

The Road Towards a Carbon-Free Society

A Nordic-German Trade Union Cooperation on Just Transition

**DENMARK
FINLAND
GERMANY
ICELAND
NORWAY
SWEDEN**



This publication is part of a joint project entitled **“The Road Towards a Carbon Free Society – A Nordic-German Trade Union Cooperation on Just Transition”**. The project is a collaboration between the Council of Nordic Trade Unions (NFS), the Friedrich-Ebert-Stiftung (FES) and the German Trade Union Confederation (DGB). Represented by the Council of Nordic Trade Unions (NFS) in the project are 13 national Trade Union Confederations within NFS, from five Nordic Countries: Denmark (FH, Akademikerne), Finland (SAK, STTK), Iceland (ASÍ, BSRB, BHM), Norway (LO-N, Unio, YS) and Sweden (LO-S, TCO, Saco).

A Just Transition towards a carbon neutral future is the most urgent environmental, social and economic issue of our times. This project aims to develop strategies and requirements from a trade union perspective on how to manage the process to a carbon free society. The participating labour organisations are united in their vision that this goal can only be reached if the social costs of this transition process are socially mitigated. This means harmonising efforts to combat climate change with the aim of ensuring decent working and living conditions. To this end, the participating labour organisations have not only analysed their respective countries’ transition path towards a fossil free future but have also formulated joint policy recommendations for the national and European arenas. The ensuing discussions and debate have strengthened the cooperation and dialogue between the Nordic and the German trade union movements on common challenges and solutions.

A total of six country reports on the Just Transition path of the participating countries (Denmark, Finland, Germany, Iceland, Norway, and Sweden) have been formulated. Each contains an analysis of the climate policies, economic and societal consequences, an evaluation of the respective national instruments and offers European perspectives. The main findings of the country reports are brought together in a synthesis. It features policy recommendations that aim to help guide the transition to a decarbonised society and an economy that is just and sustainable. The reports and their results are presented and discussed in a series of events nationally as well as in terms of Nordic and European cooperation and at the international level.

This is the Swedish country report and a collaboration between the Swedish Trade Union Confederation (LO), the Confederation of Professional Employees (TCO) and the Swedish Confederation of Professional Associations (Saco).

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Content

- 01** Current state of play | 04
 - 1.1** The impact of climate change on Sweden | 05
 - 1.2** Climate targets | 06
 - 1.3** Economy | 11
 - 1.4** Society | 12
- 02** National instruments | 13
- 03** European Instruments | 16
- 04** References | 21

01 CURRENT STATE OF PLAY

Table 1: Overview

	Sweden	EU-28/OECD
Population 2019 (EU-28 and Norway + Iceland)	10,200,000	519,160,000
Real GDP aggregates per capita, 2019	€ 43,840	€ 28,630
GHG emissions CO ₂ e per capita (excl. LULUCF), 2017	5.3 t	8.5 t
GHG emissions CO ₂ e (excl. LULUCF), 2017	53 mt	4,323 mt
Difference (excl. LULUCF) from 1990 to 2017	-26%	-23%
Net GHG CO ₂ e emissions/removals from LULUCF, 2017	-44 mt	-258 mt
Share of renewable energy in gr. final energy consumpt. 2018	55%	18%
Workforce, "active population", (aged 20-64), 2019	5,094,000	238,515,000
Collective bargaining coverage, 2016	90%	32%
Union density, 2018	66%	N/A

(Data source: Eurostat 2019a, Eurostat 2019b, UNFCCC 2017, Eurostat 2018, Eurostat 2019c, OECD 2016, OECD 2018)



1.1 **THE IMPACT** **OF CLIMATE** **CHANGE ON** **SWEDEN**

Global temperatures have risen about 1 degree on average, but the warming process is faster closer to the poles. In the northern part of Sweden, the average temperature is around 2 degrees higher than in 1860. Most of this increase has taken place during the last three decades. Heatwaves have increased. The sea level has risen by 20 centimetres since 1890, and this is in excess of the normal lifting of the land. Precipitation has increased. It rains and snows more, an increase of about 10 per cent. At the same time, the number of days with snow have decreased. We have more cases of extreme heat and drought that scientists connect to climate change. The increased global temperature slows down the jetstream which means that high pressure areas remain over Sweden for a longer time.

