



The Most Important Construction in the World

**Byggnads's programme for a climate neutral
and sustainable construction industry**

Green Jobs in a Fair Economy

It has been said that we have to choose between, on the one hand, growth and jobs, and on the other, safeguarding the environment and the climate. Today, we know that these two do not stand against each other but instead go hand in hand.

For Byggnads and the members of Byggnads, being involved in working to combat climate change goes without saying. We are prepared to do what it takes and we see important new job opportunities with the climate transition. If the construction sector invests in fossil free energy, it can both contribute to meeting the climate goals and at the same time ensure that many new jobs are created across Sweden. It is a matter of urgency.

What we need is structural change in the construction sector and major public investment driving developments in the right direction. During public procurement processes or when grants for construction are provided, there should be requirements regarding fossil free and climate-smart solutions. The aim being to set the business sector and the whole of society on to the right path.

Byggnads's commitment to the climate is based on the insight that not only is the climate transition necessary, it also gives us the opportunity to build a fairer economy. It is simply a matter of a fair climate transition where economic, social and environmental sustainability go hand in hand. A decent and well-organised labour market is actually also a precondition for a green transition.

We also wish to see a modern labour market policy that provides wage-earners with the possibility to adapt through further training, skills enhancement, reschooling and support for studies in order to be able to take on a new job in a new era.

Together we can build a new climate-neutral, fair and sustainable economy!

Byggnads's climate policy programme is based on the fact that the climate and sustainable transition in society is a major construction project in itself. The path towards a more climate-neutral construction sector needs to include the following:

- Construction in the future needs to be more circular and use more climate-smart materials
- Existing properties and new buildings shall be adapted to the climate and made more energy efficient
- Contractors must include stricter climate and sustainability requirements in public procurement processes
- All the above require both more funding and a decent and well-structured labour market

The Byggnads Programme in Brief

Since the future climate and sustainability transition in society entails a gigantic construction project in practice, Byggnads would like to emphasise the importance of the following five aspects in its climate and sustainability work:

- ▶ **More climate-smart materials and a greater reuse of materials.** Climate and sustainability measures in the construction material sector are needed to ensure the production of emission-free cement and a greater use of wood that binds carbon when building the shell. Construction also needs to be more circular with a greater focus on the renovation of existing properties, less waste and ensuring a greater reuse of materials.
- ▶ **Stricter climate and sustainability requirements in procurement.** The transition consists to a large extent of major contracted construction projects, where the public sector is often the customer.
- ▶ **Upgrade existing properties for an improved indoor environment and enhanced energy efficiency.** It is also important to consider the need to adapt to the climate, for example, with regard to rising sea levels or the risk of heavy downfall.
- ▶ **Enhance the sustainability governance of taxpayers' money** that is directly or indirectly allocated to the construction and housing policies. A social investment bank is also needed to ensure the funding of construction projects that are beneficial to the community, good for the climate and that create sustainability.
- ▶ **Ensure that construction is decent and well-structured** and this includes the connected sectors that are needed for sustainable construction projects from a life-cycle perspective, not least in the transport sector. The transition must be fair for all who work in the sector and what is sustainable and climate-smart must also be economically viable for businesses. In order to ensure that our climate and sustainability work is successful, we need rules regarding responsibility for the climate and sustainability that is akin to the main contractor responsibility. This includes:
 - **economically** – putting a stop to fraud and criminal activities to ensure fair competition on equal terms,
 - **socially** – a safe and secure working environment and compliance with the collective agreements,
 - **environmentally** – ensuring that everyone has knowledge of and complies with necessary environmental and climate adaptation rules.

Furthermore, Byggnads, and the trade union confederations that Byggnads is a member of, want to act together with others in order to make the climate and sustainability transition more powerful. Together with above all other trade unions, but also the employers, we wish to ensure that the political sphere takes concrete action to drive these issues harder. Cooperation between the social partners that has been so successful would be very advantageous for Sweden for a transition that meets the challenges of today.

Community Building – Where Sweden Excels

The Swedish expression “those who built the country” is very apt. Many are very grateful to these people, not least because the Sweden “they” built is in many ways a good country to live in. This is not least noticeable in all the welfare indices that compare countries, where Sweden is almost always to be found among the countries at the top of the list. It is worth highlighting that only just over 100 years ago, Sweden was one of the poorest countries in Europe.

