



NATIONAL BACKGROUND PAPER: **Just Transition, Lifelong Learning and Adult Education in Sweden**



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1. Introduction

As the effects of climate change become increasingly evident, countries around the world recognize the urgent need to transition to more sustainable and just societies. This report explores the various efforts and challenges Sweden faces in addressing climate change while promoting a just transition. The report focuses particularly on vulnerable groups such as women, migrants, and people with lower educational levels. It also highlights the role of formal and informal education, civil society mobilization, and international cooperation in advancing the green transition.

Like other countries, Sweden faces significant climate-related challenges. Although we do not experience the extreme temperature increases seen in some nations, climate change is evident in milder winters, increased rainfall, and more frequent extreme weather events such as heatwaves and wildfires. These changes have widespread impacts on multiple sectors, including agriculture, forestry, and infrastructure. There is also a growing need within the education sector to adapt infrastructure to become more energy-efficient and sustainable. On the global stage, countries are making ambitious climate commitments and implementing green transition strategies to mitigate these effects. Sweden is at the forefront within the EU in developing climate targets and has been a leader in areas such as renewable energy and energy efficiency.

Sweden's national strategies and plans for a sustainable future are key to the country's path forward, focusing on renewable energy, energy efficiency, and the creation of green jobs. However, these initiatives are not yet fully aimed at ensuring a just transition, where particular attention is given to vulnerable groups. Although these groups indirectly benefit from broader initiatives, more targeted actions are needed to ensure that all sectors of society can take part in the green transition.

Education is a cornerstone of the green transition. Both formal and informal education systems in Sweden are now evolving to include topics on climate, environment, and sustainable development. Several initiatives, such as those from the Swedish Public Employment Service (Arbetsförmedlingen) and the Swedish National Agency for Higher Vocational Education, offer free training programs for unemployed individuals, women, and other vulnerable groups. These programs aim to equip participants with the skills needed to meet the demands of a green economy. In addition, environmental organizations like the Swedish Society for Nature Conservation provide educational resources for teachers, giving them the tools to effectively address climate and justice issues in the classroom.

Collaboration between different educational actors is essential to ensure a holistic approach to sustainability education. Although Sweden lacks a formalized framework for collaboration in this area, many initiatives are underway to promote partnerships and the sharing of best practices. National and regional conferences, as well as workshops, serve as platforms for teachers, policymakers, and civil society organizations (CSOs) to discuss and develop strategies for integrating climate justice into education.

Civil society organizations such as Fridays for Future, Klimatklubben, and Fältbiologerna are important drivers of climate action in Sweden. Through campaigns and education, they raise awareness of climate issues, though they face challenges such as limited resources and bureaucratic obstacles. Folk high schools and study associations also contribute by offering courses and study circles on sustainability and climate, which strengthen participants' engagement.

Trade unions are working for a just transition by providing education on the impact of climate change on the labour

market and promoting new green jobs. The Swedish Union of Tenants (Hyresgästföreningen) focuses on energy efficiency and sustainable housing, ensuring that climate goals align with improved living conditions. Together, these actors drive public education and contribute to an inclusive green transition.

Transnational cooperation and networking are crucial in addressing climate change, as these issues do not stop at national borders. Sweden participates in several international programs and collaborations that facilitate the exchange of knowledge and technology, as well as best practices. Projects such as the EU LIFE program and the Nordic Council of Ministers exemplify successful international collaborations that contribute to Sweden's green transition.

Sweden's path toward a sustainable and just future requires a multifaceted approach, where education, advocacy, collaboration, and international cooperation play central roles. While Sweden has made significant progress in developing green transition plans and inclusive education programs, much work remains to ensure a fully just transition that reaches all parts of society. Initiatives targeting women, migrants, and people with lower educational levels mark important steps forward, but it is essential that these efforts be intensified to ensure a fully inclusive green transition.

2. Climate change impacts and just transition policies and programmes

2.1. Overview of Climate Change in Sweden

Sweden faces significant challenges due to climate change, as highlighted by several Swedish research institutions. According to SMHI (Swedish Meteorological and Hydrological Institute), Sweden's average temperature has increased by approximately 2°C since the late 19th century, and climate change is expected to intensify in the coming decades. SMHI's reports indicate that Sweden's climate is becoming warmer and wetter, with milder winters and more extreme weather events such as heavy rainfall and heatwaves. Swedish researchers, including those at the Swedish Environmental Protection Agency (Naturvårdsverket) and IVL Swedish Environmental Research Institute, have also pointed to the economic and social impacts for both individuals and society.