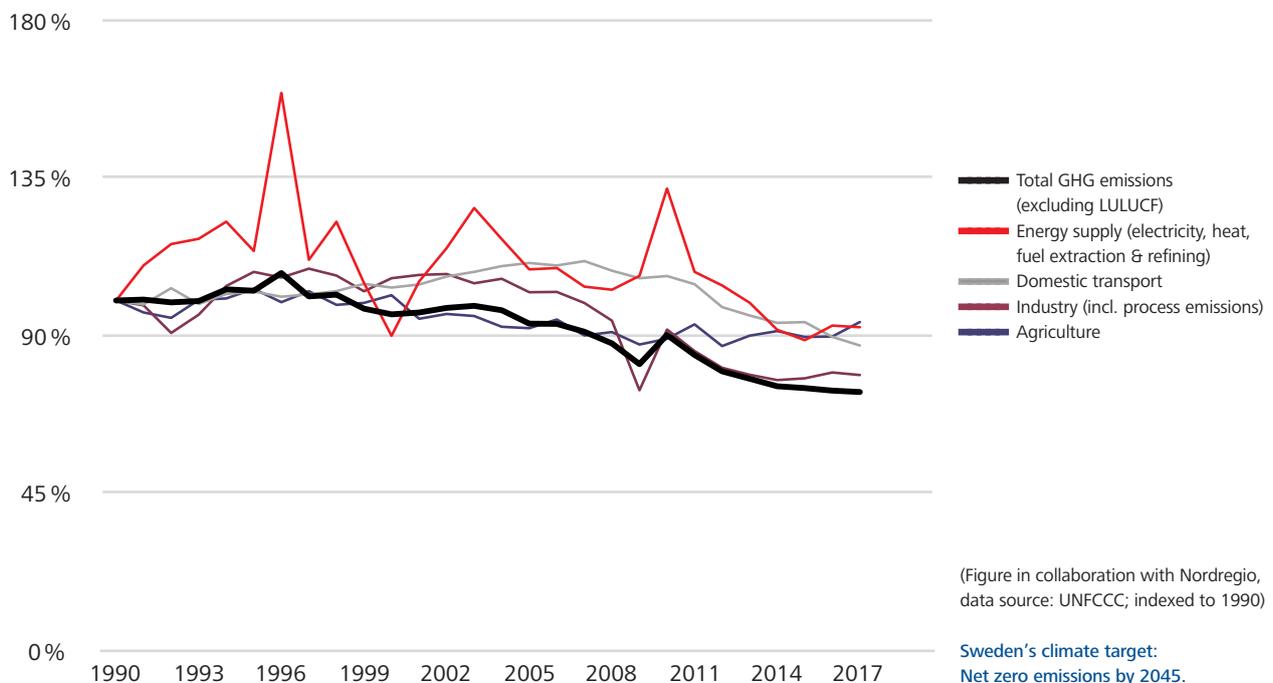
1.2 CLIMATE TARGETS

The purpose of Sweden's climate policy framework is to achieve the goals of the Paris Agreement. Sweden aims to be climate neutral in 2045 and have negative emissions thereafter.¹ By 2045, territorial emissions from activities in Sweden should be at least 85 per cent lower than they were in 1990. With the current population size, this would mean territorial emissions equivalent to 0.8 tonnes per capita.

There are also sub-targets. By 2030, Swedish emissions in the sectors covered by the EU Effort Sharing Regulation (ESR) should be 63 per cent lower than in 1990 and, by 2040, should be 75 per cent lower than in 1990.

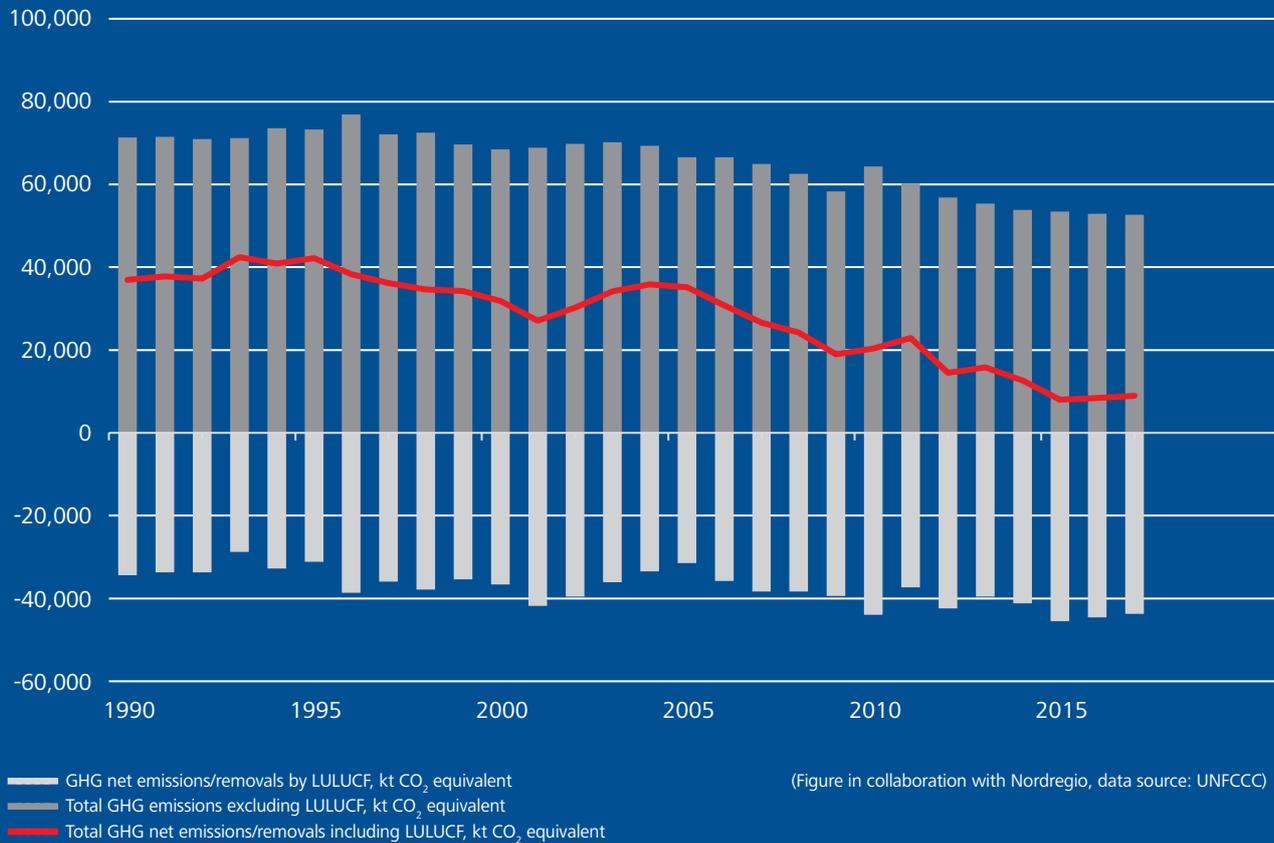
In the table on page 4 we see what is needed for net zero emissions by 2045. That is, for the amount of greenhouse gas emissions (GHG) emitted by Sweden to be less than the amount of GHG reduced through the natural ecological cycle, or through climate projects pursued by Sweden abroad. However, emissions from activities in Sweden must be at least 85 per cent lower than in 1990.

