SAMAK

A JUST GREEN TRANSITION

Nordic initiatives for inspiration and discussion

January 2021

About

This report was prepared for the SAMAK Board as a follow-up to the SAMAK Nordic climate summit in Copenhagen in January 2020. Its purpose is to inspire further discussions and follow-up in SAMAK and among social democratic parties and trade union organisations in the Nordic countries. The report was first launched in January 2021 by the Danish prime minister Mette Frederiksen. This translation into English was published in October 2021, in the run up to COP26 in Glasgow.

The task at hand has been (1) to identify important political and trade union challenges that arise in shaping a just environmental and climate policy, and to recommend overarching angles of attack and strategies for the labour movement in the Nordic countries, and (2) to discuss selected and specific measures viable in a Nordic policy setting, with a focus on technological and equalising initiatives.

Since this topic is very broad, the working group has chosen to highlight selected issues rather than producing an exhaustive list of every conceivable initiative.

The working group has consisted of the following members:

Denmark:
- Denmark's Social Democratic Party: Iben Merrild (international consultant and political advisor, leader of the working group), Anne Paulin (spokesperson on climate, Parliament)
- FH – Danish Trade Union Confederation: Henrik Jepsen (consultant on climate policy)

Finland:
- Finland's Social Democratic Party (SDP) and The Central Organisation of Finnish Trade Unions (FFC/SAK): Lauri Muranen (leader of business policy, FFC/SAK)

Norway:
- Norwegian Labour Party: Espen Barth Eide (spokesperson on climate policy, Parliament)
- Norwegian Confederation of Trade Unions (LO): Wegard Harsvik (leader of community contact and strategic work)

Sverige:
- The Social Democrats: Marlene Burwick (member of the committee for environment and agriculture, Parliament)
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The working group thanks student assistant Flavio Saleh, Social Democratic Party of Denmark, for his assistance in producing this report.

As background for parts of this report, the working group has commissioned the report "Green growth policy – Which possibilities do we have in our toolbox and which should be used?" from the Norwegian think-tank Agenda (available in Norwegian).

SAMAK is the Cooperation committee of the Nordic labour movement, see end page for list of members.. In 2020, the Social Democratic Party of Denmark has had leadership of SAMAK, with party leader and prime minister Mette Frederiksen as SAMAK leader.

LAYOUT:
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Workers are crucial to solve the climate crisis.

I. Summary

Climate change is one of the most urgent and complex challenges our societies have ever faced. Climate change is inextricably and directly connected to the ever-increasing problems in nature and the environment. Most agree that we have an obligation to pass on a sustainable planet to the next generation. However, the question is how and based on which values and goals?

A greener and more socially fair society

The labour movement's aim is for all people to live secure and good lives. It is our responsibility to act when nature and the environment, which we live off and are part of, come under threat. We have to acknowledge that the market cannot solve these challenges alone. At the same time, it is not enough to leave this task to the individual. What is needed is political will and management in order to push for an effective and sustainable transition.

We are ambitious and we have only just begun. We need a transition that will succeed in terms of taking care of the environment and reducing harmful emissions, making biodiversity available for all. At the same time we must retain a strong welfare state and create sustainable growth, where a sense of belonging and social balance is secured in society in urban and rural areas alike.

The Nordic model is the key to a green transition

The Nordic model is the key to a socially fair green transition. The welfare state shall both help create security and ensure that ordinary people can fully support green initiatives, secure in the knowledge that these will not create A teams and B teams – with those who benefit from the transition and those who lose out. At the same time, the Nordic model entails that we support structural changes and technological development. This requires that the labour movement must play an even greater role nationally and locally.

By supporting the development of green technology, we not only help reduce CO2 emissions but we also help create new green jobs for those individuals who will lose their jobs in the green transition. Further education and the retraining of workers must also be given priority in securing the right types of skills as well as a greater sense of ownership of the green transition. By being at the technological forefront, it will be possible to compete in terms of skills rather than lower wages and poorer working conditions. In doing so, we can continue to secure a strong welfare state.

A need for political governance

The public sector should use its muscles to an even greater degree to solve the enormous challenges we face, not only for short-term economic recovery after the corona crisis. There is room for even more flexing of muscles through the provision of risk capital and making high demands on state procurement in addition to taxes and grants, which climate policy already utilises to some extent.

This does not mean that the state should play all the instruments; rather the state should take on the role of conductor of an orchestra comprising many different instruments. A combination of different public initiatives may be appropriate but it is important to bear in mind their respective advantages and disadvantages. We take a closer look at taxes; public procurement; grants and state funding; venture capital; state ownership; prohibitions and instructions.

Nordic initiatives for inspiration

We will investigate initiatives such as energy islands in Denmark; Power-to-X, circular and bio-economies; floating offshore wind; carbon capture, utilisation and storage (CCUS); remote heating from nuclear power; hydrogen and fuel cells; green transport; multi-stakeholder cooperation such as the Fossil Free Sweden platform; fossil-free industry; the need for trade union climate agreements, further education, retraining and a stronger safety net.

Possible joint Nordic initiatives

In addition, we highlight possible joint Nordic initiatives within the following three areas: sector-specific partnerships; CCUS; and green development assistance in the field of energy. Moreover, it will be essential to cooperate on forming a joint position, to the extent that this is viable, in connection with the forthcoming nature and climate summits COP15 and COP26, in China and Scotland, respectively.

With our joint Nordic values and socially fair approach to the green transition, our ambition is to be a green pioneering region that may inspire and influence the rest of the world in international climate and nature initiatives, cooperating to create better living conditions and a sustainable future for everyone.

Denmark's prime minister Mette Frederiksen and Gro Harlem Brundtland, former prime minister of Norway and leader of the Brundtland Commission at SAMAK's climate summit in Copenhagen.

II. The labour movement's narrative: a just green transition

The labour movement works to ensure that all people can live good and secure lives. This requires a society built on our core values – equality, freedom and solidarity. We humans live together, but always in close proximity and as part of nature and the environment. We are all entirely dependent on nature for our food, our resources and for rest and relaxation. This will never change.

Both nature and the environment are under threat, both globally and in our local environment. Things have gone too far, and it is our responsibility to respond, so that we can live off and on this earth in the future as well. Our main guiding principle is for us and our children to have a safe future.

History has shown that the market cannot tackle these challenges alone. Political will is also necessary if we are to stop global warming and the destruction of nature. We need to manage society so that we can kick-start an effective transition, one that is both green and red. A transition that allows us to take care of the environment and reduce harmful emissions, where biodiversity is available to all, at the same time as we retain a strong welfare state and create sustainable growth, ensuring that a sense of belonging and social balance is secured in society in both urban and rural areas. Our societies in the Nordic countries are simply too small for major inequalities.

Everyone must be taken on board, and everyone must contribute. If we are to succeed, we need to design our societies so that we all live, reside, produce and travel in a sustainable way. We need to produce in a green way, and consume in a green way.

However, we do need to ensure that it is not those who have least who end up paying the most. On the contrary, the green transition may require a better distribution of wealth than we have at present. It is precisely for this reason that the Nordic model of a just and strong welfare state and a decent working life must be activated as the key to the green transition. The welfare state provides security wherever necessary when the economy changes, which it inevitably will do. The welfare state shall ensure that ordinary people can fully support green initiatives, knowing full well that we will not be creating A and B teams, with those who benefit

It must be possible to travel in a climate-friendly manner in towns and in rural areas. Here from Iceland.

Offshore wind power will become even more important in the future.

from the transition and those who lose out. The labour movement has learned from our experiences with globalisation where the gains from increased integration of the global economy have been unevenly distributed. We will not allow this to happen in the green transition.

We wish to change the world for the better. For this reason, it is our duty as social democrats and trade unionists that our work on the green transition promotes technological and digital solutions, further education and retraining, and creates green jobs. And many of the green jobs will be completely new, while others will entail a restructuring of existing jobs to ones that are greener.

Industries that make swift changes will also be tomorrow's winners in the market and be in the best position to secure earnings and jobs.

We must be aware that the foremost prerequisite for the green transition is ordinary people with the right skills. These people are industrial workers, construction workers and agricultural workers etc. – people who will create and implement tomorrow's environmental and climate solutions. Their skills are necessary both to develop and to utilise new technologies. If we are to succeed in involving everyone in each country, we also need to focus just as much on people working in rural areas, particularly non-skilled workers. For this reason, it is important that we also have a local starting-point, beginning in each individual workplace, so that those who are most affected by the transition can themselves influence their own future. This will help increase both participation, support and democratisation of the green transition. Consequently, the labour movement's involvement and its efforts are crucial to the success of the green transition.

As rich, highly-developed societies we have a special responsibility in the Nordic countries to be pioneers and show international leadership in the green transition. This requires that we do our homework, at the same time as we must inspire and influence the rest of the world to develop greener solutions. We need to reduce our footprint in the Nordic countries and strengthen our fingerprint globally, so that we together can create better living conditions and a sustainable future for us all.

We are ambitious and we have to act now.

III. Our values in a new era: nature and climate are societal issues

Global warming is an enormous threat. And both the 'free-rider problem'[1], the fact that CO2 is collected in the atmosphere for a long period of time with the consequences of this being felt only gradually, and not least that the challenges of inequality between countries and groups, have made a solution difficult.

At the same time, there is growing acknowledgement that it is not only the "climate" but all of nature and the environment that are under pressure. This applies in terms of quality, quantity and diversity – both globally and locally. We will still have major natural and environmental resources from which we will benefit, but an increasing number of individuals' environmental living conditions will gradually be limited.[2]

Climate challenges and environmental challenges shall essentially be treated as two sides of the same coin:

- They both have fundamental effects on human living conditions.
- They both have the same underlying causes: Our use of nature and the environment.
- They affect one another: e.g., when deforestation weakens CO2 absorption, or when global warming causes forest fires.
- Joint goals and solutions will affect both challenges in a positive manner. We often see a "double effect" since the two challenges are mutually dependent.
- We see negative consequences resulting from these two challenges at the same time as they are also becoming more grave.

TEXT BOX I: From a climate crisis to a nature and climate crisis

The climate crisis has been high on the political agenda for many years. In November 2021, the UN Climate Summit COP26 will be held – the 26th political climate summit – in Glasgow, the primary objective of which is to raise global climate ambitions by taking a basis in national plans, which the world's nations are obliged to submit to the UN under the terms of the Paris Agreement.

The nature crisis has received less attention, however. Few people are aware of the UN Panel on Nature and the "nature crisis' COP": COP15 for Biodiversity, which is planned for May 2022 in Kunming, China. Based on the Convention on Biological Diversity, whose aim is to foster sustainable development, COP15, the UN Conference on Biodiversity, aims to assess the implementation of the strategic biodiversity plan for 2011–2020, and to adopt the final global post-2020 framework for biodiversity.

As with the climate crisis, the nature crisis is a threat to human safety, living conditions and our existence. The nature crisis means up front less biodiversity and destruction of nature above and below water, which will undermine our ecosystem. Both water and soil arepolluted. This applies locally, nationally and globally.

Global exploitation and utilisation of nature and the environment must be seen in the light of people's need to leave poverty behind and enjoy good living conditions, experiences of nature and jobs, but it is also characterised by forces such as profit, political power and status.