When modern Sweden was being built during the 20th century, taking the needs of that era into account and with the focus on functionality, we can see that most of what was done, was done in the right way. Homes were built with practical modern kitchens and bathrooms but also with a lot of windows as well as central heating and good ventilation. The electricity grid, water and sewage pipes, railway lines and roads were built. Industries, offices, medical centres, nursing homes, libraries and sports halls were also built. In addition, the building of the community lay the foundation of a, for those days, modern welfare state. Land use and town planning have over the years also included a greater focus on accessibility ensuring the creation of an urban environment where both children and “the elderly who built the country” can feel safe and secure.

Sweden needs to deal with neglected maintenance, but also increase the building of new homes

Everything that has been built needs to be expanded as communities grow but also be maintained and upgraded so that they do not become dilapidated or lose their functionality over time. Unfortunately, these maintenance and upgrade investments have often been neglected. This is above all noticeable when storms lead to power cuts or when heavy rainfall leads to flooding. Nor has a sufficient number of new homes been built, which has resulted in the queues to rental accommodation and student accommodation, and in overcrowding and homelessness.

In addition, there are new requirements concerning social community infrastructure: connectivity, systems to ensure a more circular supply of reused materials. Public transport must be expanded, perhaps leading to safer and more accessible urban planning based on the needs of people rather than cars.

The climate, environmental and sustainability goals placed on society also entail new demands on what is built, and what shall be built. We will need more than just a lot of investments for our future to be fossil free and economically, socially and ecologically sustainable. Everything must also be done within the framework of sustainable spatial planning. Building on land that we know will be flooded in the long-term when the sea levels rise due to climate change is very short-sighted. Buildings built in areas that risk being flooded, and that society decides to protect, will, on the other hand, need sea defences. This will be an enormous construction project in many low-lying coastal areas.

The World’s Biggest Building Project

The climate is definitely a momentous issue. The slogan of the ITUC from the Paris Climate Summit in 2005, “no jobs on a dead planet”, was a way of expressing how serious the situation is. The increasingly extreme weather that we have experienced over the last few years as well as the latest compilations of research have also convinced more and more people in our societies of the need for a transition. The best way to ensure that we take the climate and sustainability issues seriously is to invest heavily in our climate and sustainability transition.

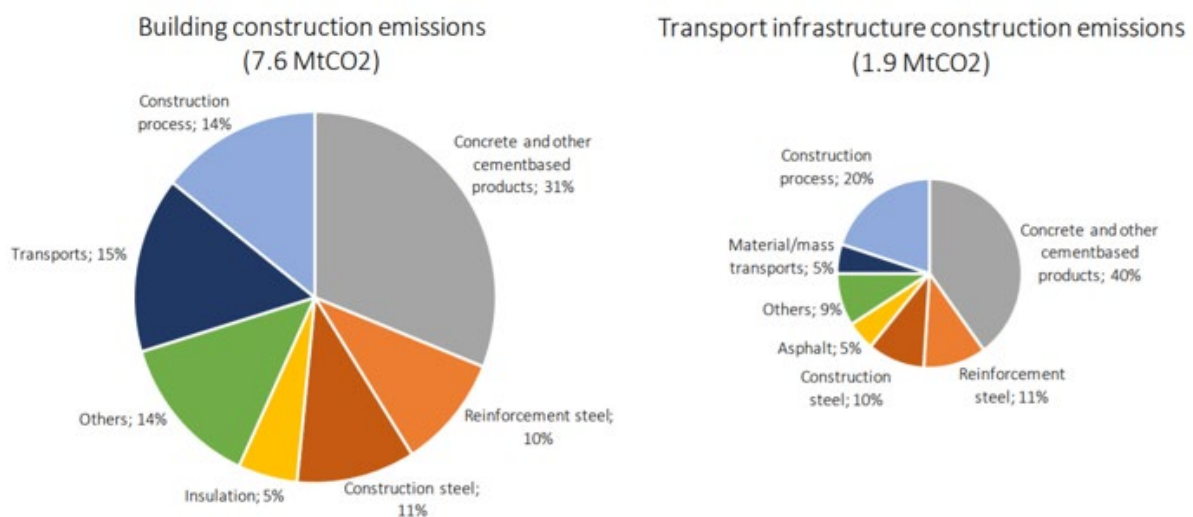
This investment in the transition will be Sweden’s (and the world’s) biggest new construction project ever. For every billion more invested in enhancing sustainability in the community, just under 1,000 jobs are created throughout the value chain. If we summarise the transition needs, it is a question of extra investments of hundreds rather than tens of thousands of billions after the next election. Sweden will therefore need to employ, train and retrain thousands upon thousands of people to become community builders. Byggnads is wholeheartedly positive to such investments, but would also like to point out that what we need is a decent and well-structured labour market and a just transition for it to work.