Figure 1: Sweden's domestic greenhouse gas (GHG) emissions, indexed to 1990 (100%)



¹ Negative emissions occur if human activity leads to the uptake of carbon dioxide in addition to the uptake that would otherwise have occurred naturally in the carbon cycle. Negative emissions of carbon dioxide arise when a greater amount of carbon dioxide is removed from the atmosphere by human activity than remaining emissions caused by human activity.

Figure 2: Sweden's total domestic GHG emissions including and excluding LULUCF in kt CO₂e



Sweden is a highly export-dependent country, so the effects of climate policies are largely dependent upon how other countries act. If the Paris Agreement becomes a reality and all countries take their responsibility to limit their territorial emissions to levels consistent with the Paris Agreement, then Sweden's strategy can work well. Investing in new technologies and goods and services that reduce emissions can lead to increased exports, employment, and growth. However, this requires both a European and a global consensus that climate-damaging activities should be prohibited or subject to charges that correspond to their actual cost.

Figure 3: The Swedish emissions reported to the UN and the EU

<p>Sweden's territorial emissions 2018</p> <p>51,779 kton CO₂eq 5.1 tonne CO₂eq per capita</p> <p>LULUCF and international transports excluded</p>	Transport sector 32%	Passenger cars, freight transport
	Industry 32%	Steel, cement and chemical industry
	Agriculture 13%	Animal digestion, farmyard manure and agricultural land
	District heating 9,5%	Waste incineration
	Working machinery 6%	Fossil fuels
	Waste 2,5%	Methane emissions from landfills
	Product use 3%	F-gases in cooling systems, lubricants and solvents
	Housing and premise 2%	Oil-fired heating

(Data source: Swedish Environmental Protection)

Between 1990 and 2018, emissions decreased by 27 per cent. Long-term emissions reductions mainly occurred between 2003 and 2014. The reductions can be partly explained by implemented measures (such as the transition to renewable energy and energy efficiency) and partly by halted growth in industry. The base year used for calculations of territorial emissions is 1990. Several measures that have affected the development of emissions development were introduced already before 1990. These include:

- extensive expansion of carbon-free electricity production (hydroelectric power and nuclear power as well as biopower and wind power in recent years)
- expansion of district heating networks and the subsequent transition from oil-fired boilers to both electric and district heating,
- high use of biofuels and waste fuels in the production of electricity and district heating,
- fuel changes in industry, and
- reduced landfilling of waste.

Sweden has a target of net zero greenhouse gas emissions by 2045.² To achieve this target, the rate of decline between 2015 and 2045 needs to reach an average of 5-8 per cent per year over time. However, this is an average for the period between 2015 and 2045, which means that the target can be achieved even if emissions reductions take place late in the period. The range corresponds to the proportion of additional measures used to achieve the net zero target.

Since Sweden lacks fossil resources, there are no sectors whose existence is based on the use of fossil energy. On the other hand, fossil energy is used in several sectors such as transport and industry. Sweden's climate goals require that the use of fossil energy essentially ceases and is replaced by climate-neutral forms of energy.

In the transport sector, greenhouse gas emissions are caused by road traffic. The emissions of passenger cars and heavy vehicles account for the largest share. Although passenger car traffic has increased since 1990, its emissions were 21 per cent lower in 2018 than in 1990. This can be explained by the addition of more and more biofuels to fuels and improved energy efficiency, which reduces the fuel consumption and carbon dioxide emissions of individual vehicles. However, this will not be enough to sufficiently reduce emissions. A higher proportion of fossil-free vehicles is required.

Greenhouse gases from heavy goods vehicles increased from the mid-1990s right up to the economic downturn in 2008. Although we saw steady annual reductions in emissions from heavy goods vehicles after 2009, we are not yet back at 1990 levels. In 2018, emissions were 12 per cent higher than in 1990. Emissions have been reduced mainly due to the increased share of renewable fuels.

To achieve the climate goals, logistics need to be improved, as well as opportunities to increase freight transport by rail and sea. To reduce emissions from the transport sector, the following changes may be required with subsequent results, all else being equal:

- More passenger transport by public transport => More jobs in public transport => Reduced passenger car use/production.
- Increased electrification of the vehicle fleet => Switch to new powertrains in the automotive industry => More jobs in the energy sector.
- More freight transport by rail and water => Reduced demand/production of heavy goods vehicles => Need to expand infrastructure => Increased demand for labour on railways and waterways.

² Net zero emissions are achieved when the human-caused greenhouse gas emissions (or carbon dioxide) corresponds to the human-caused uptake of greenhouse gases (or carbon dioxide).



Thus, for Sweden, it is not just a matter of having to transform the transport sector. The country is home to a large automotive industry, which produces passenger cars, buses, and trucks. They are currently powered by fossil energy but will need to change powertrains so they can be powered by climate-neutral energy.

The industrial sector also accounts for a significant proportion (32 per cent) of Sweden's territorial emissions. The sector's emissions have decreased since 1990 and were 19 per cent lower in 2018.