We must therefore treat climate and nature/environmental policy from a societal and not an individual perspective. Individuals and families have a personal responsibility to act in a decent manner and, in so far as it is possible, to contribute to achieve local sustainable development. Nevertheless, the solution essentially lies with societal and political development of a new green and socially fair social framework – within which everyone must be able to live a good life.

Many people underestimate the ideological dimension of climate policy. However, fundamental ideological choices – the state versus the role of the market, collectively safeguarding employees' rights or not – cannot be ignored when green policies are being implemented, even though climate and environmental problems are profound and must be given priority on our political agenda. We do not think it is possible to solve green challenges in an effective and socially fair manner without good political and professional choices in these fundamental questions concerning the governance of society. We cannot expect, for example, that the unregulated market will solve climate and environmental challenges.

Commercial businesses require frameworks and facilitation by society for them to become sufficiently green, otherwise they are often driven too much by the demand for short-term profits. At the same time, it is important to include the parties in the labour market, trade unions as well as employers' organisations, in the work of shaping these frameworks. These parties know where the problems lie in real life and their involvement will strengthen the chances of implementing initiatives.

At the same time, new generations are growing up everywhere in the world, all of whom are more focused on climate issues, more aware of environmental matters and highly dedicated. They will use information technology to gain more knowledge about the products they purchase than previous generations. The young people of today are tomorrow's consumers. They are the people who will buy cars and washing machines, and they are the ones who will renovate apartments and erect play areas outside. And they will make completely different requirements with regard to the products. The markets' demands will change, and industries that do not deliver what the markets want will lose out. The safest jobs in the coming years will be jobs in businesses with low CO2 footprints and efficient use of resources.

Globalisation has served the Nordic countries well, but the current variant is not sustainable. It is one thing to strengthen contingency plans in relation to crises, such as COVID-19. However, international political cooperation must also be strengthened considerably in order to solve climate, nature and environmental crises. Soft power and nudging can supplement supranational regulations and the use of force. The USA and president Biden will be important for

The reestablishment of marshlands will help both local environments and the climate.

international cooperation in general and for climate policy. And the EU's ambitions in climate policy must be further strengthened.

With its good reputation and political and technological involvement, the Nordic region, with its 25 million inhabitants, can continue to play a considerable role in the global battle to save our climate and environment. The Nordic countries' own CO2 emissions must be reduced in support of this, at the same time as the potential for the Nordic region's real contribution to the global battle for the environment should not be underestimated.

New technologies have been a driving force, albeit a complex and double-sided one, when it comes to nature and environmental development. There is now a special need for greater political governance of digitalisation.[3] Now that it is an everyday part of business, work and our private lives, digitalisation should and must be a key to the green transition.

Our efforts are not intended to reduce economic activity and growth; rather they should make it green. This means that we must determinedly decouple economic growth and development from CO2 emissions and the destruction of nature.

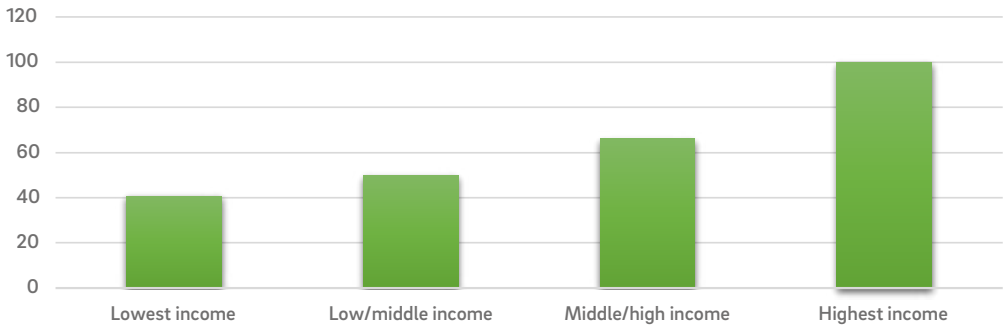
The Brundtland Commission has already shown how climate and the environment are closely linked to social and societal issues.[4] We will not have an effective climate and nature/environmental policy without equality, and we will not have equality if the weakest groups have to bear the burden. Everyone's participation and ideas are required, particularly in the workplace, since a polarised society often makes it impossible to adopt the necessary social initiatives that will reduce the total costs of the transition.

TEXT BOX II: Increased purchasing power over the last 30 years – and increased inequality

Back in the 1990s, most families in the Nordic countries had good purchasing power. Some households were very poor, however, while some had very high incomes and high personal consumption.

Since then there has been considerable growth in the average level of purchasing power throughout the Nordic countries. At the same time, social inequality has grown. From 1990 to 2017, families in the Nordic countries with the highest incomes doubled their real purchasing power, while the group with mid- or high-range incomes rose by 66 per cent. Those with the lowest incomes saw their purchasing power rise by approx. 40 per cent.

Growth in real disposable income from 1990 to 2017 in the Nordic countries for different income groups (estimates given as percentages).



Real disposable income showspurchasing power adjusted for tax and inflation. The income groups are: Lowest 0-20 %, Low/average 20-40 %, Average/high 60-80 %, Highest 80-100 %.

Source: See notes.[30]

This means, firstly, that those with the lowest incomes must not foot the bill for climate and environmental initiatives. The challenge that will now be placed on the agenda is how this will happen in practice. Subsequently, one needs to take into account different geographical challenges so that we can ensure that we achieve a green transition in which both cities, towns and rural areas are included. In other words, we need to ensure that changes in, for example, the labour market and the transport industry will mean that there will still be jobs, opportunities for retraining and transport opportunities at affordable prices in rural areas. This is also more demanding when some initiatives requires that everyone is affected, meaning that compensation and holistic considerations must be included in the decisions made.

Secondly, one should consider whether the overarching redistribution policy in the Nordic region should be more ambitious and clearly stated by social democrats and the trade unions. Good income developments in the Nordic countries over the last 20–30 years makes this possible with a strong increase in average household incomes, albeit particularly for those with the highest incomes, and there is therefore a need for these individuals to contribute more than they have done previously for a sustainable future. Studies indicate that people in high income groups on average have a higher climate footprint.[5]

In fundamental terms, the trade unions' best way of helping to solve the climate and nature/environmental challenges is to use and continue to develop the Nordic model. With its progressive values, the three pillars: good economic management, welfare and skills development schemes and a well-organised working life, it is also a unique solver of crises.[6] This is partly due to the fact that is contributes to a joint understanding of the state of society and to broad-based cooperation on specific initiatives.

Conversely, an unsolved climate and nature/environmental crisis is one of the greatest threats to the Nordic model. In this instance, this would be the case if the model fails to meet the population's fundamental needs for a safe future for all. In particular, young people would fail the Nordic model.

More biodiversity is important. From the Finnish forests.

IV. More about the labour movement and the role of employees

There is no doubt that the major climate challenges, as we see them, require that our societies must undergo comprehensive change. Even though this may be costly in the shorter term, it is essential. The price of not doing anything is far too high for it to be justified based on a narrow economic growth perspective. The costs of achieving change should also be seen as investments, partly in terms of modernising our economies and taking the lead in the fourth industrial revolution, where climate and environmental technology is expected to comprise a significant part.

In the opinion of the Nordic labour movement, climate issues go hand in hand with our traditional political ambition; to create fair and good social and economic living conditions for our citizens. The resultant changes for flora and fauna from climate change will make it more difficult to maintain these ambitions.

Greater climate challenges will not only have negative consequences for nature; they will also have a negative impact on our economies since we will have to invest more and more resources in tackling the problems and disasters that arise. It will also create greater inequality since there will be fewer and fewer resources available to invest in welfare, which normally helps increase social justice in society.

Within the labour movement, we consider social, ecological and economic issues to be inextricably linked and mutually dependent on each other. Hence, our green policies aims to strengthen all of these.

We see the need for increased involvement in industrial policies. This should not only focus on short-term growth, but also stimulate to the development of climate-innovative production processes, technology, goods and services.

Workers know where the real problems lie.

It is equally important that each workplace develops strategies for becoming environmentally and climate neutral, and that the employees become involved and are able to participate in this work. There is still time to implement planned and strategic initiatives to change our societies and economies. In this way, companies and workplaces can plan the green transition and investments they require and identify the skills they need. It also provides time to offer part of the workforce skills development training or any re-education required to carry out the new jobs which the transition will create.

Giving workers the opportunity to have an impact on the transition and to have the skills required in the labour market means that the green transition is democratised at the same time. More people are involved in the transition and will be given a chance to affect their future situation. Moreover, one can avoid so-called adjustment shocks, which occurs when businesses and industries continue as normal and suddenly discover that their activities no longer have a future. This creates not only increased unemployment but also bottlenecks in the labour market.

V. Circular economy

The world's natural resources are under increasing pressure. For this reason, it is crucial for the climate, nature and the environment that we use our resources more efficiently so that we can reduce the need to extract new resources.

In a circular economy, products must last for as long as possible. They must be repaired, upgraded and re-used. If products cannot be re-used in their original form, the waste can be re-cycled and used as raw materials in new forms of production. By re-cycling products and re-using waste, the same resources can be used many times, and as little as possible will go to waste.

Transitioning to a circular economy entails changes in design (design for a circular economy), production and consumption patterns. Consumers must be given the opportunity to make eco-friendly choices. The key to achieving this is through digitalisation, use of services and a sharing economy. The public sector can promote a circular economy through its procurements.

More efficient use of resources reduces greenhouse gas emissions, lessens the loss of bio-diversity, reduces pollution and contributes to green jobs and business models. Transitioning to a circular economy is a necessary part of the transition to a low-emissions society and reaching the UN's Sustainable Development goals.

In connection with the launch of the European Green Deal, the Commission presented an action plan for the circular economy, which showed that an ambitious implementation of circular economic principles has the potential to increase the EU's GDP by 0.5 per cent by 2030 and to create around 700,000 new jobs.

Investing in a circular economy provides opportunities for the creation of green added value, increased exports and an improved competitive edge for those countries that succeed. In order for them to succeed, however, we must ensure that we create an attractive market for circular products, and to increase the degree of innovation, we need to share risks through new funding models. We must systematically monitor information about materials, energy use and emissions so that we can utilise our resources more efficiently.

VI. Just climate-friendly passenger transport in cities and rural areas

The transport sector is responsible for some of the largest emissions of greenhouse gases. In particular, passenger transport has a decidedly negative effect on the climate. The reason for this is, among other things, the large number of passenger cars using fossil fuels such as petrol and diesel. The challenge facing a social democratic green policy is to continue to make it possible and easy for people to travel without contributing to climate change at the same time.

More charging points in rural areas make it easier to travel green.

Increased use of public transport based on renewable energy sources is an important initiative. This allows for both fossil-free and energy efficient transportation. Competing with the car is often difficult. It is unrivalled in terms of flexibility and transportation between different destinations. Extending public transport can go some way towards reducing these differences, particularly as regards commuting to work. Nevertheless, such an expansion is essentially only possible in urban areas and larger cities, where there is a large passenger base. Sparsely populated rural areas will not be able to offer public transport with a corresponding frequency.

Increasing public transport is thus not sufficient to reduce CO2 emissions from passenger car transport – particularly not in rural areas. Passenger cars of the future must be fossil-free, and in order to steer development in this direction, it should not be more economically beneficial to drive fossil fuel cars. The price of electric cars has fallen, and operating costs are estimated to be considerably lower than for fossil-fuel vehicles. Nevertheless, the purchase price is still far too high for most people to afford them.