Rising Temperatures

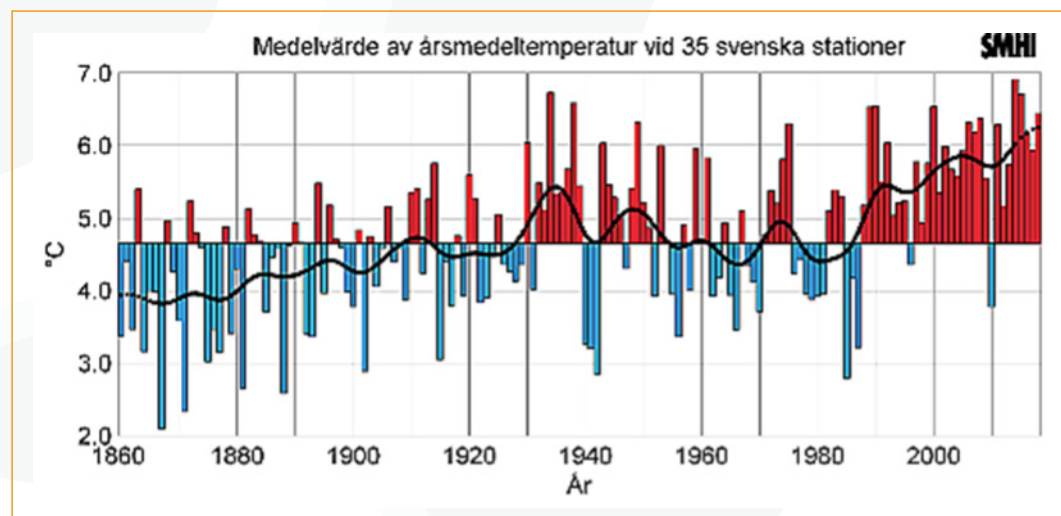
According to SMHI's climate models, Sweden will continue to experience a significant temperature increase, particularly during the summer months. Heatwaves have already become

more common, and it is estimated that the average number of heatwave days will double by 2050. Heatwaves are expected to especially affect metropolitan areas, such as Stockholm and Malmö, where urban heat island effects further amplify temperature increases. A study by Stockholm Resilience Centre (2020) shows that forest fires, caused by drier and warmer conditions, are also expected to become more frequent. Statistics from MSB (Swedish Civil Contingencies Agency) show that the forest fires of 2018 covered over 25,000 hectares, the largest number of fires in modern history.

Decreased Precipitation and Rising Sea Levels

According to SMHI, precipitation in southern Sweden has decreased by approximately 10% over the past 50 years, while northern Sweden has seen an increase in precipitation. SLU (Swedish University of Agricultural Sciences) has shown that agriculture on Öland and Gotland has been particularly affected by recurring droughts, impacting both production and water supply. Statistics from the Swedish Board of Agriculture indicate that crops such as grain and potatoes are particularly

FIGURE 1: SMHI's climate indicator for annual average temperature in Sweden 1860-2018.



vulnerable to drought, leading to reduced yields and higher food prices.

The Swedish National Board of Housing, Building and Planning (Boverket) has warned that rising sea levels, as a direct result of global warming, threaten low-lying coastal communities. SMHI estimates that sea levels along Swedish coasts could rise by up to 1 meter by 2100, posing a significant risk of flooding for areas like Gothenburg, Malmö, and other coastal cities. A report from Chalmers University of Technology shows that protective measures, such as building flood defences, could cost up to 10 billion SEK over the coming decades.

Natural Disasters and Forest Fires

Forest fires have become more frequent in Sweden, and research from SLU shows a clear link between longer dry periods and increased forest fires. MSB statistics indicate that 2018 was an extreme year, with 75 municipalities affected by fires and over 4,000 people evacuated. The cost of extinguishing the fires exceeded 1 billion SEK.

Economic and Social Consequences

Swedish municipalities, authorities, and companies face significant economic challenges related to climate adaptation and the green transition. According to a report from IVL Swedish Environmental Research Institute, Sweden's climate adaptation costs are estimated to exceed 200 billion SEK by 2050. These costs include investments in infrastructure, water supply, and adaptation measures for agriculture.

The Swedish Environmental Protection Agency has also warned that particularly vulnerable groups, such as the elderly, low-income earners, and people in rural areas, are more severely affected by the consequences of climate change. A study from Karolinska Institute (2021) shows that heatwaves increase the risk of health issues such as heart attacks and strokes, especially among the elderly. During the 2018 heatwave, over 700 deaths were reported as being related to extreme heat.

Overall, research indicates that climate change will affect everything from agriculture and water supply to urban development and public health in Sweden.