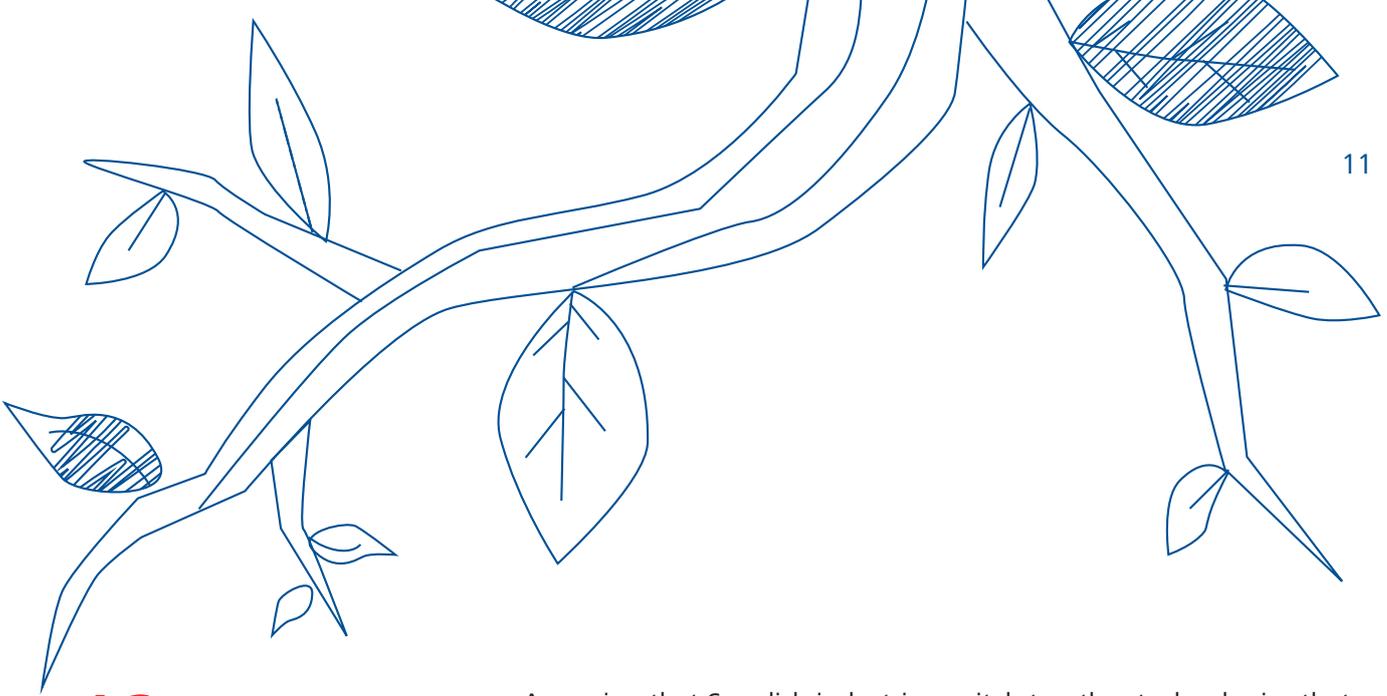
In 2018, emissions were distributed in the sector as follows:

- Iron and steel industry: 34 per cent
- Minerals industry: 19 per cent
- Refineries: 18 per cent
- Chemical industry: 9 per cent
- Other (mining, timber trade, etc): 8 per cent
- Paper and pulp industry, printing, 6 per cent
- Metals industry: (excluding iron and steel), 5 per cent
- Food industry: 2 per cent

Total emissions from industry include direct emissions from industrial manufacturing processes, emissions from burning fuels in industry and diffuse emissions. The highest emissions are produced by the iron and steel industry, the mineral industry and refineries. The main sources of emissions are:

- combustion of industrial residual gases from coke plants and iron and steel production processes,
- use of coke as a reduction agent in blast furnaces in the iron and steel industry,
- calcination of limestone and dolomite in cement production in the mineral industry,
- the combustion of industrial residual gases in refineries and diffuse emissions in refineries (for example, emissions from hydrogen production and leakage from pipelines).

Process-related emissions have been reduced to a lesser extent because of traditional measures to reduce greenhouse gas emissions, such as fuel substitutions (natural gas instead of coal, biofuels and electricity instead of fossil fuel) and energy efficiency measures do not affect these emissions. More consistent process changes, such as replacement processes and products are required to reduce these emissions.



1.3 ECONOMY

Assuming that Swedish industries switch to other technologies that enable other forms of energy such as hydrogen and electrification or, as is the case for the cement industry, use CCS/CCU to prevent greenhouse gas emissions, they could continue to produce the goods of today.

Assuming that the technical development projects that are under way, for example around hydrogen reduction and CCS/CCU, the next challenge is to make these technologies economically competitive. Much of the competitiveness of Swedish industry has been built on innovations and an ambition to be at the forefront and to produce goods of the highest quality. The climate technologies that are now being developed primarily aim to minimise the external negative effects of production and do not necessarily mean that the goods themselves have better properties. In other words, consumers will have to pay more for the same type of quality to cover the cost of climate-neutral production. If the price of greenhouse gas emissions in the form of CO₂ taxes or the emissions trading system spreads globally, it will not necessarily imply a competitive disadvantage for Swedish industry. Nor if consumers see a value in paying more to reduce their climate impact.