A higher price for fossil fuels may reduce the benefit of diesel-driven cars and force development towards more and thus cheaper green cars. The problem with such a policy is that one

risks affecting low-income groups and people who commute or live in rural areas. They are neither offered satisfactory public transport nor can they for the time being afford to purchase fossil-free cars. Financially well-to-do people in larger cities will not notice this in the same way, however. They will be offered an extended public transport service and will at the same time be in a better position to afford to buy fossil fuels or to purchase a fossil-free car.

Phasing out fossil-fuel vehicles without people feeling their opportunity to move freely has been restricted is crucial to social democratic environmental policy in the transport sector. There is a clear risk of increased inequality if the policy is not designed to take into account differences between people who live in rural and urban areas and between people with different economic circumstances. There is therefore a need for different access and policies that are adapted to the differences between rural areas and citiies but ones that have the same overarching goals to reduce CO2 emissions from the transport sector.

Different instruments and incentives may be required to convert the car fleet and to increase the number of electric cars, but also to increase production of biofuels and electro-fuels and to make it possible for fossil-fuel cars to convert to such fuels. Being climate smart should not be a question of class.

VII. The green transition in light of COVID-19

The COVID-19 pandemic has led to a strong financial downturn worldwide with a very uncertain duration and time profile. The Nordic countries are well-equipped to face this situation but we will also be hard hit. Perhaps this downturn may affect the whole decade, as when the financial crisis was felt in the 2010s.

Less activity will for a period of time result in a noticeably lower growth in CO2 emissions and reduced environmental effects. Firstly, it should be said that a large part of future problems will

COVID-19 may give us more digitalisation and fewer journeys.

in any case be due to previous sins, since too much CO2 has been released into the atmosphere and a lot of nature already has been challenged. Secondly, lower activity does not in itself lead to necessary structural change. COVID-19 may also imply delays in or cancellation of green investments if funds are used instead for crisis management.

The COVID-19 crisis must therefore be used to speed up the green transition. Many agree on this point as a principle, and the challenge is therefore just as much related to realism and implementation in practice. Tripartite cooperation is central to solving this issue in the Nordic countries. Publicy-generated green investments and green demands for crisis funding are obvious tools but there is also room for creativity.

The ability and willingness to give priority to spend public funds on a green transition through and in the wake of the COVID-19 crisis is an important point that requires focus and further analysis. One danger is that lower levels of employment lead to low wage growth and fewer tax revenues, at the same time as the social situation requires increased public expenditure.

It is even more important to pursue an economic policy during the COVID-19 pandemic that manages to maintain economic activity. Nonetheless, initiatives implemented during the COVID-19 pandemic must have a good distributive profile, also so as not to undermine the necessary backing of the green transition.

VIII. The need for political solutions: an active state shall coordinate

In light of the COVID-19 pandemic, it is important to maintain pressure in the political fight for a green transition. If the markets were able to solve the climate crisis, we should have already been on the right path. We are not, however. It is clear that a restructuring the Nordic economies is characterised by such great technological changes, international influence and a complex array of participants that there is a need for clear political action. This means a more active and governing industrial policy, and an implemented and coordinated environmental and climate policy. The two things are interrelated. In recent years, it has also become evident that if our environmental and climate policy is to succeed, it must be socially fair. In a world where economic differences are growing, it is important that economic policy and climate policy help reduce and not increase these differences.

In our opinion, there is a need for selected and targeted state instruments in order to combat climate change. The economist Mariana Mazzucato's research claims it is precisely the state that is the strongest driver of innovation. According to Mazzucato, the government's role in most successful economies has gone beyond creating the optimal infrastructure and regulation. They have assumed a leading role and fostered innovation by proactively devising strategies for new areas with a high potential for growth; by financing the most uncertain phases of technological development, where the private sector is less willing to risk getting involved; by creating demand for and initiating further development, and often even by monitoring commercialisation processes.[7]

In other words, governments should use their muscles even more to solve the major challenges we are facing and not only on devising short-term economic remedies[8]. There is room to flex one's muscles even more by providing risk capital and making high demands on state procurement in

The governments have many tools in their toolboxes that need to be used to solve the environmental and climate challenges.

addition to taxes and tax relief, which climate policy to some extent already uses. This does not mean that the state should play all instruments, but rather that the state shall act as a conductor of an orchestra comprising many different instruments. A combination of different state initiatives can be appropriate, but it important to be aware of their respective advantages and disadvantages, investigate the initiatives thoroughly in advance and follow the implementation carefully.

The thinktank AGENDA[9] has considered the advantages and disadvantages of six forms of political instruments that can be targeted towards industrial development, instruments that can be designed to promote a green transition. These six instruments are discussed in the following sections.

Taxes

Climate taxes are decidedly, in climate policy and in theory, among the most effective tools since they stimulate desired changes in behaviour, are targeted, make environmentally-friendly alternatives more competitive without grants, and help protect the interests of society. Taxes cannot solve everything alone, among other things because this would require charging very high taxes, and because one would also have to take into account competitive ability, leakages and equality. One way of making taxes more acceptable to those who pay them – and at the same time stimulate the development of genuine alternatives – is, for example, via taxes paid into funds and taxes for distribution purposes. The Norwegian Nox Fund is an example of the former, where industry itself manages the taxes that are collected and distributes funding for technological development. There are considerable disadvantages to funds, however, such as the fact that the national coffers miss out on funds that could have been used for redistribution purposes, but in special circumstances and for a limited period of time they can be of value. Taxes should be considered carefully, particularly taxes that have a broad effect but where changes in behaviour are necessary, as they are in the transport industry. There will be a need to combine environmental and climate taxes with, for example, direct cash transfers or tax relief to parts of the population with a specific social and geographical profile, in order to secure that they are not affected most by, for example, fuel, road and CO2 taxes.

Public procurement

Public procurement is a potentially effective tool in the green transition provided it is used in a targeted and precise way. The value of technology is realised when it is used and swifter take-up of technology results in higher added value. This is one area where the authorities can play a major

role, particularly through long-term environmental and emission requirements or through development agreements with suppliers, where the purchaser and potential suppliers develop technology and solutions in collaboration. In doing so, one creates climate-friendly solutions with competitive advantages and one also creates a market for new technology. This may mean that some purchases will be more expensive and affect consumers unequally (e.g. increased ticket prices for climate-friendly public transport). Compensation shall also be given for price effects that have a socially distorting effect, and in general it requires better purchasing competency, particularly among smaller entities such as municipalities. At the same time, it is necessary to be mindful that green purchases are not prioritised to the disadvantage of welfare benefits, thereby increasing inequality.

Grants and state funding

Grants for services that serve the general public (e.g., electricity supply, research and development, bus services etc.) make it possible to speed up technological development, to upscale production and can change relative prices in the market, thus making sustainable alternatives more attractive. A grant in the form of investment support or tax rebates can therefore help trigger an unrealised socio-economic benefit. Grants may be difficult to discontinue, however.

Risk capital

New green technology and industry have a need for private capital. Venture capital provided by the state can take a greater risk, require less co-financing and have a longer lifetime than commercial funds. The idea is that the state shall stimulate increased investment in private risk capital by relieving private capital investors of the risk, thereby promoting the development of sustainable technology and industry. With a higher risk profile, it is also necessary to define social tasks that are of high priority.

State ownership

Dynamic state ownership can be utilised to promote green expertise. While it is not a goal in itself that the state must operate businesses, state ownership can be used to rapidly secure technological development and to build up expertise in specific areas that are critical to the establishment of a new industry in the country, when private capital is lacking or does not provide the social development desired that is in the best interest of society. This can occur in different ways, e.g., the state can create or take over businesses involved in technology development of national interest that require long-term frameworks in an innovation phase and subsequently be sold once the company is no longer involved in the same development. Alternatively, the state can create companies that will foster technological development in areas that are not already covered by the market.

Prohibitions and instructions

Prohibitions and instructions can be effective legal instruments in the green transition. Environmental and climate-related demands or regulations of contents and emissions from a given product can be effective, such as, for example, the ban on CFC (chlorofluorocarbon) gases. In some areas, they can also be perceived as fairer than taxes, e.g., the ban on oil-fired boilers. Prohibitions and instructions can also create a lot of resistance, since one can see them as intervening in the realm of people's private lives, as one saw with the Smoking Act (which now in a broader sense is considered legitimate in order to create the necessary changes in people's norms).

It is therefore important that several initiatives are taken in order to speed up the green transition. However, it is also necessary to take into account thatsome technological solutions may not always be socially fair or equalising in themselves, which is why they need to be introduced carefully and linked to equalising measures, so that the green transition does not end up being unjust.

IX. National technological and inclusive initiatives by way of inspiration

We are closely linked in the Nordic countries and have always been able to learn a lot from one another. The green transition is no exception. The green transition requires countless different initiatives, which governments can and should implement in order to kick-start the transition. In what follows below, we have chosen to highlight selected green initiatives from Denmark, Finland, Iceland, Norway and Sweden that showcase either technological initiatives or participatory processes designed to secure a socially just transition.

The technological initiatives below may possibly not be equalising in themselves. However, by supporting development of green technology we will not only help to reduce CO2 emissions but also help in creating new jobs for those who may lose their jobs due to the green transition. By being at the forefront of technological development, it is possible to compete in terms of skills rather than in terms of lower wages and poorer working conditions. In other words, new innovation and technological development can increase our levels of expertise, raise wages and the tax base, thereby helping to secure a stronger welfare state.

The Nordic model therefore requires that we support structural change and technological development. Instead of worrying about new technology, we should fear outdated technology. Such a strategy is particularly important for small export-dependent countries such as the Nordic nations. Here the degree of self-sufficiency is lower, and import conditions are determined by how attractive our export products are.

Today we are facing a fourth industrial revolution where climate technology and related products and services will be a driving force. In order to continue being successful countries in a globalised economy, it is crucial that we rapidly develop technology, goods and services. Precisely what this entails has yet to be identified, but in light of the challenges faced, many point out that climate and environmental technology may become an essential mainstay in the fourth industrial revolution.

In 2020 and 2021, SAMAK and the S Group at the Nordic Council has held a virtual roadshow in the five Nordic countries on achieving a socially just green transition.

For the labour movement this means that our traditional view of technological development, structural change and labour market policies with the fourth industrial revolution can be supplemented with a policy for green technology in order to create a nature- and climate- friendly economy.

Our hope is that we may be inspired by one another across the Nordic countries. It should be noted that the working group has not considered every single initiative and is in no way recommending that initiatives be transferred on a one-to-one basis from one country to another. It is our opinion, however, that it may be useful to know about initiatives we have planned or tested so that we may learn from the experiences and opportunities that are in the making in the Nordic countries.

DENMARK

The Danish context and the framework for a future green transition

In December 2019, a large majority of the parties in the Danish parliament agreed on a new ambitious Climate Act, the purpose of which was to reduce Denmark's CO2 emissions by 70 percent by 2030. Denmark's Climate Act establishes the 70 per cent target and obligates the current and future climate ministers to concrete actions. The act requires that any government in power must deliver in terms of climate action. As part of the Climate Act, the government is, among other things, required to present a Climate Programme each year outlining the status of how far we have come in respect of the 2030 target of achieving a 70 per cent reduction, and additionally it highlights the technical potential of achieving further reductions in different sectors.