2.2. Economic and social impacts of climate change

Sweden's efforts towards climate adaptation and a just transition present a comprehensive challenge affecting many sectors of society, including infrastructure, public health, and agriculture. Research from institutions such as SMHI and the Swedish Environmental Protection Agency has highlighted the economic and social consequences of climate change, showing how particularly vulnerable groups are disproportionately affected. Research from IVL Swedish Environmental Research Institute indicates that climate adaptation measures such as green infrastructure, energy efficiency, and sustainable transportation are crucial to meeting climate challenges.

The Public Health Agency of Sweden has emphasized the health effects that impact vulnerable groups the most, such as the elderly, children, and people with chronic illnesses, particularly during heatwaves and increased air pollution. Studies have shown that heat-related deaths rise during heatwaves, highlighting the growing need for climate-adapted housing environments. The Swedish Union of Tenants (Hyresgästföreningen) has worked to promote energy-efficient housing and improve living standards, including advocating for better insulation and the use of sustainable energy sources in multi-family dwellings.

In the labour market, the Swedish Trade Union Confederation (LO) is particularly engaged in ensuring that the green transition is fair. Low-educated workers, often in precarious employment, risk being severely impacted by the structural changes required by climate measures. According to research from the Municipal Workers' Union (Kommunal), these workers may require extensive training and reskilling to manage the transition to a green economy. Without targeted

efforts, these groups risk marginalization, leading to increased unemployment and economic inequality.

The agricultural sector, employing many low-educated and migrant workers, is also highly vulnerable to the effects of climate change. SLU has shown that changing weather conditions, such as extreme drought or sudden downpours, affect crop yields and can lead to increased uncertainty in food supply. This not only impacts the economy but also households' ability to afford food at reasonable prices, exacerbating food security issues for low-income earners and vulnerable families.

Moreover, migrants and newly arrived individuals are affected by climate change in various ways. Many migrants live in housing with poorer conditions and have less access to social support and information about climate adaptation measures. Save the Children has highlighted how children in socioeconomically disadvantaged families are particularly hard hit, both through increased exposure to climate-related health risks and through disruptions to their educational opportunities due to climate-related disturbances.

Economically, climate change risks deepening the gap between wealthier and poorer groups in society. Those with resources can more easily invest in climate measures such as energy-efficient housing, renewable energy, and better insurance coverage, while those lacking such resources face increased economic vulnerability. Ramboll has pointed out that the costs of climate change, in the form of both direct damage and long-term adaptation, are likely to increase unless robust measures are taken to protect society's most vulnerable groups.

For municipalities and businesses, climate change represents a direct financial burden through increased costs for managing floods, droughts, and heatwaves. According to a study by the Swedish Association of Local Authorities and Regions (SKR), there is an increasing need for investments in climate-adapted infrastructure, such as improved sewage

systems, heat protection, and green infrastructure, to protect communities from extreme weather events. Authorities and municipalities also need to revise urban planning to handle both short- and long-term risks. Businesses are impacted by higher insurance costs, damage to production facilities, and disruptions in global supply chains. At the same time, an early transition to sustainable business models and investments in renewable energy could provide long-term economic benefits and strengthen competitiveness. The Swedish Federation of Business Owners has emphasized the importance of supporting small and medium-sized enterprises in implementing climate-adapted solutions and reducing their carbon emissions.

To counter these effects, broad political and societal mobilization is required, with efforts directed toward supporting the most vulnerable. At the same time, the government, in collaboration with research institutes and CSOs, needs to develop strategies that not only mitigate the impacts of climate change but also actively work to strengthen social justice in the green transition.

2.3. Global climate pledges, green transition policies, regulations, and plans

As a member of the European Union (EU), Sweden follows the EU's climate commitments under the Paris Agreement. The EU's goal is to achieve climate neutrality by 2050, with an interim goal of reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. Sweden's climate policy is part of this and is supported by national plans aimed at reducing its carbon footprint and enhancing resilience to climate change.

Sweden's green transition is structured through Sweden's National Energy and Climate Plan (NECP), covering the period 2021–2030. According to this plan, every EU member state, including Sweden, must draft and submit its national energy

and climate plan to the European Commission. Sweden's NECP focuses on five key dimensions of the Energy Union: decarbonization, energy efficiency, energy supply security, the internal energy market, and research and innovation. Key targets include:

- Reducing greenhouse gas emissions by at least 55% by 2030.
- Increasing the share of renewable energy to at least 32%.
- Improving energy efficiency by 32,5%.
- Increasing electricity interconnections within the EU by at least 15% (SMHI, 2021).

EU legislation also requires that emissions from land use, land-use change, and forestry (LULUCF) be offset by carbon sequestration during the 2021–2030 period. This supports the goal that all sectors, including land use, contribute to reducing emissions in line with the Paris Agreement (Swedish Environmental Protection Agency, 2022).