A Just Transition

All workers and workplaces are affected by climate change. The necessary transition is not only about making the necessary transition in our polluting industries, it is also about new jobs as solar panel installers, new industrialisation such as green steel and new skills for large-scale wooden constructions, new investments in sustainable energy and transport systems and the possibility of ensuring a more equal and sustainable economy where no one is left behind. When industries and the labour market make the transition and become environmentally sustainable, we need a range of measures to ensure the rights of the workers. These are best drawn up by the social partners, but also politicians need to adjust rules and systems. Important areas that need to be dealt with are, for example, social insurance systems, working environment rules, labour market policies and skills enhancement.

An Overview of the Impact of Construction on the Climate

Below is a brief presentation of where the main impact of construction on the climate arises, divided into buildings and infrastructure projects respectively. The pie charts have been taken from the major Swedish-based research project on these issues: MISTRA Carbon Exit (*Final report on building– “Technical Roadmap, Buildings and Transport Infrastructure 2020” by Ida Karlsson et al.*)



The larger pie chart represents climate emissions from the construction of buildings while the smaller one represents all construction of transport infrastructure investments. Altogether,

Swedish construction emits just under ten million tons, which constitutes about 20 per cent of the total Swedish domestic climate emissions of about 50 million tons per year.

However, by the year 2045, Swedish emissions shall have decreased to ten million tons per year according to the Swedish Climate Act. Every year, Sweden shall thus also neutralise or bind equal amounts of carbon dioxide, with, for example, an increase in carbon stores in forests and on agricultural land.

Cement and Steel Can Become Climate-Neutral with New Technology

There are large slices in the pie chart linked to cement (grey) and steel (brown). In the short term, these will not decrease by very much, but in the long term they will probably be reduced down to zero thanks to new technology, but also thanks to a change in the concrete recipes and, for example, by mixing in slag and replacing part of the cement. Slag will also in certain areas of use enhance the performance of the concrete. The emissions from the calcining process during the production of cement are, however, unavoidable. But the carbon dioxide that is emitted can be separated and collected through carbon capture and storage. There are projects that are looking into this. What is important is that major clients, not least public contractors like the Swedish Transport Administration, demand that this type of cement is used in all projects despite the fact that it costs more.

There are several projects on iron pellets and steel production that are looking into how emissions can be radically reduced: HYBRIT, H2GreenSteel and, in addition, there are ongoing projects at LKAB on the emissions of the raw material of iron ore. However, Sweden produces mainly special steel that is exported. It is therefore unlikely that all reinforced steel for construction will be made using the new fossil-free hydrogen gas based blast furnace method before also other actors in the world steel market make the transition. That may take decades. However, there is a great deal of interest in the new hydrogen gas based method that will probably also become profitable when the EU's trade in emissions is gradually tightened.

Transport and Machinery Shall Run on Electricity or Biofuels

The blue slices represent transport linked to construction (dark blue) and machinery used in the construction process (light blue). These emissions may be reduced already in the next few years through the use of biofuels and later also of hydrogen gas/fuel cells and not least electrification. What remains are two yellow and green slices that represent other types of building materials such as cement and steel. For wood, glass, plastics, plaster etc., reuse, design, choice of materials and other material streamlining, together with the climate work of the suppliers, will make a major difference when it comes to reducing the amount of emissions.

Even if there will be no fossil-free cement or steel to procure for construction projects in the next few years, it is possible to procure fossil-free transport services and machinery already today. The greater the demands placed by construction projects and their contractors, the faster the transport and machinery sectors will be forced to make the transition with their fleet of machinery in order to be able to compete. During the construction planning phase, the design and choice of materials are included as well as how the material is installed and also removed. It is naturally also possible to reduce the climate footprint of a construction project and a building material.

Recovery Has the Best – and Fastest – Impact

People often say that the “negawatt”, i.e. the energy you do not need to add because of your energy efficiency measures, is the cheapest and most environmentally friendly source of

energy. The same applies to construction materials and buildings. In the construction industry, the biggest positive impact on the environment and the climate is often achieved by ensuring a more efficient use of already existing premises, because new buildings include a lot of production of materials, transport and the use of machinery which in turn lead to more emissions. When the decision has been made that something shall be rebuilt or a new building shall be built, any choices made concerning materials and how the building is constructed, will naturally also play a part.