The goal of achieving a 70 per cent reduction in greenhouse gases is broadly supported by NGOs, trade unions and industry. The Danish government has involved various sectors of industry in the task of devising future climate initiatives, by establishing 13 climate partnerships (e.g. partnerships in the agricultural sector, energy, heavy industry, the finance sector etc.) with representation by businesses and trade unions. The 13 partnerships presented their climate recommendations in the spring of 2020. Some of these recommendations have already been adopted in the Climate Agreement for the Energy Sector and Industry in June 2020. These have since been followed up by agreements concerning a green tax reform and a green transformation of road transport with a stated ambition of 1 million green cars in 2030, as well as an agreement to stop the extraction of oil and gas from the North Sea in 2050. Climate negotiations concerning the agricultural sector were concluded in the start of 2021.

Danish investments in green technology

The development and upscaling of some technologies gives both good reason to expect considerable reductions in greenhouse gases and a potential for more and better jobs. If we look back in time, the development and production of windmills has created a strong Danish industry with major exports and thousands of jobs. When we today face climate changes and an economic crisis with unemployment, we should ask ourselves which technologies can create new success stories. Some of these future technologies are expected to be the following in Denmark:

Wind and energy islands

With the Climate Agreement for Energy and Industry, which was adopted in June 2020, a large majority of the Danish parliament agreed that the world's first two energy islands would be built in Danish waters by 2030. The energy island concept takes offshore wind power to the next level, where energy islands are expected to collect energy from several offshore locations

and transport it to either Denmark or neighbouring countries in Northern, Western or Eastern Europe, depending on where the demand for electricity is highest. Once the electricity supply is has reached sufficient levels, electricity from these energy islands can be used for Power-to-X processes and the production of green fuels.

Power-to-X

A partnership between businesses in the Danish energy sector has concluded that so-called Power-to-X technologies[10], that can phase out fossil fuels have a potential to reduce emissions by 1.9 million tons of CO2 by 2030 (2–3 per cent of Denmark's 1990 emissions) and much more by 2050. The investment cost for development and upscaling are estimated to be DKK 19.5 billion[11] excluding the cost of expanding wind power and solar energy production and the infrastructure to support Power-to-X. The new fuels, and the technologies and knowledge developed to produce them has considerable potential for export and jobs for Denmark, particularly if future EU legislation and ambitions increase demand.

Circular economy and bioeconomics

Experts and organisations such as Kate Raworth and the Ellen MacArthur Foundation claim that society must be changed from a traditional "linear economy" to a circular economy with more recycling. In Denmark, challenges relating to the use of plastic and the bioeconomic sector have been given a lot of focus. The National Bioeconomy Panel has proposed that bio-refining of grass and plastic leads to considerable reductions in greenhouse gas emissions and has a business potential, and the Danish Trade Union Confederation (FH) has proposed that Denmark adopt a "strategic mission" focusing on transforming biomaterials and waste into high-value productsi.[12] Initiatives supporting biogas development and a reform in waste management had already been included in agreements from June 2020, and other initiatives supporting the transition to a circular economy and bioeconomy will be discussed in forthcoming negotiations. Looking towards 2030, the development of a circular economy and a bioeconomy may improve Danish businesses' resource effectiveness and competitive ability considerably and create new, good jobs in rural areas.

Preliminary analyses, initiated by FH, indicate a combined job creation potential from these types of investment, including the expansion of energy production, of more than 200,000 man-years (excluding permanent jobs within operations).[13] It is important that one actively ensures that these jobs are "good" in the sense that they are secure and well-paid etc.

Strengthened education - throughout one's working life.

Secure a socially just transition: the need for a strengthened education

The development of green technologies up until 2030 and 2050 will require strong and creative minds, as will their implementation, operation and disassembly and recycling in a circular economy. Nevertheless, ideas and skills do not arise out of the blue. It is important that education and further education create a greater feeling of ownership of the green transition, since this will give employees the opportunity to contribute more actively. In this sense, education can be a cornerstone in securing social justice in the green transition.

It is presumed that only a few work functions will remain unaffected by the green transition over the next 10–20 years. The green transition will undoubtedly lead to changes in types of jobs and in the labour market. New job functions will also emerge, existing job functions will develop, and some functions will possibly disappear completely. The generation that is currently being educated at the beginning of the 2020s will still be in the labour market in 2050, and they will be able to implement and develop new climate-neutral technologies over the next decades. It is not possible to predict the many different types of job and which highly specific skills the green transition will create. The need for new skills will, however, make great demands on both the general education system and the further and higher education system.

The Danish flexicurity model creates a solid foundation for a labour market undergoing change, and adaptation of a labour force that is prepared for change. On the other hand, the model makes the process of hiring and firing easier for employers. This may make transitional periods less expensive and faster. On the other hand, employees are protected by a solid social safety net and they have access to education and vocational training during periods of unemployment. The model thus supports a transition in which employees – even though they have a higher risk of unemployment – enjoy relatively high economic security and swift access to relevant training. However, the Danish model only works when all elements are taken into consideration in the preparation of new legislation or in tripartite agreements.

The Danish model must be further strengthened to support the acquisition of necessary skills in order to achieve the climate goals in a cost-effective manner. It is crucial that we establish education systems – including post-education and adult education programmes – that are flexible, coherent and clear, so that young people, unemployed individuals and those in work can quickly receive an education, upgrade their skills or be retrained, so that they are capable of taking the green jobs that will emerge in the future. An analysis from the Danish Trade Union Confederation shows that far more employees would take part in further education if businesses systematise this. For this reason, educational planning for employees should be taken just as seriously as holiday planning for employees.[14] Lifelong learning – both in and outside the workplace – should form part of the investment in the green transition.

For unskilled and skilled workers with outdated educations, it is important to identify and eliminate challenges to participating in further education that will make them more relevant in the labour market, for example, in relation to operating or maintaining future green technology. One way of doing this may be through political agreements like the one entered into in the summer of 2020 in which training programmes for unskilled and skilled workers with outdated educations were made more easily available. Among other things, the agreement made it possible to take vocational training at 110 per cent of social benefits when it is related to jobs where there is a lack of labour. In this way, benefits can be used as part of the green transition, since this makes it easier for unemployed individuals to gain a new and relevant education that meets demand in the labour market.

A social safety net secures a socially fair transition and support ambitious climate policies.

A strong social safety net is the key

There is a need for a strong social safety net in order to secure a just transition and constant support for ambitious climate policies among the population. People are more likely to choose a new type of education, give priority to further education and to explore new business models if they do not need to fear unemployment. The same applies to workers in traditional jobs who are facing the risk of losing their jobs as a consequence of the green transition. They will probably not resist a green transition if they are not afraid of unemployment as a result of it. As is the case with education, the flexicurity model in Denmark is a good basis, but there is a need to further strengthen some aspects of it.

FINLAND

Finnish energy and climate policy

Finland's current government has set itself and future governments the goal of achieving carbon neutrality by 2035. In reality, this means that any emissions from Finland shall be compensated for by carbon take-up in, for example, forests and fields. The 2035 goal is not legally binding, however. The government is currently updating its national strategy, which is expected to be ready in the summer of 2021.

Finland also has a Climate Act that aims to support the transition to a low-carbon economy. For example, the Climate Act requires that the government regularly draws up plans outlining initiatives that will guarantee reductions in emissions. Furthermore, the Act states that any government must be advised by a scientific climate panel on climate-related issues.

Climate action plans and a socially just transition

Since the parliamentary elections in April 2019, Finland has been led by a centre-left-green coalition headed by the Social Democratic Party. The new government programme includes as a key priority the battle against climate change. The first words in the programme are "Climate change".

Finland's electricity production is relatively clean, since more than 80 per cent of the electricity generated is CO2-free.[15] For this reason, district heating, transportation and manufacturing are the next major sectors that will be focused on in Finland's climate policy. The government has chosen first to produce climate action plans for each of these sectors. Beyond the technological

action plans the government is obligated to involve the trade unions in this work so to ensure they also cover the aspect of a socially just transition.

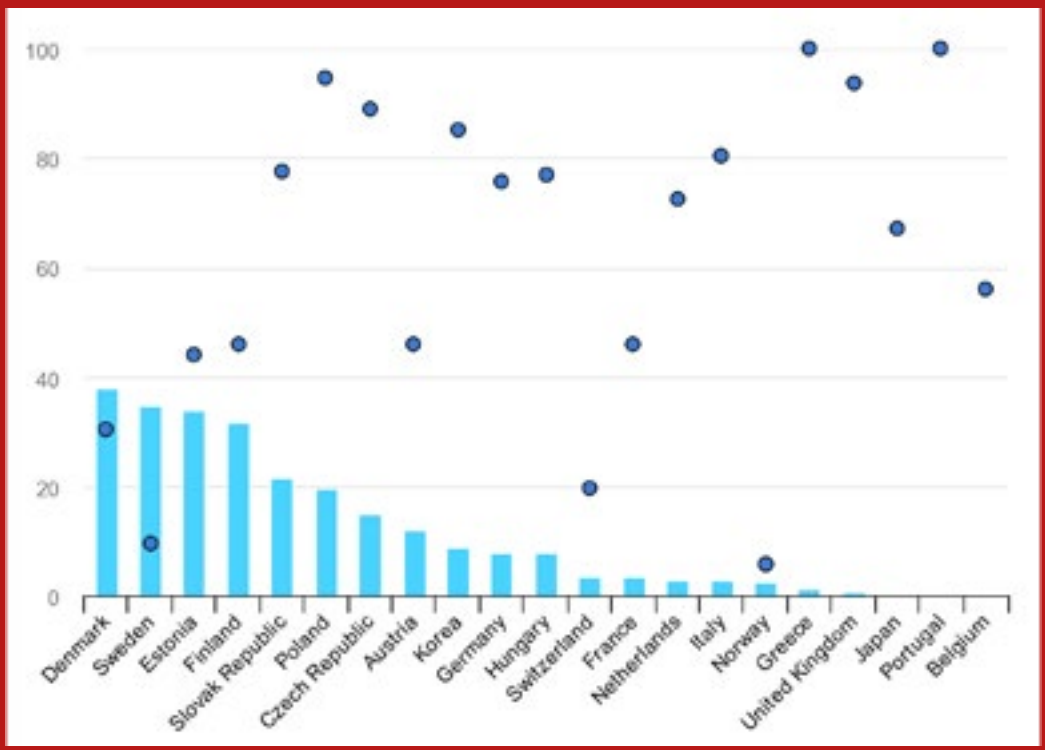
The Finnish market for household heating is dominated by district heating systems. Approximately 50 per cent of household heating comes from district heating,[16] which is particularly important in cities and larger rural towns. Over the last 15 years many energy suppliers have shifted from fossil fuels and peat to sustainable fuels, particularly biomass, for heat production. However, biomass is not considered to be a sustainable solution, particularly not in the largest cities. For this reason, there is a clear need for a plan of action for district heating, one that makes it possible for Finland to convert the district heating sector in a sustainable way.