At the national level, Sweden is implementing several strategic plans to achieve its climate goals. These include:

1. The National Strategy and Action Plan for Climate Adaptation (adopted in 2018), which identifies the most significant climate risks and proposes measures to reduce vulnerability.
2. Sweden's Environmental Objectives, which focus on air quality, biodiversity, and sustainable development.
3. The roadmap for a Fossil-Free Sweden and the goal to be completely fossil-free by 2045 (Swedish Environmental Protection Agency, 2022).

Achieving these goals requires significant investments in infrastructure and energy efficiency. Planned investments include projects for renewable energy, upgrading the electricity grid, implementing smart meters, and increasing the use of renewable energy sources such as wind and solar

power. The Swedish Energy Agency has also focused on improving energy efficiency in households, public sectors, and transport infrastructures (Swedish Energy Agency, 2022).

Despite progress, Sweden still lacks a comprehensive plan for a just transition. However, measures to protect vulnerable groups have been introduced. For example, actions to lower electricity prices have been implemented, and financial incentives are offered to improve energy efficiency in households and install solar panels through the net metering system, protecting economically vulnerable consumers (Swedish Energy Agency, 2022).

2.4. National recovery and transition Plans

Sweden's National Recovery and Resilience Plan (NRRP) from 2023 includes several key components supporting the green transition and, to some extent, the just transition. The plan aims to promote sustainable development through the following components:

i. Reducing Greenhouse Gas Emissions and Diversifying Energy Supply

Sweden's energy and climate goals present both opportunities and challenges for the economy, energy system, and society. The National Energy and Climate Plan (NECP), combined with the recovery plan, aims to implement cost-effective measures to achieve medium- and long-term goals, stimulate economic development, and address environmental challenges. Key targets for 2030 include:

- 55% reduction in greenhouse gas emissions compared to 1990 levels.
- 50% renewable energy in final energy consumption.
- Specific targets for renewable energy: 65% in electricity production and 50% in heating and cooling.
- Improved energy efficiency by reducing energy consumption in industry, the transport sector, and buildings (Swedish Energy Agency, 2022).

Major initiatives include continued expansion of wind and solar power, digital solutions such as smart grids, and the implementation of green tax policies to accelerate the transition.

ii. Ensuring Sustainable and Green Mobility

Sweden aims to reduce carbon emissions from the transport sector by 70% by 2030. Initiatives such as the development of sustainable urban plans, promotion of cycling and walking, and the expansion of public transportation are central. The Swedish Transport Administration is working on implementing intelligent transport systems and investments in electric vehicles and charging infrastructure (Swedish Transport Administration, 2022).

iii. Transition to Renewable Energy Sources

Sweden's goal for the share of renewable energy sources in energy consumption is to reach at least 50% by 2030. Measures to increase the share of solar and wind power, as well as improve energy efficiency in industries, are supported by government subsidies and investments (Swedish Energy Agency, 2022). A special focus is placed on reducing dependence on fossil fuels by promoting local electricity production and energy storage.

iv. Improving Energy Efficiency in Buildings

To achieve Sweden's goals of reducing greenhouse gas emissions and improving energy efficiency, the government has focused on renovating and upgrading public buildings, such as schools and hospitals. All new buildings must be nearly zero-energy buildings (NZEB), and existing buildings undergoing renovation must meet higher energy standards. Government subsidies are directed at vulnerable groups, including low-income households and people with disabilities, to enable energy efficiency improvements in homes (Swedish National Board of Housing, Building and Planning, 2021).

v. Promoting Water-Saving Measures

Efficient water management is a key part of Sweden's climate adaptation strategy. By improving water infrastructure, reducing water losses, and increasing water reuse, these efforts help mitigate the effects of drought and water scarcity (Svenskt Vatten, 2022).

vi. Improving the Conservation Status of Natural Habitats (Biodiversity)

Sweden is actively working to strengthen the protection of important natural habitats, both on land and in water. This is done through initiatives such as Natura 2000 and LIFE projects aimed at improving the conservation status of threatened species and habitats. These initiatives align with the EU's Biodiversity Strategy for 2030 (Swedish Environmental Protection Agency, 2022).

vii. Promoting Education and Skills for the Green Transition

Education and skills development are crucial to supporting Sweden's green transition. Programs targeting low-educated individuals, migrants, and women focus on increasing skills in green jobs and sustainable technology. Municipal adult education (Komvux) and vocational adult education (Yrkesvux) offer training in energy efficiency, renewable energy, and sustainable agricultural techniques to support inclusion and create more green jobs (Swedish National Agency for Education, 2022).

viii. Strengthening Skills for Low-Educated and Unemployed Individuals

Sweden has launched several initiatives to improve the skills of low-educated and unemployed individuals, particularly in areas such as green technology and digitalization. The Swedish Public Employment Service and the Swedish National Agency for Higher Vocational Education offer training to strengthen the workforce's competitiveness and support the transition to a more sustainable economy (Swedish Public Employment Service, 2023).