Three Steps on the Road to Zero Emissions

It is possible to reduce the impact on the climate in a construction project by looking at one or all of the following areas:

- 1) Focus the climate work on activities that lead to most of the emissions (see the pie charts).
- 2) Look at the project budget - write climate requirements regarding what you spend most on.
- 3) Start with what has the greatest impact on the climate, i.e. the materials and the expenditure that leads to the highest level of emissions per weight/volume unit or krona spent, which is fossil fuels, cement and steel, and fossil plaster.

Today, there are several computer programs for the construction sector where it is possible to see how different materials, even the same type of material but different brands, differ as regards emissions of greenhouse gases. Any contractor, architect, construction company or client who is climate savvy, will use such tools to make a good climate choice.

When the requirement of climate income tax returns for new buildings is introduced at the end of the year (2022), all actors in the construction sector will be forced to start measuring and accounting for the impact on the climate. This is an important step along the way to finding efficient methods for a reduction of emissions.

Byggnads's List of Demands Regarding the Climate-Smart Community-Building Project

This brief report is not about what is going to be built. Many other excellent reports focus on how it is high time we “rebuilt the country”, some of which are mentioned in Annex 1. To summarise, the conclusion of what has been written about the sustainability transition is that it constitutes a major community construction project. It is a matter of both new construction and re-construction. In addition, it will be important to make the right decisions about **where** we build, **how** we build and **with what** we build. The decisions will include a number of different environmental aspects beyond climate impact and mitigation. The social sustainability issues, in other words, what is built, for whom and how the job is performed at construction sites, are also included. The aim of this report is to highlight the issues that pertain to *how* to build.

The climate and sustainability work of Byggnads shall ensure that what is built shall be built using climate-smart materials and methods, under decent conditions and in a good working environment. All sustainability aspects shall apply throughout the construction process and the lifecycle of the building - from sustainable forest management for the timber and carpentry to greener cement where concrete is needed. Naturally, all transport and machinery at all levels shall run on fossil-free fuel as soon as possible. In order to achieve this for all

goods and value chains, Byggnads needs to work with other trade unions, for example, GS (The Forest, Wood and Graphic Workers' Union), IF Metall and the Transport Workers' Union.

With good maintenance and janitorial services, with upgrading work and renovations, it is possible for a well-designed and well-constructed energy-efficient building to be in use for much longer than is currently the case. This also requires cooperation between trade unions, for example, with other unions within 6F and with the Municipal Workers' Union. It is useful if buildings can be designed and (re-)constructed to be used in a much smarter way than today, when many buildings are not used for parts of the day, week or year. When a building has finally come to the end of its life, as much of the material must be reused as possible. Not building again from scratch more than is necessary is usually the most climate-smart option.

Sustainable Community Building Is Byggnads's Home Turf

The efforts in the area of climate and sustainability will allow Byggnads to continue working with issues familiar to the trade union movement, for example, the need to focus on energy efficiency in renovation work as well as the need for a state-run green investment bank. Other issues that mitigate the impact of construction on the climate are issues that Byggnads has "only" been involved in for the past decade or so; and due to the global nature of the climate issue, this involvement has primarily been together with the global, European and Nordic trade union confederations. During the climate summit in Paris in 2015, the ITUC managed to ensure that the words "just transition", meaning a just climate and sustainability transition, were included in the final negotiated document that was a landmark agreement at the time.

Five Areas for a More Aggressive Climate Policy

Byggnads, together with other trade unions, wrote about the need to contribute to a reduction in climate emissions, and how to achieve that in the LO report "Five Proposals for an Investment-Led Climate Policy". The LO demands a more forceful policy in five areas, with a mix of major state-funded investments, far-reaching politically drawn up frameworks that make the market itself dare to invest, as well as public procurement that demands more stringent sustainability requirements:

- ▶ A more circular supply of materials including investments in green cement.
- ▶ Energy efficiency and an expanded renewable energy system focusing on solar, wind and hydrogen.
- ▶ A fossil-free transport system and well-developed public transport.
- ▶ A bio-based industrial symbiosis to produce more biofuel and biochemical raw materials.
- ▶ More wooden buildings.