District heating initiative

Unlike gas heating in households, which is used for heating in many European countries, district heating is relatively easy to decarbonise. Heating power plants and furnaces that use fossil fuels are still those most used, but biomass and other forms of low-emission fuels are gaining ground. In the future there will be even better opportunities for district heating. Heat exchange pumps are already being used. These use heat from waste water, data centres and other sources, and small nuclear reactors that produce heat are expected to be part of the solution. One additional advantage is that this will reduce the burden on the electricity sector if there is a national need.

TEXT BOX III: District heating is a considerable energy source in the Nordic countries – and it is easy to decarbonise

Share of district heating in household energy consumption (columns) and the share of fossil fuels in the production of district heating (dots).



Source: IEA

The Finnish energy system is dependent on nuclear power. It is expected that the share of Finland's energy production from nuclear power will grow from 30 per cent to 45 per cent when the Olkiluoto 3 facility has been completed. The problem with current major power plants is that they are only designed to generate electricity. The heating of Finnish towns is based on district heating, particularly in larger towns, and the heating power plants are as mentioned still primarily driven by coal and gas. Owing to limited access to biomass and the introduction of legislation requiring the phasing out of coal by the year 2029, there has been a lot of discussion about the possibility to produce district heating from small modular nuclear reactors that only produce heat. These reactors are smaller than existing facilities and are also lighter and more secure to operate than larger plants. There are several benefits from nuclear power: nuclear power plants emit neither CO2 nor pollutant substances, and they are very economical compared to fossil-based power plants.

Finland's Technical Research Centre (TRC) is currently working on a suitable reactor design. In the next phase of their work, TRC will seek state and possible private funding to complete the design. The possibility of creating a Public Private Partnership is also being investigated. The programme has a huge potential since the demand for district heating is high. Small modular reactor designs are also being planned, since they are well-suited in, among other things, the production of hydrogen.

The development of district heating from nuclear power has the potential to benefit both the battle for the climate and the economy. By supporting the development of new technologies, it is possible to secure a reduction in CO2 emissions while also creating completely new industries, exports and green jobs.

Small nuclear reactors are only one of several possibilities in relation to district heating. Some countries may choose not to use nuclear power. However, the wide-scale use of district heating in Finland and the Nordic countries means that small-scale nuclear reactors and Nordic-based technology can inspire other countries to decarbonise the heating sector and simultaneously create new jobs in the industry.

The phasing out of peat

Peat has traditionally been a very important source of energy, particularly in connection with district heating and electricity-producing furnaces in Finland. Its properties (e.g. it prevents rust in biomass furnaces) means that peat is often used, as part of a mixture of fuels in biomass facilities and at present it covers around five per cent of the country's energy production.[17] Since it is not a sustainable source of energy, it will be phased out for climate reasons.

The peat sector has traditionally been treated well, i.e. with lower taxes than fossil fuels, since it is a local form of fuel. In addition, the peat industry employs several thousand workers during the summer months. In some regions it has been an important part of the local economy. For this reason, peat has been a difficult climate policy issue.

A date has now been agreed for the phasing out of peat, as part of the just transition in the EU's Green Deal. There will therefore be considerable funding available to support the process of phasing out peat. In order to guarantee support from society for wide-reaching climate initiatives, it is crucial that people who are affected by the transition be looked after. Which specific initiatives that will support the transition from peat to sustainable energy sources are as yet undefined. Management of the phasing out of peat may create a precedent for a socially just green policy for the transition in other sectors in Finland and the EU.

ICELAND

The Icelandic context

The Icelandic government launched its Climate Action Plan in September 2018 to speed up its reduction in CO2 emissions and reach its Paris Agreement goals of a 40 per cent reduction by 2030. Iceland's goal is to be carbon neutral by 2040.

Iceland has a unique profile when it comes to CO2 emissions and solutions. The country's electricity is produced almost entirely from renewable sources, i.e., hydroelectric, and geothermal energy. Iceland has been using geothermal heat for heating buildings and homes since 1930, as an alternative to coal and oil. The primary source of electricity is hydropower, but geothermal steam also plays an important part. The country's electricity and heat production are currently practically CO2 neutral. Fossil fuels are used by the transport and fisheries industries. The aim is to decarbonise these sectors and to set aside sufficient public funds to ensure this. The biggest source of greenhouse gas emissions is fossil fuels for cars, ships, and agriculture. In 2016, road transport accounted for 20 percent; fisheries for 11 per cent; heavy, industrial processes and chemicals for 42 per cent; agriculture for 13 per cent; and waste management for five per cent.[18]

CO2 tax

Iceland has a general CO2 tax that covers all fossil fuels. The tax rate was increased by 50 per cent in early 2018, by another 10 per cent in 2019, and yet another 10 per cent in 2020. This is a simple and efficient way of cutting carbon emissions.

CO2 neutral transport

Iceland is promoting CO2 neutral transport. Electric cars and other non-polluting vehicles have zero charges and taxes, and important infrastructure, including public charging points, is under construction. The government has allocated funds to support building such points for electric cars. The scheme will be further developed to include infrastructure for other types of clean energy and fuels, including hydrogen and methane. Subsidies will be based on a needs-analysis that will identify bottlenecks and opportunities in coordination with local governments, car hire companies and others.

Public transport

Iceland has not a had large public transport infrastructure network in place; there are, for example, no trains in Iceland. As a first step in promoting public transport, the government and metropolitan Reykjavik, spearheaded by its mayor, recently signed an agreement on major investments in public transport. In coming years, special lanes will be built to accommodate a Bus Rapid Transit System (BRT), in which buses have dedicated lanes. This will improve reliability, efficiency, and service in public transport.

Afforestation, reforestation, and wetland restoration

Afforestation and reforestation are important measures to reach Iceland's CO2 neutrality commitments. Today the island has practically no forests but when the country was first settled, some 1100 years ago, the landscape was different. Around 25–30 per cent of Iceland's surface was covered by birch but in the following centuries, Iceland suffered a massive deforestation. The government therefore subsidises reforestation to help absorb carbon from the atmosphere, a programme that relies on many participants. The Icelandic forestry and soil conservation service works with local and regional forestry associations to make Iceland green again.

Afforestation is producing results in Iceland.

The Soil Conservation Service has also launched wetland restoration projects to help reduce greenhouse gas emissions and re-establish the biosphere, bird wildlife and improve water resources. The total length of drained trenches is estimated at some 34,000 kilometres. The axis of the wetland restoration effort is cooperation between farmers, landowners, municipalities, and Iceland's central government to reclaim lands that are not used for agriculture or forestry. Reclaiming wetlands is a relatively fast and inexpensive way of cutting Iceland's greenhouse gas emissions.

Future-orientated policies

The Social Democratic Party, Samfylkingin, in opposition, and the Icelandic Confederation of Labour, ASÍ, argue that, in order to respond to the economic instability caused by the COVID-19 pandemic, Iceland needs to create green jobs by accelerating public transport works and focusing on green innovation. Samfylkingin has criticised the government for lacking ambitions in its climate commitments, and for not investing enough to attain those goals nor to prepare Iceland for a greener future. Samfylkingin believes that Iceland, boasting vast amounts of green energy and resources, and a unique nature and environment that attract millions of tourists every year, should be a leading example in fighting climate change. Currently Iceland is lagging behind its Nordic neighbours.

Samfylkingin published an Action Plan on 8 October 2020 with a focus on modern, green employment, particularly in high productivity industries, aimed at creating value added and well-paid jobs. To start the process, Samfylkingin proposes that a publicly financed, green investment fund be established. The fund should support the development of climate-friendly businesses and green, high-technology industries, and reinforce the Fund for technological development and R&D in green technology. Samfylkingin wants to accelerate the process through energy transition, afforestation, reforestation, and wetland restoration and thus create green jobs more quickly.

NORWAY

The Norwegian climate framework

Norway wants to cut its greenhouse gas emissions in cooperation with the European Union. In the agreement on climate change with the EU, Norway has committed to working with the EU on reducing Norwegian CO2 emissions by at least 50 and up to 55 per cent by 2030 compared with the 1990 level. This agreement on climate change sets the framework for Norway's climate change policies and is designed to stimulate transition to a low emission society. The long-term vision is that by 2050, emissions will be reduced by 90–95 per cent.

The Norwegian labour movement is more ambitious. Their specific goal is that Norway officially set a target for 2030 of a 55 per cent cut and that this applies to the entire economy (ETS and non-ETS sectors alike). Their ambition is also to achieve CO2 neutrality by 2050 instead of a 90–95 per cent cut in emissions.

Norway's climate change policies are based on the principle that the polluter must pay and that the sustainability goals should be attained as efficiently as possible. Cutting greenhouse gas emissions in Norway is costly. More than 80 per cent of Norway's greenhouse gas emissions are already either taxed or are part of the EU Emissions Trading System (ETS).

The Norwegian context

As in other countries, the need for transitioning to a greener economy that emphasizes durable energy, sustainability, and a circular economy is very high up on the political agenda in Norway. We are different from the other Nordics in that we are still a major oil exporter. In Europe, we are the second largest, only surpassed by Russia. The oil and gas sector make up the most important industrial cluster in Norway and, even more importantly, a great part of the maritime and service industries have been heavily dependent on the constant enlargement of the oil fields. A substantial part of industrial innovation in Norway taken place in this broadly defined sector.

Norway's oil wealth comes from oil exports, which afford long-term revenues, since there will still be a global market for oil. As fewer new fields, and thus also fewer new platforms and pipelines, will be developed, demand for labour in the oil industry will plummet long before the last barrel of oil or the last ton of gas has been exported, as the mere production of oil does not require much labour once the facilities have been constructed.

It is well known in Norway that we need to establish a broader industrial base and that we need to build future industries on the shoulders of those that exist today. But even if there is broad agreement on the direction the green transition must take, there is considerable disagreement on how fast we should proceed.

The Labour Party and the National Confederation of Trade Unions, LO, steer a middle course in this debate: we are against "outphasing plans", but we strongly believe in building up new industries in good time. We need sectors that can create sources of income alternative to those that will in future be adversely affected by the fall in demand from oil companies. This process was well under way before the crisis caused by the pandemic, and the Labour Party published a detailed "North Sea Plan" with this very goal: to cut emissions and create jobs, placing the North Sea once again at the centre, just as it was 50 years ago when we embarked on the oil adventure.

To achieve greater change and a more profound transition, the central government, companies, workers, and researchers need to work even more closely together. We argue in favour of targeted, industrial national policies that audaciously include clear "social" missions, ambitious goals, stimuli, and partnerships while also favouring the climate and economic sustainability. These policies need to go hand in hand with political actions that ensure social justice both during and after transition.

Norway has great potential for "new" industries

The good news is that many of the industries that will be in demand in future are especially relevant to Norway because of our big, maritime industry.

Floating offshore wind power

Floating offshore wind is expected to become a major export in future. Even though floating windmills are currently more expensive than bottom-fixed windmills both on land and offshore, floating offshore wind power will make building bigger mills and placing them anywhere feasible, enabling the exploitation of optimal conditions for wind and demand and with minimal adverse effects on other industries. Economies of scale will ultimately also make offshore wind a sensible alternative. Our solid offshore expertise from the oil industry is highly relevant to the development of offshore wind. There is already production of and expertise in constructions that can withstand extreme weather, coating, positioning systems, solid and complex cables, supply ships etc. The Labour Party has proposed several specific initiatives to further develop this know-how on a larger, industrial scale. We have also proposed establishing power networks in the North Sea to connect producers and consumers.