The Paris Agreement means that greenhouse gas emissions must be drastically reduced by 2050. Against this background, it should be an advantage to be at the forefront when it comes to the development of climate-smart industrial processes, goods and services. It could mean that the Swedish export industry will be able to increase its production and sales.

Demand for biomass is increasing as more and more people see an opportunity to reduce their negative climate impact. Sweden's rich availability of forests is seen as an important part of the country's transition to climate neutrality. However, this requires balanced forestry that does not threaten biodiversity and takes into consideration that forests also provide recreation and act as carbon sinks. It should be possible to increase the net volume, since the amount of standing timber in Swedish forests has doubled in the last hundred years.



1.4

SOCIETY

Whether forests will be harvested is also an economic issue that, among other things, is determined by how much the forest owner is paid. Sawmills pay the best prices, but if they are to increase their demand, construction in wood must increase. The sawmill industry will then also be able to increase its employment and turnover. A positive side effect of this is that it would also increase the supply of biomass to sectors that cannot pay as well as sawmills. The sawmills themselves use about half of each tree. The other half becomes residual products that can be used for other purposes.

The properties of cellulose allow it to be used for everything we now use fossil oil for. It could therefore not only be used as energy, but also for more refined products such as plastics, fabrics and insulation materials.

Development of the bioeconomy means constructing new value chains and for Sweden that would also have regional political advantages. Forests are mainly found in the more sparsely populated parts of Sweden and the sawmills collect their raw material within a radius of about 100 kilometres. In other words, this would mean increased employment and economic growth in these parts of the country.

The higher the level of education, the lower the risk of unemployment in general. The same is probably true of climate change adaptation. The ability to find jobs at other workplaces and in other sectors increases with the level of education.

From a trade union perspective, it is crucial that investments are made in technology, goods, and services for a climate-neutral world. Sweden has undergone extensive structural transformation since the mid-1900s. The solution has always been to invest in what is coming. That must also be the principle now.

A major issue today concerns passenger transport in sparsely populated areas. It is not possible to expand public transport there in the same way as in urban areas. This makes the inhabitants more dependent on cars, most of which still run on petrol and diesel. At the same time, the price of fossil fuels must increase to enable them to be phased out. Electric power is cheaper but the price of electric cars with sufficient range is far too high. If Sweden succeeds in developing a bioeconomy, it could also mean an economic boost for sparsely populated regions.

For an export-dependent country like Sweden, the necessity of the Paris Agreement becoming a reality is especially important. Investments to reduce territorial emissions can be profitable for companies as well as employees and the state if the principle of “the polluter pays” applies globally.

NATIONAL INSTRUMENTS

The Climate Law (Klimatlagen SFS 2017:720) came into effect on 1.1.2018. Under this law, the government is to put forward a climate action plan every four years³, containing, among other things, the Swedish commitments within the EU and internationally as well as the planned reductions to reach the climate goals. The first proposition according to this law was put forward in December 2019 (Regeringskansliet 2019). The action plan has a broad perspective and aims to integrate climate in all policy areas.

The government aims at Sweden achieving climate neutrality by 2045, and thereafter showing negative emissions. The goal also states that emissions in 2045 should be 85 per cent lower than in the base year (1990), and that the remaining 15 per cent reduction can be reached through other measures.

There are three intermediate stages:

- 2020 – 40 per cent reduction relative to 1990
- 2030 – 63 per cent reduction relative to 1990
- 2040 – 75 per cent reduction relative to 1990

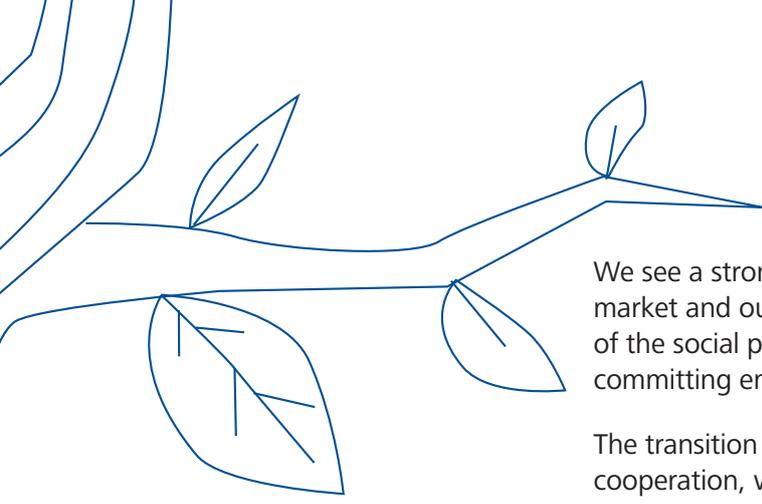
Each year, a council of experts⁴ will evaluate the measures taken and their compliance with the set targets. Vinnova – the Swedish innovation agency – funds projects at the Swedish-Finnish company SSAB which processes steel without coal; in battery research and in future transportation, among other things.⁵ Other completed initiatives include investment aid to communities, regions, as well as to smaller entities.⁶ Sweden has a tax on CO₂, which has been in effect since 1995, and which is currently (2019) at around 100 euro (1,000 SEK) per tonne CO₂. The general perception from the trade union perspective is that we must do what is required to uphold the Paris Agreement. We emphasise the need for a Just Transition and for the social partners to play a major role in this process.

³ Every year after a national election, so next time in 2023.