3. Formal and non-formal education on climate, environment, and Just Transition

3.1. Formal and non-formal education on environment, climate, sustainable development, and just transition issues in formal and non-formal education

Formal Education Activities

1. Education for Environment and Sustainable Development:

The Swedish National Agency for Education (Skolverket) is responsible for integrating environmental and sustainability issues into school curricula. Skolverket has developed guidelines to promote education for sustainable development, where students learn about climate change, environmental protection, and social justice. The aim is to create conscious and responsible citizens who can contribute to a sustainable future. Through projects like Green Flag and Keep Sweden Tidy, schools are provided opportunities to implement practical sustainability projects.

Example: *Green Flag is a program that supports schools in working practically with sustainable development through student-driven projects in areas like energy, water, recycling, and biodiversity.*

2. University Programs:

Swedish universities, such as Lund University, Stockholm University, and Chalmers University of Technology, offer programs focused on sustainability, environmental science, and climate change. These programs are important for training future leaders in the field of sustainability and provide students with tools to work in environmental technology, sustainable construction, and climate policy.

Example: *Chalmers offers programs in energy and environment, where students learn about renewable energy and circular economy, which are central to the green transition.*

Non-Formal Education Initiatives

1. Training by the Public Employment Service and Trade Unions:

The Swedish Public Employment Service and trade unions, such as LO, play an important role in offering non-formal education to meet the demand for skills in the green economy. Through training programs targeted at job seekers, low-educated individuals, and other vulnerable groups, they focus on new skills in areas like renewable energy, energy efficiency, and sustainable agriculture.

Example: *LO organizes training for its members on energy efficiency and green workplaces, providing workers with the tools to contribute to the climate transition at their workplaces.*

2. Adult Education by Study Associations:

Study associations, such as ABF (Workers' Educational Association) and Studieförbundet Vuxenskolan, have long experience in providing adult education on environment and sustainable development. They offer study circles and courses on topics ranging from sustainable consumption and climate change to social justice and the green transition. These activities often target local communities and marginalized groups, aiming to make the green transition inclusive.

Example: *ABF and Vuxenskolan organize study circles on climate change and sustainable agriculture, with special initiatives to reach unemployed and low-educated adults.*

3. Environmental Organizations and Local Initiatives:

Civil society plays a central role in non-formal education on climate and sustainability in Sweden. Organizations such as the Swedish Society for Nature Conservation, Fridays for Future, and others organize workshops, seminars, and campaigns that engage the public in climate issues and sustainability projects. They often work on local projects that involve communities in practical environmental and climate activities.

Example: *The Swedish Society for Nature Conservation runs the Climate School project, offering education and information to both schools and private individuals on how to reduce their carbon footprint.*

4. Erasmus+ Projects and International Collaboration: Swedish schools and universities regularly participate in Erasmus+ projects focused on sustainable development and environmental education. These projects allow teachers and students to exchange experiences and best practices with schools in other countries, strengthening global cooperation for a sustainable future.

Example: *Through Erasmus+, Swedish schools collaborate with other European countries to develop environmental education and sustainability projects, giving both teachers and students a broader international understanding of climate issues.*

3.2. Educators and trainers' capacities on climate justice and Just transition issues

Initiatives to strengthen teachers' competence on climate issues and the just transition are primarily driven by Skolverket, in collaboration with various agencies and organizations such as the Swedish Society for Nature Conservation and the Swedish National Council of Adult Education. These initiatives aim to integrate climate issues and sustainable development into education at all levels and provide teachers with the tools they need to effectively teach these important topics.

Initiatives to Build Teachers' Competence on Climate and Just Transition:

1. Teacher Training Programs: Skolverket offers specialized training programs for teachers focused on integrating climate issues and sustainable development into their teaching. These programs aim to enhance teachers' knowledge and pedagogical skills to effectively teach about environmental issues and sustainable practices.

Example: Skolverket offers educational modules through the Teacher Portal, where teachers can access resources and support for teaching about sustainable development and climate justice.

2. Curriculum Integration: A key focus for Skolverket is integrating climate issues and the just transition into curricula at all levels, from primary to upper secondary school. This ensures that students gain a foundational understanding of these critical issues early on and develop a responsible approach.

Example: *Climate and sustainable development are already embedded in the syllabi for subjects like geography, social studies, and biology, giving students opportunities to learn about climate change and its social consequences.*

3. Development of Teaching Materials: Skolverket and other organizations, such as the Swedish Society for Nature Conservation, develop teaching materials, tools, and resources to support teachers in delivering engaging and informative lessons on climate issues and sustainable development. These resources are tailored to different age groups and school environments to ensure they fit various educational contexts.