Carbon Capture, Utilisation and Storage (CCUS)

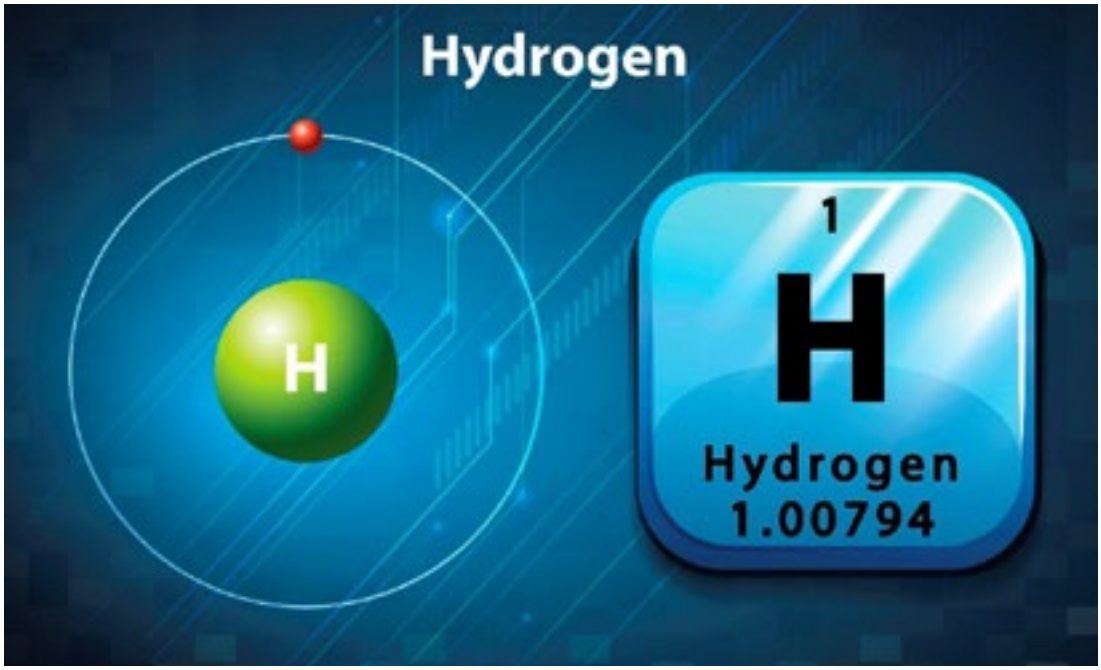
Jens Stoltenberg's government built the biggest and most advanced test facility for CCS at Mongstad, north of Bergen. It attracts great interest from companies worldwide that develop CCS as an industry. A huge storage facility under the North Sea, the "Northern Lights", that will be able to store a large percentage of Europe's CO2 for decades to come, is almost completed. The Labour Party, LO, the Confederation of Norwegian Industries, NHO, and the environmental movement are applying pressure to secure funding for two full-scale CCS projects initiated by the government of Erna Solberg. These projects will, among other things, service cement production in Breivik. Pressure is also increasing to secure funding for a waste treatment plant in Oslo. Norway will then be able to demonstrate the whole CCS value chain to the world within a few years. This is of paramount importance, as it provides an opportunity to reduce CO2 emissions much faster in existing industries, while the fight to cut CO2 from all industrial processes goes on unabated, and thus the negative impact on the labour market and on revenues will be much less dramatic. There are also experiments on the utilisation of CO2 in the pipeline. But to become a climate friendly solution, we have to investigate how to utilise stored CO2 while still keeping it "captured", e.g., in permanent structures. Otherwise, we risk simply delaying the release that we want to prevent.

Hydrogen and fuel cells

Hydrogen and fuel cells are also interesting, emerging industries. In a rapidly electrified world, battery needs are expected to grow by as much as 1300 per cent in the next decades.[19] Norway is well placed to develop this further, as the country has relevant industrial bases in, e.g., electro-chemicals, and a surplus of cheap, clean energy, which have enabled the construction of a number of new hydrogen and fuel cell plants this year.

One of the most promising developments is the expected rapid transition to hydrogen. In short, the two most important energy carriers in future will be electrons and hydrogen (including

Currently, "grey" hydrogen production is primarily based on coal, oil, and natural gas. However, if CO2 is stored in CCS facilities, this hydrogen is "blue", and if hydrogen is produced by solar and wind energy, it is "green".



derivatives, such as ammonia). It is expected that all light limited range transport will be electrified, i.e., private cars, ferries, short distance planes etc., while heavier means of transport needing longer ranges will use hydrogen or ammonia, including ocean-going vessels, trains, trucks, long-distance planes, and the like.

This opens a whole new horizon for industrial development in e.g., post-fossil shipyards. The Norwegian Shipowners' association, Rederiforbundet, has taken a very ambitious stand. They have promised that as of 2030, none of their members will acquire fossil fuel vessels, and that by 2050, they will stop operating such vessels altogether. The value of the Norwegian commercial fleet is among the top five in the world, so this is not a frivolous statement by a private player. With sufficient state support through legislation, tax incentives, R&D etc., this can be a prime driver of the maritime industry and mitigate the impact of vanishing oil contracts . Hydrogen also has applications other than transport. A number of large industrial processing companies in steel, aluminium etc. are currently investigating how hydrogen may replace natural gas in their processes.

Norway has potential for producing both "green" and "blue" hydrogen. Green hydrogen is produced by splitting water by electrolysis, which requires electricity. There are currently frequent surpluses of electricity and with an increasingly limited exchange capacity, prices often fall close to zero. These low-price periods would lend themselves to the development of future hydrogen plants, which have the advantage of being able to regulate their production of hydrogen in line with price fluctuations. But if we include the expected growth in demand in the equation, it will take too long to arrive at a scale that enables a total decarbonisation of European industry and transport. Enter blue hydrogen, which is natural gas transformed into hydrogen through CCS. The remaining deposits of natural gas and the perspectives of a substantial phasing out of natural gas in its CO2-emitting form, as established in the European Green Deal, create an immediate potential for Norway's production of large volumes of non-emitting blue hydrogen. This is why the Labour Party has argued that Norway needs a strong and ambitious national hydrogen strategy, strong incentives for the production and use of hydrogen, and should establish a state-owned hydrogen company that can act as an industrial locomotive, the way Statoil (now Equinor) did in the early days of the oil boom.

SWEDEN

The Swedish context

In Sweden, emissions have decreased over time, but progress istoo late. Concrete initiatives are needed for Sweden to become fossil fuel-free and comply with the Paris Agreement and fulfil the government's ambition to become the world's first fossil-free welfare state and thus contribute to the UN Sustainable Development Goals. Sweden wants to solve climate change challenges through clear and ambitious climate goals and by modernising Sweden. In itslast four-year period, the Social Democratic government made historically large climate-related investments.

We must ensure that all of Sweden is well prepared for a fossil-free future. Public policies must create a framework for gradual change, in which the whole country is involved. In this way, we can avoid the very high societal costs associated with rapidly changing conditions for citizens and business. The future is fossil-free, and the role of public policies is to achieve long-term and controlled, green, systemic change that takes account of the different conditions in urban and rural areas, among different income groups, and also individual circumstances.

Climate change policy framework

As a result of a broad, political agreement, Sweden's climate change policy framework entered into force in January 2018. The framework includes a Climate Change Act, a Climate Change Policy Council, and climate change goals. The Act commits the government to pursuing a climate change policy based on the goals adopted by Parliament, the Swedish Riksdagen. According to the overarching, statutory climate goals, Sweden shall be CO2 neutral by 2045. The Council is an independent body that shall regularly examine whether the government takes the decisions that are needed to attain the goals. For each new term, the government must also submit an action plan for achieving the climate change goals. These plans shall also be examined by the Council.

The Fossil-free Sweden platform

The Fossil-free Sweden initiative, launched by the government in 2015, prior to COP21, is a framework for cooperation between hundreds of actors, including businesses, municipalities, regions, research institutions, and civil society organisations, to achieve CO2 neutrality in different business sectors. Already 13 action plans have been submitted to the government and another eight are to be submitted in 2020. Involved industries include rock processing, cement, construction, food retailing, aeronautics and civil aviation, mining and metal industries, shipping, forestry and related industries, steel, heating, freight transport and oil. The action plans contain the industrial players' own proposals for transitioning to CO2 neutrality and the public policies needed for this to happen.

To achieve zero-emissions by 2045, we have to achieve zero-emissions in most sectors.

Transport systems will be restructured

The labour movement is an international movement, and we wish to protect an open world in which people meet. But we must travel in a more sustainable manner. Emissions from the international transport sector are expected to increase. Aviation and maritime transport are expected to become the biggest CO2 emitters by 2050, unless these industries are regulated into the Paris Agreement commitments.

Emissions from aviation mustbe reduced. We have introduced a tax on aviation in Sweden, and we will examine the feasibility of making landings and approaches less polluting, introduc-

ing an obligation to cut emissions, and using biofuel also in civil aviation. Electrification of civil aviation is also under consideration. We need to drastically reduce the free quota allocation to civil aviation under the EU Emissions Trade System and adopt binding goals for European maritime transport, currently non-existent in the EU.

To make the transition in road transport, we must establish a streamlined, smooth road transport system and cut emissions. The means with which to achieve this include our emission commitments, which involve gradually phasing in biofuel, and electrification, which involves developing electrified roads, enlarging the charging infrastructure, and producing new and better batteries. We would welcome support from the EU for this development in the form of stricter emission requirements for new vehicles.

Electrification can speed up the reduction in emissions from the transport sector and there is therefore a need for developing this infrastructure in all of the EU to support and accelerate the process. There are currently two pilot projects testing two different kinds of electric roads. These would enable trucks and other vehicles to recharge their batteries while driving. One pilot project connects the truck with a rail embedded in the asphalt. The second pilot connects the truck to overhead power rails, such as are currently used for trolleybuses, trams, and trains. The technology only requires electrifying a small part of the road network. Sweden, for example, has 400,000 km of road but only needs to electrify 5,000 km for trucks and cars to operate smoothly. The government has decided to develop a national plan for electric roads and to enlarge the pilot projects with another two stretches of road. The European Commission has proposed additional investments in sustainable transport, not least in alternative fuels and sustainable transport infrastructure (including one million new charging points). The automotive industry is already involved in the transition to increase the electrification of road transport, but there is a need for stronger measures to ensure that the necessary infrastructure is in place.

The Swedish government is now ready to realise the biggest investment in trains in modern times, which will have enormous impact on the country's ability to attain its sustainability

Electrification of the road network. The first road using wireless charging was inaugurated in Gotland last year.

goals. We would also welcome more investments in rail in all of Europe, better night train services, better passenger rights and better connections. We must change the structure of incentives for people to choose green means of transport.

