, No: 2, No, not ready: 6, Don't know/blank: 1, Total: 72

18.1.Yes: 47, No: 12, No, not ready: 14, Don't know/blank: 1, Total: 74

18.2.Yes: 66, No: 4, No, not ready: 3, Don't know/blank: 0, Total: 73

18.3.Yes: 61, No: 4, No, not ready: 8, Don't know/blank: 0, Total: 73

18.4.Yes: 57, No: 4, No, not ready: 13, Don't know/blank: 0, Total: 74

18.5.Yes: 68, No: 1, No, not ready: 5, Don't know/blank: 0, Total: 74

18.6.Yes: 68, No: 0, No, not ready: 5, Don't know/blank: 1, Total: 74

Danish Ministry of Climate,
Energy and Utilities

The Danish Ministry of Climate, Energy and Utilities
Holmens Kanal 20, 1060 København
Tlf. : +45 33 92 28 00
E-mail: kefm@kefm.dk