Example: *Klimatklubben, in collaboration with the Swedish Society for Nature Conservation, has developed teaching materials for schools that want to work practically with climate issues.*

4. Collaborative Projects: Swedish schools and organizations often participate in collaborative projects with international partners and local communities to promote research and innovation in environmental education and sustainable development. These projects allow teachers and schools to learn from best practices in other countries and engage in global environmental issues.

Example: Through Erasmus+, Swedish schools have collaborated with European partners to develop sustainability education that strengthens teachers' ability to teach about global climate challenges.

Challenges

Despite the progress, there are several challenges in strengthening teachers' competence on climate issues and just transition in Sweden. Limited funding for continuing education programs, varying levels of support from school administrations, and difficulties in standardizing climate-related topics in curricula present obstacles. Additionally, the dynamic field of climate science requires teachers to constantly update their skills to stay informed about the latest research and policy developments.

A particular area of concern is that adult education, especially education targeted at immigrants, women, and low-educated adults, often lacks sufficient focus on climate issues and social innovation for a just transition. To address these challenges, more targeted educational efforts would need to be developed for these groups, both within formal and non-formal education.

3.3. Collaboration between education stakeholders on climate justice and Just Transition issues

In Sweden, initiatives to strengthen teachers' competence on climate issues and the just transition are primarily driven by Skolverket, in collaboration with various agencies and organizations such as the Swedish Society for Nature Conservation and the Swedish National Council of Adult Education. These initiatives aim to integrate climate issues and sustainable development into education at all levels and provide teachers with the tools they need to effectively teach these important topics.

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4. Civil society consultation, collaboration, and coalition building

4.1. Advocacy/campaigns - CSOs' mobilisation on environmental/climate action

Civil society organizations play a crucial role in mobilizing environmental and climate efforts in Sweden. These organizations, including study associations, trade unions, the Swedish Union of Tenants, and other non-profit actors, use advocacy strategies to raise awareness, influence policy, and drive local movements toward sustainability. The green transition requires broad collaboration between civil society, academia, and the public sector to achieve a fair and sustainable future.

Key organizations in Sweden's green transition efforts:

- 1. Swedish Society for Nature Conservation (Naturskyddsföreningen):** Sweden's oldest and largest environmental organization, which campaigns on biodiversity, climate, sustainable agriculture, and reducing the use of plastics and chemicals. They work closely with schools, local groups, and policymakers to influence legislation and increase public engagement in environmental issues.
- 2. World Wide Fund for Nature (WWF Sweden):** WWF focuses on preserving natural resources and biodiversity, while also working for the sustainable use of oceans, forests, and the climate. Through collaboration with companies, politicians, and local communities, WWF strives to create sustainable solutions that are integrated into both national and international policies.
- 3. Swedish Union of Tenants (Hyresgästföreningen):** With its focus on housing issues, the Swedish Union of Tenants contributes to the green transition by promoting energy-

efficient and climate-smart housing. They collaborate with local authorities and residents to foster sustainable solutions in the construction and property sectors.

- 4. The Trade Union Movement:** Trade unions, including several large LO-affiliated unions, work to ensure that the green transition occurs in a socially just way. They advocate for jobs in sustainable energy and industry, as well as a secure transition for workers in sectors affected by climate policies.
- 5. Study Associations:** Study associations, such as ABF and Folkuniversitetet, play an important role in spreading knowledge about climate issues and sustainable development. Through public education and local training efforts, they contribute to raising public awareness and engagement in the green transition.

CSOs, including study associations, trade unions, and environmental organizations, play a central role in the green transition through advocacy and public education. By running campaigns on digital platforms, social media, and public events, they increase awareness of environmental issues such as plastic use, biodiversity, and renewable energy. Study associations offer courses and study circles to educate the public on sustainability, while organizations like the Swedish Society for Nature Conservation and Greenpeace drive advocacy through debate and dialogue with policymakers. Public education also reaches vulnerable groups, strengthening their participation in the climate debate, contributing to a more inclusive and just transition.

A challenge in the Swedish context is the need for stable and long-term funding to implement larger and more sustainable projects. There is also a lack of educational materials and

sufficient public participation, which is hindered by limited resources. Additionally, civil society sometimes faces difficulties in reaching decision-makers, as political decisions do not always include civil society's insights. An example is how many environmental organizations have struggled to influence climate policy decisions through consultations and participation in the legislative process.

4.2. Education - CSOs engagement on formal and non-formal learning on climate and just transition issues

CSOs play a central role promoting educational initiatives on climate change and just transition. Through methods such as study circles, lectures, courses, and other public education efforts, these organizations reach wide segments of society, often with a special focus on workers, youth, and local communities – key target groups in the EU's green transition efforts.