Industrial emissions are to decrease to near zero

Industry accounts for approx. 30 per cent of Sweden's greenhouse gas emissions.[20] The most important sources are steel and cement plants, and chemical industries. We want to pioneer active climate policies and investments in climate-friendly technology that also sharpens our competitive edge. We want companies to profit from acting in environmentally friendly ways and thus invest in climate friendly, industrial processes. There are solutions that make all of the above industries sustainable. The Swedish steel industry has established the HYBRIT project to develop new technology for producing fossil free steel, using hydrogen instead of coal, with the aim of having a fossil free steel production by 2035. If the HYBRIT project is successful, Sweden could reduce its CO2 emissions by 10 per cent, and Finland's by seven per cent.[21] The cement industry also plans to use CCS technology. The increased use of recycled concrete will reduce emissions even more. The chemical industry is a heavy user of fossil oil but can replace it with bio-oil. The chemical re-use of plastics in the production of pyrolysis oil and increased production of biogas is also necessary to restructure the chemical industry.

The technological conditions for a green transition are good but research and continued investments in business and industry are important. Swedish companies have a strong commitment to change and through the Fossil Free Sweden initiative industries have on their own worked out action plans towards zero emissions.

In Sweden, we have strong traditions for adapting. In the transition to a fossil-free society, we stand united to tackle climate change while also creating green jobs.

Trade union climate agreements: A socially just transition and new green jobs

The price of lower emissions must never be the loss of jobs and livelihoods. The fear of certain jobs disappearing must not lead to resistance against the climate goals. Both climate goals and employment must be ensured for the transition to be socially just.

"Think Global, Act Local" is a very fitting slogan for the green transition. By starting with the individual workplace, those who are most affected by the transition can influence their own future. They can also more easily understand what a transition towards climate neutrality means for their working and living conditions. A local point of departure allows for greater participation and democratization of the green transition, and thus also ensuring that it is socially just.

Even though greenhouse gas emissions are local and must be handled locally, many of the solutions will require wider cooperation through international funding schemes, e.g., the EU green subsidies and the different funds that are established under the auspices of the UN climate negotiations. It is paramount that these funds and cooperation also offer opportunities for upskilling and competence development, further education and retraining for those who lose their jobs in e.g., fossil fuel sectors, including oil, coal, and natural gas.

To ensure a socially just transition, trade unions and employers should enter into trade union climate agreements and agree on strategies for achieving net zero emissions in the different sectors. The agreements should stress the need for upskilling, competence development and new technology.

X. The need for joint Nordic solutions

The green initiatives that are highlighted by Denmark, Finland, Iceland, Norway, and Sweden cover a wide variety and either illustrate interesting, technological initiatives, or inclusive processes and actions aimed at ensuring a socially just transition. We are also aware that all countries need to implement a range of measures to resolve environmental and climate challenges. This applies to both different green technologies and political initiatives aimed at ensuring a socially justtransition. At the same time we will also have to use some of the same initiatives across the Nordic countries.

The Nordic Council of Ministers has placed the green transitionhigher up on the agenda in recent years, including a new Nordic programme cooperation for the environment and the climate 2019–2024, that focuses on sustainable development in the Nordic region, the EU and globally. The Council also emphasises cooperation in international negotiations and an active and ambitious follow-up on the implementation of international agreements on the environment and climate change, in which the ambitions of the Paris Agreement are at the core.[22]. Importance is also attached to implementing the Council's second, major initiative: Vision 2030. The Nordics have set their sights on becoming the world's most sustainable and integrated region that shares three strategic priorities for a green, competitive, and socially sustainable Nordic region.[23]

Since we are so deeply interlinked in the Nordic countries, it makes good sense to benefit fromeach other's competencies and develop joint Nordic solutions that we can all profit from while reducing CO2 emissions and protecting nature in our respective countries. Furthermore, we can jointly push for actions and policies in the EU and international forums. Areas that lend themselves well to joint actions to promote green technology could include:

Together, the Nordics can do more.

1. Nordic project cooperation to utilise experiences from green sector partnerships

In 2050, we will achieve net-zero emissions or less in more or less all parts of the Nordic economies. In addition to general policies, this transition requires binding cooperation on concrete plans and solutions, also across sectoral lines. Intersectoral cooperation is already underway within all of the Nordic countries. In Denmark, 13 climate partnerships make up the framework for cooperation between sectors; in Sweden, cooperation is formalised in the Fossil-free Sweden platform; and Finland is establishing intersectoral partnerships under the Finnish Climate Programme (See Chapter IX for details).

The specific form of intersectoral cooperation varies, but the idea is, in essence, the same. On the request of and in dialogue with authorities, players in private business and trade mustco-operate and implement measures to reduceemissions.

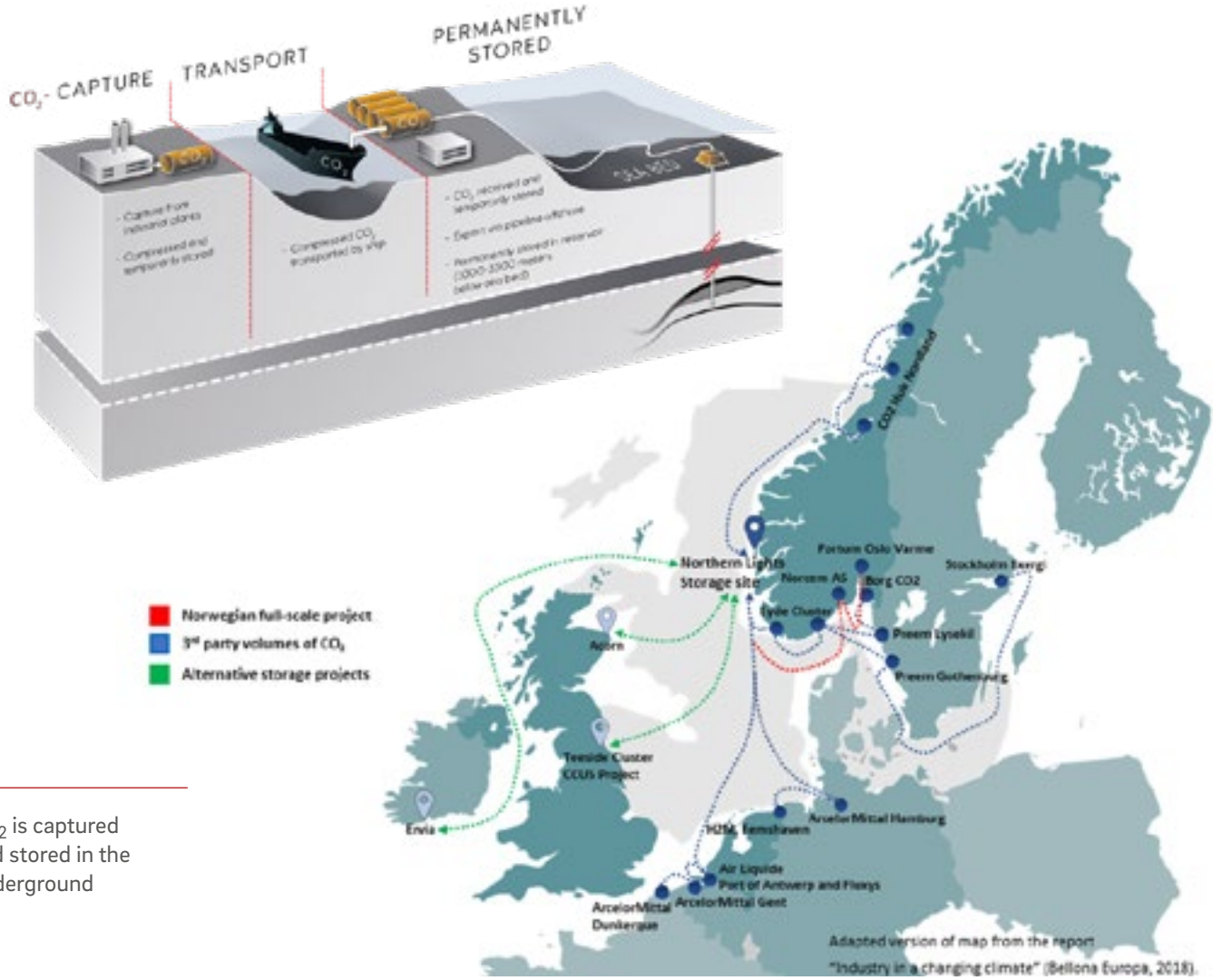
TEXT BOX IV: Denmark's 13 climate partnerships

- Land transport and logistics. Chair: Jens Bjørn Andersen, CEO, DSV Panalpina
- Service, IT and consultancies. Chair: Eva Berneke, CEO, KMD
- Civil aviation: Simon Pauck Hansen. Chair: CEO, SAS Denmark
- Waste, water and the circular industries. Chair: Camilla Haustrup Hermansen, CEO and co-owner, Plus Pack
- Building and construction. Chair: Jesper Kristian Jacobsen, Managing Director, Aarsleff
- Life Science and biotech. Chair: Lars Fruergaard Jørgensen, CEO, Novo Nordic
- Trade. Chair: Michael Løve, Group CEO, Netto International
- Production companies. Chair: Mads Nipper, CEO, Grundfos
- The finance sector. Chair: Torben Möger Pedersen, CEO, PensionDanmark
- Energy and supply. Chair: Henrik Poulsen, CEO, Ørsted
- Blue Denmark. Chair: Søren Skou, CEO, Mærsk
- Energy intensive industries. Chair: Michael Lundgaard Thomsen, Managing Director, Aalborg

The challenges facing the Nordics have common features in thatwe all have to reduce our emissions; in that we needenvironmental and climate policies that are socially just, and in that the a model of cooperation is at the core of the transition. At the same time, proposals and solutions resulting from the national partnerships will vary between countries. This is also due to the fact that their business structures and technological clusters differ.

These circumstances afford the Nordics a fruitful basis for learning. One could consider establishing a Nordic joint project to ensure that concrete ideas, processes, and initiatives resulting from national intersectoral project cooperation are disseminated and developed in the Nordic region as a whole. This would also strengthen Nordic cooperation between business and labour market players in general. There should be room for learning from each other, both in terms of forms and methods of intersectoral cooperation, and e.g., how workers and employers and their organisations are involved and contribute.

Consideration should be given to whether a project could be implemented under the auspices of the Nordic Council of Ministers. An overarching purpose would be to disseminate and discuss available national information, reinforce Nordic networks and propel the Nordics to the green pioneer region we would like to be. Similarly, close Nordic cooperation on national processes and actions on nature and the environment could also be considered.



CO_2 is captured and stored in the underground

2. Joint Nordic Action in Carbon Capture, Utilisation and Storage (CCUS)

Nordic cooperation on Carbon Capture, Utilisation and Storage (CCS) has great potential, both to achieve a smart and proactive climate change policy framework strategy, particularly within the EU, but also in respect of the concrete CCS process.

The point of developing CCS is to capture emissions from irreplaceable products that currently are technologically impossible to avoid, such as cement, while at the same time reducing CO2 emissions in general. The point is evidently not to maintain the current high levels of CO2 emissions from coal, for example, but one must keep in mind that even capturing and storing bioenergy may result in negative CO2 emissions.

An important aspect is that CCS also allows us to ensure that we do not simply relocate production, e.g., cement or biomass, and thereby also simply delocalise our CO2 emissions. Instead, CCS should afford us job conservation and creation, which is key to a socially fair green transition.