⁴ Klimatpolitiska rådet: <https://www.klimatpolitiskaradet.se/>

⁵ Vinnova; <https://www.vinnova.se/en/m/inspiration-for-innovation/>

⁶ Among others KLIMP and Klimatklivet, read more here: www.naturvardsverket.se/godaexempel and <http://www.naturvardsverket.se/Miljoarbete-i-samhallet/Miljoarbete-i-Sverige/Uppdelat-efter-omrade/> Klimat/Om-Klimatklivet/



We see a strong link between our capacity for transition in the labour market and our capacity for green transition. The active participation of the social partners can lead to many positive outcomes, such as committing employers to providing the necessary reskilling.

The transition agreements (Omställningsavtal) put in place by bipartite cooperation, without state intervention, is also an important tool providing training, help with searching for jobs, as well as economic benefits for laid off workers. These job security councils are generally very successful and helpful to workers at risk of losing their jobs. Nine out of ten applicants in the private sector found a new job or started their own company (PTK 2019).

In a historical context, we see that the Swedish model has been good at protecting people, not jobs, and that there is a general trust among people that losing their job does not mean losing all security. Maintaining this trust in the green transition is of great importance, and it is necessary among other things to have systems of unemployment insurance for those who lose their job, as well as opportunities for reskilling, already before job loss occurs. Trade unions have an important task in making this more known to policymakers.

Which measures are missing from the trade union perspective? There is no common view on this, since our respective organisations focus on their respective sectors. In general, we share the view that the transition must be just, and that no group or region is to be left behind. This means that we need strong systems for reskilling as well as social protection. In general, this is already the case in Sweden (if seen in an international context), even if we see a need for strengthening them.

We also see that the measures put in place to create incentives for technological change must be long-term and provide clear rules for the state of play in different sectors, so employers and companies know what they need to plan for the skills needed and necessary changes in production (an example comes from Unionen, organising in the automotive sector (Dagens Industrie 2019)). We also find the United Nations' 17 Sustainable Development Goals (SDG) outlined in the Agenda 2030 helpful since they emphasise the importance of both social and environmental sustainability.

In general, it would be helpful to investigate what skills will be needed in the future, but as stated earlier, it is not clear that Sweden has any sectors that will need to disappear fully in the future, so these measures are not as clear as, for example, in the coal sector in Germany. Clear governance and targets defined by the state with regards to guaranteeing a common state of play and goals that we can adjust to will be important both for companies making production decisions and for individuals making educational choices.

The Climate Council foresees that the reductions currently planned are too small to meet the emissions reduction target. The largest

reductions came between 2003 and 2014, but the Council has reported a slow-down of reductions in recent years. The rate is too slow to meet the 2020 interim goal. Reductions need to be around 5-8 per cent per year and are currently at only 1 per cent per year. According to the Council, transport is a key sector if the targets are to be met, since it is responsible for about half of today's emissions (Klimatpolitiska rådet 2019).

The trade unions see a need for stronger social protection and better systems for reskilling, both for meeting the demands of globalisation, automation, and the transition to a green economy.

Trade union representatives took part in the committee that formulated the Swedish strategy to reach the goals in Agenda 2030, and participated in reference groups when the Climate Policy Framework (Klimatpolitiska ramverket) was developed.

In general, we believe that what is needed are the transition measures that we need in other cases of transformation, which we think are largely already in place in Sweden today, even if there is room for improvement when it comes to opportunities for reskilling and when it comes to strengthening the social security systems. We see a need for better social protection both when it comes to employment insurance and health insurance.

Regarding upskilling for workers, a position that we from the trade union movement have been pushing for some time is to include the needs of working people when shaping the dimensions of tertiary education. We feel that there is a greater acceptance for these perspectives but are still waiting to see some more concrete results. Different sectors or regions might be affected differently by the green transition, but these systems have shown themselves to be quite flexible in other times of structural change.

An important arena for the trade unions is that we are represented on the boards of many large companies, where the decisions on adaption are taken.

The employment security councils (Trygghetsråd) are set up by the social partners under the so-called Transition Agreements (Omställningsavtal) to administer and deliver services to employees that have been dismissed for economic reasons. They are set up by the social partners through collective agreements, financed through contributions and without state involvement or regulation of their activities. Here, employees who have been dismissed due to economic or organisational reasons are given additional benefits, for example economic compensation and support aiming to help them find new employment or start their own business. Transition agreements first appeared for white-collar workers in the 1970s, but have since been extended to more and more sectors and over the last two decades have begun to cover almost all the sectors of the labour market.

03

EUROPEAN INSTRUMENTS



Carefully targeted government and company policies will be required to ensure a Just Transition for workers and communities. Just Transition policies will result in substantial economic and social benefits, compared with a low-carbon transition without them (Chateau et al. 2011).

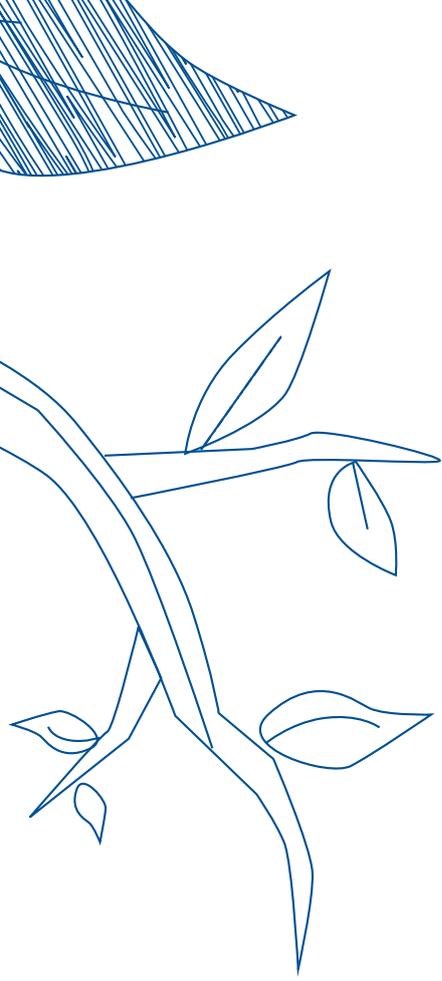
The European Union needs to anticipate changes in advance in order to enable adjustment and empower those impacted so that human rights are respected. It must invest in human and social capital and the capabilities required for the transition.