Existing Buildings Need to Be Made More Energy Efficient and Adapted to the Climate

Byggnads also wishes to highlight the need to adapt everything that has already been built and everything that is now going to be built to the climate. First and foremost, there shall be no construction on certain vulnerable sites. Existing buildings and all new buildings need to be adapted to the climate so that they can withstand a changed climate entailing, for example, heatwaves, floods and rising sea levels. Extreme weather has become increasingly extreme and less uncommon. The floods in Germany and the Benelux countries in the summer of 2021 led to hundreds of deaths and the material damage and cost of reconstruction amounted to

hundreds of billions. One lesson learnt from this was that it is important not to rebuild the buildings that were destroyed in the same way and perhaps not even in the same place.

Whose Responsibility? The Blind Spot in Climate Research and Politics

Byggnads is thus embracing all good initiatives in the area of the climate, but wishes at the same time to make both climate research and politics aware of the fact that there is a blind spot which is about what will be required of the labour market when all the commendable measures that have been planned are to be put into practice.

It is about the set up on the (labour) market and how it actually works when the concept of cost reduction has led to many serious actors with high climate ambitions finding competition difficult. Fraud can be found in everything from waste management not being handled correctly, to the exploitation of labour, and to non-compliances regarding vehicle and logbook requirements. Without well-functioning markets that ensure that everything is done correctly, many of the effects of all the commendable climate initiatives that are taken will unfortunately be lost.

In theory, a building may naturally be designed and subsequently contracted according to all the latest research and all the findings and challenges regarding the choice of materials, material efficiency, the minimisation of waste, the use of fossil free transport and machinery, in every climate welfare plan.

In practice, however, there is often a chain of subcontractors in the labour market, and perhaps most particularly in the construction and transport sectors. This means that an awareness of both the climate and the rules that apply is not the main priority for a variety of reasons. The requirements regarding climate-smart measures becomes a game of Chinese whispers where it is what the final subcontractor in the chain has heard as well as understood, taking into account any language difficulties and level of knowledge of climate-smart construction, which determines the actual outcome of what is agreed on paper. Not least the financial incentives provided to all those involved to solve the problems that arise in the complex construction projects that today are often performed under the pressure of time are decisive in one way or the other.

In order for it to be easy to do the right thing, and difficult and costly not do the right thing, the prime-contractor agreements must be extended to include responsibility also in the area of the climate and sustainability. This is necessary in order to ensure that the requirements are actually met and met correctly, and, in addition, that the responsibility for ensuring that the rules are complied with rests with the highest level in the chain of contractors. The transport sector will, for example, require the use of transponders and more checks to deal with both cabotage operations, infringements of road-use rules as well as substandard vehicles.

Reforms motivated by climate policy that can be drawn up in the same way as a prime-contractor agreement will then make it possible to get old, accident-prone lorries with high emission levels off the roads. These reforms will thus fulfil several functions at the same time, not least as regards the working environment. Sound competition is safeguarded while fraud and illegal activities are hindered. If serious actors wishing to invest in both climate-smart knowledge and technology, for example, electric machinery, are not able to compete because other actors do not comply with the rules, the pace of climate transition in society will be

delayed. Several political frameworks are required to ensure that the market is well-structured and decent so that market logic can help rather than harm when sustainable and climate smart measures are to become profitable and the obvious alternative.

More will also be required of climate and sustainability related training to ensure that all involved really are able to build in a sustainable and climate-smart way. This must be achieved at the same time as the sustainability and climate transition is carried out in Sweden, and must be done at the workplace and with the help of the social partners. What is needed is quite simply a new culture and a new working environment on construction sites, but also on the roads where construction materials are transported.

A New Swedish Transition Policy Based on the 17 UN Sustainability Goals

Construction constitutes a major part of all community investments in Sweden. Housing in turn represents the largest single item in most household budgets. This means that housing and construction together entail a great deal of money, but also a large flow of natural resources. The major advantage of an emphasis on construction and housing issues is that there is a great deal of funding and resources that could be used in a different way. All state-funded construction and housing should be used to steer social development in a more sustainable direction to a greater extent than today. Community support is provided to reach community goals, and now the expressed goal of society is to achieve sustainable development and meet all the 17 UN sustainability goals in Agenda 2030.