There is considerable research on CCS, and we are at a stage where Nordic governments actively prioritise technology. In Norway, the government recently signed an agreement to finance the world's first full-scale CCUS project,[24] which includes a CCS project at a cement factory in Southern Norway. Another project is underway at a waste incineration plant outside of Oslo that is operated by Finland's state-owned energy company Fortum. In Denmark, the

government has likewise invested in CCS after having set aside a considerable reserve[25] for promoting the development of technology, and proposals for additional research funding are on the table.[26] In Sweden, the CCS test facility at Preem's hydrogen plant at the Lysekil refinery is operational with a view to analysing the entire value chain and studying how the tested technology can be scaled up.[27]

TEXT BOX V: What is CCS and bio-CCS?

Carbon Capture and Storage (CCS)
CCS captures excess CO2 and sends it back into the underground, re-establishing the long-term balance of the CO2 cycle. This is achieved in three steps:

1. CO2 is captured by filtering exhaust gases from CO2 sources, e.g., industry and energy production.
2. The gas is compressed and transported in a pipeline or on ships to a reservoir in the underground.
3. The CO2 is pumped into the reservoir until it is filled up.

Research is also underway, in the framework of Carbon Capture, Utilisation and Storage (CCUS), on possible applications and not only storage of the captured CO2.

Bioenergy-CCS
Capturing CO2 from biomass affords dual benefits, biomass, such as straw, wood shavings etc. have already captured CO2 through photosynthesis. When biomass in transformed into biofuel, CO2 is released as exhaust gases that can be captured and stored. In this way, CO2 neutral energy is produced to replace fossil fuels and remove the CO2 that the plant has absorbed from the atmosphere.

Source: www.geus.dk/udforsk-geologien/fangst-and-lagring-of-co2 ccs

Cement is a major source of CO2 emissions in the Nordics and globally, probably accounting for as much as five per cent of total global annual CO2 emissions.[28] In Sweden and Denmark, cement factories are looking at CCS as one of many ways of reducing their CO2 footprint. A waste incineration plant in Copenhagen has planned to cut their CO2 emissions by 90–95 per cent (approx. 450,000 tons per year) using CCS and storing the CO2 in old oil wells in the North Sea. The Danish government is offering financial support and an application for additional funding has been filed with the EU Innovation Fund. Finland has also applied for funding from the EU. As to the practicalities of storing captured CO2, many are looking to Norway and the North Sea.

More research is still needed to operationalise the U (use) and the S (storage). We have a lot to learn from countries that have preceded us in testing and demonstrating CCS technology. Closer coordination can help avoid unnecessary competition for funds from the EU and instead ensure a more strategic cooperation on both EU funding and CCUS. The next step would then be to spread the message and ensure support for the Nordics' access to CCUS in the EU, i.e., that CCS will be necessary in coming decades until we have developed CO2 neutral production of essential products, and that there is a need for upscaling CCUS.

Norway presented their CCS strategy in 2014,[29] and Denmark is currently preparing a comprehensive strategy on CCUS. We thus see great potential for coordinating and working together on CCUS. One possible avenue is to develop a joint CCUS framework for the Nordics, including, among other things: 1. Exchanging experience and governmental best practice on how to involve industry and business. 2. Coordinating research. 3. Ensuring support for Nordic access to CCUS in the EU and taking a coordinating approach to the EU Innovation, Reconstruction, and Cohesion Funds.

3. Joint Nordic initiative for international, green partnerships: "Energy for Development"
The Nordic countries are strong and need to do their part and more at home to solve the nature and climate crisis. But we also need to act internationally. We have a responsibility – particularly since we, as wealthy countries, in general have the highest per capita emissions.

We are witnessing a new wave of industrial and technological innovation that feeds into green transition in several fields in the Nordic countries. The development of hydrogen, wind power, solar power and CCS are just a few components that make up the new, green energy system. Competent public and private entities help place the Nordics at the forefront of the European green transition. The Nordic countries are thus well placed to work with countries outside of the EU and assist the poorest countries and areas in their green transition. Reducing emissions and developing business models based on circular, renewable and sustainable technologies within Nordic borders could catalyse the green development and help developing countries minimalise the fossil fuel stage.

In light of the above, a Nordic energy aid initiative should be considered, perhaps designed as a cooperation with selected countries on developing plans for a 100 per cent renewable energy supply, from small to large scale and to phasing out fossil fuels. The Nordics can offer expertise in e.g., institution building and know-how from the Nordic energy sector and help mobilise finance to realise the plans.

By pooling resources, the Nordics can draw on each other's respective strengths. Sweden, for example, has excelled at rolling out small scale renewable energy, while Denmark is more commercial and has developed excellent business models while also working on international regulations and systems. Norway is experienced in large scale development, institution building and finance. A coordinated and comprehensive effort should result in less reporting and coordination in the recipient countries. A possible avenue is a "one-stop-shop", where countries could receive coordinated input to the restructuring of their electricity systems; from rolling out small-scale solutions that help to reduce poverty, to large scale construction needed to develop business and industry, create jobs, and generate tax revenues.

The coordination already taking place between the Nordic embassies in many countries could be strengthened further in this direction and a possible joint initiative could be put forward by the Nordic Ministers of Development in the context of the "Building Back Better and Greener" initiative.

The UN Sustainable Development Goals for 2030.

Notes

1. When it is necessary to reduce the sum of all global greenhouse gas emissions, but it is expensive for the individual (person, business, country) to cut their own CO2 emissions, it will, in the short run, seem economically advantageous not to do the cuts yourself, but rather "leave it to others" and thus become a "free-rider". Even though many factors play in, this feature of climate change challenges makes it more difficult to cut emissions for the individual / entity and also, as we have already seen, to achieve binding, international agreements.

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9. AGENDA (2020), 'Politikk for grønn vekst: Hvilke muligheter finnes i verktøykassen og hvilke bør brukes?'

10. Power-to-X: Green electricity can be transformed into hydrogen and from there to green ammonia, green methanol and similar and thus replace fossil energy in sectors that are unable to use electricity or batteries directly, such as heavy transport, some industries, oil and gas production and others. Read more at: www.energinet.dk

11. Developing and upscaling these technologies will be costly. In many cases, however, co-finance from private investors should be possible as these technologies in the medium term can generate considerable revenues, also from exports. In September 2019, Danish private investors said that they intended to increase their climate investments to DKK 350 billion by 2030. And in December 2019, the Danish government established a private/public fund, Denmark's Green Future fund, which could potentially furnish some of the above investments. (Office of the Prime Minister, 2019: The Prime Minister and the Danish pensions industry announce billions in investments in the green transition, https://www.stm.dk/presse/pressemeddelelser/statsministeren-og-den-danske-pensionsbranche-annoncerer-milliardinvesteringer-i-groen-omstilling/; Regeringen, 2019, Danmark Grønne Fremtidsfond, www.regeringen.dk/nyheder/2019/fl20-danmarks-groenne-fremtidsfond/).

12. Fagbevægelsens Hovedorganisation (2020), 'Sammen skaber vi Danmark – sammen skaber vi grøn omstilling. FH's helhedsplan for en retfærdig grøn omstilling'; see also Mazzucato, Mariana (2013) 'The Entrepreneurial State: Debunking Public Vs Privat Sector Myths'. London: Anthem Press.

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14. Fagbevægelsens Hovedorganisation (2020), 'Sammen skaber vi Danmark – sammen skaber vi grøn omstilling. FH's helhedsplan for en retfærdig grøn omstilling'.

15. Source: https://www.slideshare.net/energiateollisuus/energy-year-2019-electricity - Slide 12.

16. Source: https://www.slideshare.net/energiateollisuus/district-heating-in-graphs-year-2019 - Slide 3.

17. Source: Statistikcentralen Finland. http://www.stat.fi/til/ehk/2019/04/ehk_2019_04_2020-04-17_tie_001_en.html

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21. SSAB (2020), 'Först med fossilfritt stål med HYBRIT teknik': https://www.ssab.se/ssab-koncern/hallbarhet/hallbar-verksamhet/hybrit.

22. Nordisk samarbejdsprogram for miljø og klima for perioden 2019 til 2024: https://www.norden.org/da/node/33706 og læs evt. også prioriteringerne for det danske formandskab af Nordisk Ministeråd i 2020: http://norden.diva-portal.org/smash/get/diva2:1362813/FULLTEXT01.pdf

23. The concrete focus is on reducing the use of plastics, further developing the Nordic electricity market, exploring the possibilities for converting green electricity into fuel, the green transition of business, further work on the Helsinki Declaration on CO2 neutrality the Nordic countries, sustainable transport, joint initiatives ahead of COP15 and the UNEA5 summit, the circular economy, mobility in the labour market and the world of work in future, artificial intelligence, sustainable cities, and sustainable value creation in the coastal communities of the future.

24. NOK 16,8 billion of the estimated NOK 25,1 billion are put up by the government: https://electrek.co/2020/09/21/norway-world-first-carbon-capture-storage-project/

25. DKK 3,135 billion from 2024 to 2030. https://fm.dk/media/18085/klimaaftale-for-energi-og-industri-mv-2020.pdf

26. Carbon capture, Power-to-X, climate and environmentally friendly agriculture and food production, and recycling and reduction of plastics waste. The Social Democratic movement aims for prioritising these four missions by allocating DKK 750 million during the negotiations on the research reserve for 2021.

27. Chalmers (2020), 'Sweden's largest CO2 captue and storage plant launched': https://www.chalmers.se/en/areas-of-advance/energy/news/Pages/Launch-of-Sweden%E2%80%99s-largest-carbon-capture-and-storage-plant.aspx

28. J.G.J. Olivier and J.A.H.W. Peters May (2020), 'Trends in global CO2 and total greenhouse gas emissions': https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report_4068.pdf See also Robbie M. Andrew (2019), 'Global CO2 emissions from cement production. 1928–2018. Earth System Science Data': https://essd.copernicus.org/articles/11/1675/2019/essd-11-1675-2019.pdf.

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30. Denmark: Danmark's statistik, Finland: "Income and wealth inequality" (Tulo-ja varallisuuserot) by Marja Riihelä and Matti Tuomala, in Kalevi Sorsa Foundation (2020) The state of inequality in Finland 2020, ed. Maija Mattila, Norway: Statistics Norway (SSB), Sweden: Statistics Sweden (SCB). The figures for the Nordic countries are estimates based on averages of not fully comparable figures from the respective countries. Please note that Iceland is not included.

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Page 39: The UN Sustainable Development Goals (www.verdensmaalene.dk)

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SAMAK is the Labour Movement's Nordic cooperation committee. The abbreviation SAMAK comes from the Nordic concept "samarbejdskomité", which means cooperation committee.

SAMAK's member organisations are the Social Democratic parties and trade unions in the Nordic countries, as well as the parties in Greenland, the Faroe Islands and Åland. It has a total of 13 members:

Social democratic parties

- The Social Democratic Party, Denmark
- The Finnish Social Democratic Party, SDP
- The Social Democratic Alliance Samfylkingin, Iceland
- The Norwegian Labour Party
- The Social Democrats, Sweden
- Føroya Javnadarflokkurin, The Faroe Islands
- Siumut, Greenland
- Åland Social Democrats

Trade unions

- FH – Danish Trade Union Confederation
- The Central Organisation of Finnish Trade Unions (FFC/SAK)
- The Icelandic Confederation of Labour (ASI)
- The Norwegian Confederation of Trade Unions – LO
- The Swedish Trade Union Confederation - LO

WE BUILD THE NORDICS

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