Clear transition plans should be developed for individual sectors if member states are to capture the economic and social opportunities on offer from the transition to a net-zero economy. Comprehensive Just Transition policies are lacking for affected sectors, communities, and workers.

These policies need to provide a range of support in the respective member states, including adequate pensions, wage loss compensation, relocation assistance and regional revitalisation. It may be particularly helpful in hard-to-decarbonise industries, such as cement, where it may become cost-effective with some additional investment. Renewable energy, energy storage and related supply chains could also provide new jobs.

Trade union participation must be increased in the management of EU funds, which are one of the main policy tools supporting the transition. Trade union members' voices should be amplified by involving them in all stages of the planning, implementation, monitoring and evaluation of projects financed by European Structural and Investment Funds, the European Fund for Strategic Investment and projects and funds within the Just Transition Mechanism.

According to the European Commission, achieving a goal of 47 per cent greenhouse gas emissions by 2030 will require 529 billion euros of public and private investment annually. (European



Commission 2016). These investment targets are not currently being met. Moreover, this funding gap does not take social cohesion nor adaptation needs into account. Increased climate ambition must go hand-by-hand with increasing the means to achieve this goal.

To close this funding gap, the EU should phase out fossil fuel subsidies. Moreover, the Stability and Growth Pact could be complemented by a Climate and Employment Security Pact in order to tackle the climate emergency.

The EU's Climate Bank could support the transition with zero-interest loans in each member state worth 2 per cent of the EU's GDP, approximately 300 billion euros per year. The ECB could also proceed with a Climate Easing Programme by buying EU-issued Green Deal Bonds and thereby creating resources to fund the transition.

It is of great importance that all affected members, irrespective of general living standards in their country, are fairly compensated for their loss in the transition. The Green Deal provides an opportunity for the EU to reinvent its social contract with European citizens and reassure them that the 2017 Rome Declaration's pledge for a social, sustainable, and prosperous Europe is genuinely the bedrock for a European 21st Century (European Commission 2017).

We emphasise the need for the EU to start thinking now about how this call for broad social dialogue can be achieved. Building social consensus with communities and businesses is a huge task and we cannot afford to wait.

If workers are forced to change jobs, and/or relocate, then governments must ensure they will have adequate working conditions and basic human rights respected. Strong labour institutions, labour laws and effective trade unions will be needed.

We cannot fully understand, let alone address, the Just Transition challenge unless people get a chance to have their say. Transparency, dialogue and information – key to all transition planning – will be especially crucial for overcoming barriers and making the transition process more positive.

Institutional arrangements must be adapted to ensure the participation of these stakeholders at all levels: international, national, regional, sectoral and local.

Consultations must include all key policy areas of the decarbonisation process and macroeconomic policies, industrial, sectoral and enterprises policies, skills development, occupational safety and health, social protection, active labour market policies, as well as labour rights.

We agree with the ILO that the four pillars of the Decent Work Agenda – social dialogue, social protection, rights at work and employment – are indispensable building blocks of sustainable development and must be at the centre of policies for strong, sustainable and inclusive growth and development (ILO).

The EU needs to ensure that this transition brings social justice. Policies must respect, promote, and realise fundamental principles and rights at work. Policies must not undermine current systems of collective bargaining, collective action, workers' rights or protections.

The European Union and its member states must:

- Minimise hardship for workers
- Implement appropriate public policies to address the needs of workers
- Provide social protection
- Aid in the development of skills and retraining for green jobs
- Assist the development of green enterprises
- Promote active labour market policies
- Consult with the social partners to develop mechanisms for Just Transition

Coherent policies for the economy, environment, social cohesion, the labour market and education and training need to provide an empowering environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies.

Addressing climate change requires collective action, so cooperation at the EU-level is of utmost importance. The EU has taken a leading role in coordinating both the greening of the EU economy and the efforts of its member states to combat climate change, which is excellent as long as progress continues to be made.

Decent jobs

The promotion of green jobs – that is, employment in the production of green products and services, and employment in environmentally friendly processes – is central to sustainable economic development. But importantly, green jobs also need to be decent jobs. A decent job is productive, delivers a fair income, provides social protection and freedom for people to express their opinions and organise, and it assures equality of opportunity and treatment for all women and men.

The EU should encourage a European Just Transition that secures the livelihoods of those who might be displaced or otherwise negatively



affected by the green transition. This is essential from a social justice point of view, but also for mobilising the necessary political and work-place-based support for action on climate mitigation. Policies must respect, promote and realise fundamental principles and rights at work.

Policies and programmes need to consider the strong gender dimension of many environmental challenges and opportunities. Specific gender policies should be considered in order to promote equitable outcomes.

These coherent policies need also to provide a Just Transition framework for all to promote the creation of more decent jobs, including, when appropriate: anticipating impacts on employment, adequate and sustainable social protection for job losses and displacement, skills development and social dialogue, including the effective exercise of the right to organise and bargain collectively.