This means, for example, that the ROT rebate (the tax deduction on household construction services) should be developed into KROT, GROT and SUSTAINABLE ROT:

- ▶ **KROT:** Tax deduction to reduce the impact of construction and housing on the climate and to reduce the climate vulnerability of buildings through climate (Climate-ROT),
- ▶ **GROT:** Tax deduction on renting after rebuilding, or for existing buildings to house more tenants (Communal housing ROT), and
- ▶ **SUSTAINABLE-ROT:** Tax deductions to make buildings more sustainable so that society can achieve the sustainability goals more easily, for example, energy efficiency measures.

Housing and construction have an impact on our everyday environment, where we live our lives. We can probably all agree on the fact that our everyday environment would benefit from the UN sustainability goals being met. After all, we all want healthy and safe housing areas with good fossil-free transport lying close to a natural environment where the environmental goals are met. In Annex 2, you can read more about how Byggnads's proposals concerning a more climate and sustainability oriented construction and housing policy might impact each and every one of the 17 SDGs.

Therefore, Byggnads would like to see already after the next election, a new, climate-smart Swedish construction policy that can contribute to an increased sustainability to the benefit of the community. In order to achieve this, we need a more decent and well-structured construction sector, to restore sound competition between construction companies and a fair transition for all construction workers.

Annex 1:

The Climate Policy Context for Byggnads's Programme

Byggnads is positive to a number of climate initiatives presented by different international and Swedish organisations and actors. There are also commitments that Sweden has entered into such as the UN's Agenda 2030.

The UN Global Goals for Sustainable Development and Agenda 2030

By 2030, the World's UN countries will contribute to ensure that no one lives in extreme poverty, that the world's imbalances and injustices are reduced and to combat climate change. The so-called Agenda 2030 includes 17 measurable goals for the creation of sustainable development. All countries shall contribute to the work with both their domestic and foreign policies. Organisations and companies also have a responsibility.

All the goals are relevant to the construction sector, something that not least this report demonstrates. Goal 13 is about combating change although that goal permeates all the other SDGs because the climate crisis has an impact on the preconditions that prevail for everything that humans, companies and organisations do. On the final pages of this report we go through how Byggnads, not least through an ambitious climate programme, can contribute to all the 17 goals.

The UN's Climate Panel

The UN's climate panel, the IPCC, publishes a report every few years. The report includes a brief summary for decision-makers and a number of research-based sub-reports about:

- ▶ the scientific situation regarding emissions of greenhouse gases and levels in the atmosphere,
- ▶ the need to reduce greenhouse gas emissions, and how "best" to go about doing that,
- ▶ the need to adapt our societies to the changes in the climate that have already taken place and that are expected to increase to a varying extent, depending on whether we manage to reduce the emissions.

Every time the report is released, the tone from the research community is sharpened. The message is becoming increasingly sharp, even in the summary for decision-makers where the text is political. Byggnads is positive to the IPCC's report and wishes to remind readers that the process of producing every report is solid and substantial, and thus slow. There is not enough time therefore to include the latest research. The reality is thus more serious than what actually emerges in these excellent reports.

The EU

The EU's green deal has been adopted, but the proposals about increasing the ambitions concerning emissions (fit for 55) have not been finally negotiated yet. Byggnads is very positive regarding the main features of the proposals, not least the proposals about renovating homes and buildings focusing on energy efficiency. A number of the proposals, for example, in the area of vehicles and transport, as well as the need for industrial innovation for a reduction in emissions (cement, steel, chemical), are directly geared towards the large slices in the pie chart on climate emissions in construction presented in this report. The proposals regarding forestry need to result in both a sustainable forestry and secured access to cover the demand for timber to be used in construction. It is an advantage to use residual biomass for

biofuel for heavy (construction) transport and (construction) machinery, as well as biochemical input for interior construction fittings, for example, in order to reduce the climate emissions of the construction sector.

The Climate Policy Council

The annual reports of the Climate Policy Council where the Swedish climate policy is reviewed can best be summarised as stating that the Swedish political climate goals are insufficient and are still far from being reached. Thus, all the government's fine words about climate policy need to be filled with much more practical action and actual investments. In addition, the goals need to be sharpened. Emissions need to be reduced by 5-10 % a year if Sweden is to reach its own expressed long-term emission goals. Neither the world's emissions (that are still increasing) nor Sweden's emissions (that are decreasing, but rarely by more than a couple of per cent per year) meet the goals.

Byggnads has a particularly positive view of the Council's proposals regarding establishing much clearer links between crisis recovery policy, for example, after the financial crisis in 2008 and now the Corona crisis, and climate and sustainable measures. The investment measures required for transition in Sweden should include one more decimal point than the measures presented in the last few years.