Formal Education: Collaboration with Schools and Teachers

In formal education, CSOs collaborate with the Swedish National Agency for Education (Skolverket) and municipal schools to integrate climate and sustainability issues into school curricula. For example, through workshops, CSO experts work with teachers to create interdisciplinary lesson plans that address topics such as sustainability, biodiversity, and climate adaptation. These workshops employ interactive teaching methods, case studies, and practical exercises to enhance teachers' ability to engage students on climate-related issues.

Example: *The Swedish Society for Nature Conservation (Naturskyddsföreningen) and WWF Sweden collaborate with schools to develop teaching materials on biodiversity and sustainable development, helping students understand the connection between humans and nature and how we can work towards a sustainable future.*

Teacher training programs and workshops focused on climate education methods are also central initiatives. These programs provide teachers with access to the latest research, teaching methods, and educational materials. Through role-playing, simulations, and peer learning, teachers acquire new tools for teaching about climate change and motivating their students to take action for sustainability in their communities.

Non-Formal Learning: Study Circles, Courses, and Lectures

Outside formal education, study associations lead in offering non-formal learning on climate and sustainable development. Through study circles, lectures, and courses, participants can delve into topics such as sustainability, energy transition, recycling, and the circular economy.

Example: *ABF offers study circles where participants discuss climate change and social justice, focusing on practical solutions like energy efficiency and sustainable consumption. These circles often engage workers and other community groups affected by the transition.*

CSOs also organize a range of local workshops and events to raise awareness and promote climate action. These workshops use methods like community dialogues and citizen science to engage local communities in discussions on how climate change affects their lives and what actions can be taken for a just transition.

Example: *Keep Sweden Tidy (Håll Sverige Rent) organizes courses and training on recycling and reducing plastic waste, enhancing individuals' and communities' capacity to contribute to environmental efforts.*

Youth Engagement and Leadership

Youth are a particularly important target group for CSOs, and through initiatives such as climate camps, leadership training, and youth-driven projects, young people are empowered to become advocates for climate issues and act for change.

Example: *Fridays for Future Sweden mobilizes youth through strikes, forums, and workshops, where they are educated on climate justice and sustainable development while gaining the tools to influence policy.*

Practical Education and Capacity Building

CSOs actively work to build the capacity of local communities by offering practical workshops on renewable energy, sustainable agricultural methods, and community resilience. Study visits to sustainable projects and demonstrations are key components of these trainings, providing participants with practical knowledge and tools to tackle climate challenges at the local level.

Example: *The Transition Network (Omställningsnätverket) organizes workshops and study visits where participants learn about local energy production and sustainable farming methods.*

Collaboration, Digital Platforms, and Online Learning

Collaborations between CSOs, educational institutions, municipalities, and international organizations are crucial for maximizing the impact of educational efforts on climate and just transition. Through these partnerships, CSOs gain access to funding opportunities and can share best practices.

Example: *The Church of Sweden collaborates with various actors to include climate and justice issues in its work, focusing on vulnerable groups such as women and immigrants.*

To reach broader audiences and adapt their content, CSOs use digital platforms and online education. Virtual workshops and e-learning are important tools for disseminating knowledge on climate issues and making education more accessible.

4.3. Consultation - CSO's on just transition by government agencies and challenges

Consultation between CSOs and government authorities in Sweden plays an important role in ensuring that climate and transition policies are inclusive and just. This consultation aims to integrate diverse perspectives, especially from groups most affected by climate change and the transition to a green economy. Labor movement organizations, environmental organizations, and youth movements are key players in these processes.

Government agencies such as the Swedish Environmental Protection Agency (Naturvårdsverket), the Swedish Energy Agency (Energimyndigheten), and the Ministry of the Environment often invite CSOs to participate in political processes through public consultations, roundtable discussions, and advisory committees. Several non-profit organizations actively participate in these forums, providing evidence-based recommendations. The Swedish Society for Nature Conservation, Fridays for Future Sweden, Greenpeace, and trade unions have all emphasized the need to combine environmental protection with social justice in climate policy.

Challenges for CSO Participation in Consultation

Despite these efforts, CSOs face several challenges that hinder their participation in consultations on a just transition. One of the biggest challenges is the lack of access to comprehensive and up-to-date information.

CSOs often report difficulties in obtaining detailed data and reports from government agencies, making it harder for them to provide well-informed feedback. Another challenge is that consultation processes can sometimes be perceived as symbolic, where CSO recommendations are not always integrated into final policy decisions. This can lead to frustration and a sense of marginalization among organizations. Small, volunteer-driven organizations, such

as Friends of the Earth Sweden (Jordens Vänner) and The Swedish Youth Association for Nature Studies (Fältbiologerna), particularly struggle to have their voices heard, as they often lack the technical and financial resources needed to fully participate in consultation processes. Smaller associations may find it difficult to conduct necessary research, mobilize stakeholders, or participate in the many meetings required to influence policy.