Social protection

Social protection must be put in place to ensure social equity for affected communities. Long-term strategies should plan for the social protections required to complement mitigation efforts.

The EU should support national strategies that integrate social protection into policy measures and responses to environmental impacts and the challenges of the transition for those likely to be negatively affected.

Furthermore, it must encourage sound labour market policies that help enterprises and workers in the anticipation of changing labour market demands in the context of the transition to environmentally sustainable economies by facilitating access to jobs, strengthening employability and training.

The EU must also promote the inclusion of a social dimension into national climate change policies, including measures specifically targeting those who are going to be negatively affected.

Policymakers and stakeholders must take stock of communities that will be affected by transitions and communities where measures are needed to reach a socially fair outcome. They must work to build inclusive conversations with these communities as they engage stakeholders in the development of long-term strategies. They should also plan to include communities early in the process when developing mitigation pathways and actions to ensure that groups are not left out at key stages and are able to raise important issues.

The EU should improve the availability of labour market data and carry out ex ante assessments of the employment and socio-economic impacts of environmental policies.

Skills

The EU must support the transition to more environmentally sustainable economies by reviewing skills development policies to ensure they support responsive training, capacity building and curricula. There should be strong interaction between the world of work and the world of education and training. The greening of the economy should focus on skills development in order to succeed.

Solid technical and vocational education and training systems need to involve industry and trade unions, and must include higher education. Access to training helps workers to develop the skills needed to transition to new types of jobs or to work with new materials, processes, and technologies in their existing jobs.

While industry-level restructuring reduces demand for some occupations and skill profiles, it increases demand for others. Access to training is vital to enable workers and enterprises to move from declining to growing sectors, and some new occupations will require new skills. But the most widespread source of change in skill requirements comes from the process of greening existing jobs. To take up the challenge, education systems need to anticipate and adapt to new skill requirements and lifelong learning must become a reality for all workers.

The emergence of additional jobs requires new competencies and shifts in demand for occupations. There is a need to focus on skills and education policies to facilitate job transition and to improve employability. This is critical because without skilled workers and competent enterprises, the shift to a low-carbon economy will be neither technically feasible nor economically viable.

Social consensus

Strong social consensus on sustainability goals and pathways to reach them is fundamental. Social dialogue must be an integral part of the institutional framework for policymaking and implementation at all levels.

The EU must provide opportunities for the participation of social partners at all levels and stages of the policy process through social dialogue, and foster consultations with relevant stakeholders such as EU institutions, member states, regions, municipalities, social partners, and civil society.

The EU should actively promote and engage in social dialogue at all stages from policy design to implementation and evaluation and at all levels from national to enterprise level to forge consensus on ways to achieve environmental sustainability with decent work.

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LO

The Swedish Trade Union Confederation, LO, is the central organisation for 14 affiliates which organise workers within both the private and the public sectors. Together, the 14 affiliates have about 1,423,000 members of whom about 657 000 are women. The 14 affiliates of LO have independent status. LO is primarily an organisation for co-ordination, research, signing labour market insurance schemes and shaping public opinion at central and regional levels.

TCO

TCO (The Confederation of Professional Employees) comprises 13 affiliated trade unions. The 1.4 million members of these unions are professional and qualified employees who share a major responsibility for important functions in society, although in a wide variety of occupations. They work in all parts of the labour market, for example in schools, healthcare, trade, the media, the police, industry, IT and telecommunications. Over 60 per cent of the members are women. Approximately half of the members work in the private sector and half in the public sector.

Saco

Saco, the Swedish Confederation of Professional Associations, is a politically independent central organisation with 21 unions. Altogether it has more than 700,000 members. The members are professionals with qualifications from higher education. Saco's aim is to develop and improve employment conditions and professional activities for professionals in Sweden. Central issues are job security, rights, salaries, the workplace environment and the quality of education. Saco promotes its members' interests and supports its unions through analyses, debates and shaping opinion.

NFS

The Council of Nordic Trade Unions (NFS) is a regional trade union council. Its affiliates are 15 national trade union confederations of the Nordic countries which together represent more than 8.5 million members from blue collar, white collar and academic sectors in Denmark, Finland, Iceland, Norway, Sweden, Greenland and the Faroe Islands.

Founded in 1972, the main task of NFS is to coordinate and foster regional trade union cooperation in the Nordic countries, particularly

with regard to employment, economic and social policy and in relation to ETUC, ITUC, TUAC, ILO and PERC. NFS represents its members in relation to the Nordic Council and the Nordic Council of Ministers and has close ties with the Baltic Sea Trade Union Network (BASTUN).

The Friedrich-Ebert-Stiftung

The Friedrich-Ebert-Stiftung (FES) was founded in 1925. It is the political foundation with the longest history in Germany. It has remained true to the legacy of its founder and namesake, and it upholds the values of social democracy: freedom, justice and solidarity. Its ideals are linked to the Social Democratic Party and free trade unions.

The FES promotes social democracy primarily through:

- political education work to strengthen civil society
- political consultancy work
- international collaboration with foreign offices in over 100 countries
- providing financial support for gifted students
- preserving the collective memory of social democracy with facilities including an archive and a library.

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Abstract

Climate change impacts all parts of society including the labour market and working conditions. Sweden aims to be climate neutral by 2045. Investments to reduce territorial emissions can be profitable for companies as well as employees and the state. New green jobs must be decent jobs giving a fair with social protection, freedom for people to express their opinions and to organise as well as equality of opportunity and treatment for all women and men. A shift in demand for some jobs will require skills and education policies to facilitate job transition and to improve employability.