In addition, Byggnads wishes to remind the readers that the sustainability transition in Sweden includes a number of maintenance measures and new investments for transport, electricity and water and sewage networks. Moreover, investments are needed to find a solution to the problems in the housing market in the shape of modernisation, climate adaptation and increasing the building of homes in order to find a solution to the housing crisis.

During the last few decades, when the state has started spending a great deal to resolve financial crises and pandemic crises. The climate and sustainability crises are both much greater and more serious in nature. In addition, they are not as easy to resolve. They will require both more far-reaching and more long-term measures. As opposed to the other above-mentioned crises, this transition is not just about holding up financial actors or shutting down sectors. Hence, we believe that the money invested in the climate transition constitutes an investment for the future that should be earmarked for construction and that should be spent on building and safeguarding the country's long-term self-sufficiency capabilities, which reinforces the balance sheet of the country. The climate and sustainability transition is a community building project.

Fossil Free Sweden's Sectoral Roadmaps

Byggnads also agrees with the work of the Fossil Free Sweden initiative. Over 20 sectors, many linked to construction and the lifecycles of buildings, have together with the initiative drawn up roadmaps to reduce, and in the long-term completely eradicate, climate emissions. The construction industry has a roadmap, all the major construction materials sectors have their own roadmaps as do road haulage, the heating and electricity sector and the recycling sector. These roadmaps need to be coordinated in the same way that a number of trade unions (as well as employer associations) cooperate and coordinate their efforts concerning different questions. The roadmap of one sector becomes via chains of goods and values, important input in the work of another sector concerning reducing their products' lifecycle emissions. This coordination effort has already started but would be facilitated if Byggnads together with other trade unions were to cooperate even more with the two other parties in the Swedish

tripartite model – the employers and the state. Historically, Swedish society has succeeded in transitioning exactly because this tripartite cooperation has been so successful over the years.

Initiatives Linked to the ITUC and a “Fair Transition”

Over the years, Byggnads has, sometimes via the LO, cooperated with the thinktank Global Utmaning (Global Challenge) and its network for renovation measures linked to energy efficiency, the building of homes which creates sustainability, the need for a state-run investment bank, and now most recently, the so-called Climate Agenda and the research project MISTRA FAIRTRANS. The latter was inspired by the ITUC’s slogan about a “fair transition” – in other words that the climate and sustainability transition needs to include aspects concerning fairness and justice in order to be supported by important actors. The trade unions belong to the group of actors linked to the Climate Agenda and FAIRTRANS which includes a major programme for further training geared towards the trade unions and their members on the subject of the climate and sustainability challenges and how they can be resolved.

Annex 2: How a New Construction Policy May Contribute to Agenda 2030

According to Agenda 2030, society shall be expanded and rebuilt so that we achieve the 17 SDGs together. The tricky part is that in order to meet all the separate goals, they must all be taken into consideration when policies, solutions, measures and construction projects are being determined and decided.

Goal 1: No poverty: Investments, not least in construction, build the economy and create job opportunities for the long term. Job creation with good working conditions is the main tool to combat poverty. The state together with trade unions and employers need to ensure that all actors linked to construction comply with their regulatory obligations and the provisions in collective agreements.

Goal 2: Zero hunger (and better agricultural possibilities): Community planning and construction projects need to maintain and create as many different ecosystem service functions as possible, which at the same time may enhance the ability of our communities to show resilience as they face climate change like, for example, flooding. Reducing the waste of resources and ensuring a more circular flow of materials reduces the pressure on the ecosystems we live off.

Goal 3: Good health and well-being: A reduction in the footprint of resources and a greater adaptation to sustainability in construction and housing do not only decrease climate emissions but also most other air emissions as well, in particular where particles and nitrogen oxides have a negative impact on health. Enhanced ecosystem production on and around buildings in renovated or newly built city districts may lead to health gains as well as environmental and climate improvements. Energy efficiency measures in homes lead to better indoor air quality and investments in the area of transport lead to better outdoor air quality.

Goal 4: Quality education: Traineeships and apprenticeships for all pupils on construction related educational programmes need to be organised, and an enhancement of knowledge is needed on all construction related educational programmes and at the workplace as regards climate-smart and sustainable construction.

Goal 5: Gender equality: Through a number of initiatives, Byggnads has been at the forefront as regards improved gender equality in a construction sector that is still far too male dominated. A greater focus on children, the elderly and gender equality in community and urban planning often goes hand in hand with improvements for the climate, environment, health and gender equality.

Goal 6: Clean water and sanitation: Construction must take a much greater consideration of the problems that exist regarding the supply of water caused by climate change with rising water levels, risk of heavy downfall, heatwaves and droughts. In addition, existing buildings might need to be adapted to the climate, which will in turn lead to a need for, for example, the construction of sea defences and ways to handle storm water. The water supply needs to be safeguarded through a sustainable use of water and by handling the negative effects on the quality of drinking water that flooding may entail.

Goal 7: Affordable and clean energy: Energy efficiency renovations of existing homes and buildings constitute an important part of being able to meet the energy goal. Integrating renewable energy investments in homes and buildings through solar panels on roofs and the use of geothermal energy is also a way of meeting the energy goal. The more buildings and homes are made more energy efficient, the easier it will be to increase the share of renewable energy throughout the energy system.

Goal 8: Decent work and economic growth: All investment projects, not least in the area of construction, lead to the creation of jobs. Sustainable investments in the public interest also lead to better economic development. If these investments are also made in the way Byggnads suggests in this report, a number of subgoals on resource efficiency, an improved working environment and reduced unemployment, not least as regards groups that are a bit further away from the labour market, will benefit. We need to enhance the supply of construction labour as we face decades of reconstruction work in the environmental transition.

Goal 9: Industry, innovations and infrastructure: Sustainable infrastructure for transport, energy, a circular supply of materials and welfare services needs to be planned together with the planning for the building of new homes and renovation of already existing homes. Apart from infrastructure systems that need to be built in a more climate-smart way, these efforts also need to be coordinated with new technological solutions and social behaviour innovations as regards, for example, electrification, digitalisation and the sharing economy.

Goal 10: Reduced inequalities: From a gender equality perspective, housing and urban planning issues are key issues in order to deal with homelessness, overcrowding, segregation and insecurity. These social sustainability issues are just as important for sustainable cities and communities as the ecological issues.

Goal 11: Sustainable cities and communities: With more wood used in construction, extensions, densification and newly built areas may become energy efficient carbon sinks – a kind of processed forests in our cities and communities. With an expansion of emission-free public transport, with more cycle and walking paths in urban areas that are planned based on all the socially oriented sustainability goals our communities will become more humane.

Goal 12: Responsible consumption and production: Community and urban planning determine how sustainable we can be as individuals. In order for consumers to consume in a sustainable way, producers need to have sustainable production, and for that to be possible, community infrastructure for transport, energy and the supply of materials must be built with a focus on sustainability. *A construction policy for community planning that is cohesive*

and oriented towards sustainability is required if we are to meet the subgoals concerning, for example, a non-toxic, more circular use of resources and a much weaker ecological footprint.

Goal 13: Climate action: The majority of the proposals in this report are in fact about the three subgoals – reducing climate emissions, adapting our communities to climate change and incorporating the climate policy perspectives throughout community planning and in all decision-making.

Goal 14: Life below water: Our communities are often coastal or lie near watercourses. Thus, most of what we build - how we build and where we build - has an impact on the sensitive parts of the coastal sea ecosystems. It is important that the climate-adapting measures we take to protect our communities from every rise in sea levels must be taken in harmony with the coastal ecosystems they are being built in.

Goal 15: Life on land: All ecosystem services that healthy trees, cultivation plots and wetlands can provide us with promote and protect the inhabitants and everything we build. What we build must be in harmony with the ecosystems that cleanse the air and water, regulate water flows and prevent erosion. In addition, they are beneficial to recreation, health and wellbeing. Maintaining and building multifunctional and varying green surface areas constitute a kind of sustainability insurance for all involved.

Goal 16: Peace, justice and strong institutions: Inclusive urban planning – what is built and where – promotes integration, meetings and security. In this way it can strengthen people's faith in each other and in our democratic society. A proper state of affairs in the labour market forms a part of this.

Goal 17: Partnerships for the goals: Everything that is included in this report is just as valid in other countries as it is in Sweden. Sweden may be facing major transition challenges, but these are often even greater in other parts of the world. This is why Byggnads is working with these issues at the international level, via the Nordic, European and global forestry, wood and building confederations and the ITUC. We also work with Union-to-Union which is the union aid organisation of the LO, TCO and Saco.