Example: Both Greenpeace Sweden and the Swedish Society for Nature Conservation have highlighted challenges in getting their recommendations fully considered in decision-making processes, despite extensive campaigns and research-based proposals. At the same time, the trade union movement has emphasized the importance of considering workers' rights in the transition process, but they too sometimes face obstacles in the form of lengthy decision-making processes and insufficient resources.

Another challenge is the pace of action implementation. CSOs, which often advocate for rapid and far-reaching changes, can feel frustrated by the government's slow responses due to political, economic, and social considerations. While CSOs push for radical measures to meet climate goals, the government tends to act more cautiously to balance various interests, which can create tensions between the parties.

Solutions to Improve Consultation Processes

To address these challenges, it is important to increase transparency and accessibility in consultation processes. Government agencies should provide CSOs with up-to-date and comprehensive information in a timely manner, ensuring that their views are considered in decision-making processes. Capacity-building efforts can also help smaller CSOs enhance their technical and advocacy skills, enabling them to participate more effectively.

It is also crucial to create more inclusive and participant-friendly platforms where diverse voices, especially from vulnerable groups and trade unions, can be heard and respected. The Swedish Trade Union Confederation (LO) and other trade union organizations have been active in advocating for fair working conditions as a central part of the climate transition. By building collaborative platforms where these actors participate, policies can become more just and sustainable.

5. Cross-border solidarity

5.1. Transnational networking/coalitions in green transition for vulnerable groups in Cyprus

Transnational networks and coalitions play a crucial role in driving the green transition, especially in supporting vulnerable groups. Many Swedish CSOs collaborate across national borders to exchange knowledge, build capacity, and promote social justice within climate and environmental work. By participating in these networks, Swedish actors gain access to expertise and resources that can enhance their efforts domestically.

A prominent example is the European Environmental Bureau (EEB), Europe's largest network of environmental organizations. EEB works to promote environmental sustainability and social justice throughout Europe. Swedish environmental organizations, such as the Swedish Society for Nature Conservation (Naturskyddsföreningen) and Greenpeace Sweden, benefit from EEB's lobbying efforts at the EU level, which are crucial for influencing policies that protect vulnerable groups during the green transition.

Climate Action Network (CAN), which includes over 1,500 environmental organizations globally, is another key actor in which Swedish CSOs participate. CAN's focus on climate justice and equitable solutions aligns with the needs of vulnerable groups in Sweden, such as workers in fossil-dependent sectors and immigrant communities. By engaging in CAN, Swedish organizations can collaborate on global climate campaigns, participate in international conferences, and learn from successful climate adaptation and emissions reduction projects in other countries.

Another example is the Nordic Council of Ministers, which brings together Nordic countries to promote sustainable and climate-friendly solutions. Through this forum, Sweden can collaborate with other Nordic countries on green transition projects that benefit vulnerable groups, such as immigrants and rural populations. Within this framework, initiatives have been developed to support the transition to renewable energy and the circular economy.

These transnational networks often provide capacity-building workshops, digital training, and platforms for knowledge exchange, which strengthen local Swedish organizations' ability to drive change. Through collaboration and solidarity between member organizations, CSOs in Sweden can amplify their impact and push for a more inclusive green transition.

Examples of Transnational Networks and Coalitions:

- European Environmental Bureau (EEB): eeb.org
- Climate Action Network (CAN): climatenetwork.org
- Nordic Council of Ministers: norden.org

5.2. Cross-border projects

Cross-border projects are essential for promoting a sustainable transition and supporting vulnerable groups in Sweden. These projects often involve collaboration between Swedish organizations and international actors to address common environmental challenges, increase resilience among vulnerable groups, and promote sustainable development practices. Below are some key examples of cross-border projects focused on environmental sustainability and climate action.

- **Interreg Baltic Sea Program:** The European Interreg Baltic Sea Program aims to promote cooperation between countries in the Baltic Sea region to enhance sustainable

development and climate action. Through projects under this program, Swedish organizations collaborate with partners in Finland, Denmark, Estonia, and other countries to reduce carbon emissions, protect marine ecosystems, and support climate adaptation in coastal communities.

- **LIFE Program:** LIFE is the EU's funding instrument for the environment and climate action. Swedish projects within the LIFE program focus on developing sustainable solutions to reduce climate impact, strengthen biodiversity, and transition to a circular economy. An example is LIFE IP Rich Waters, which aims to improve water quality in Sweden's lakes and waterways through cooperation with international partners.
- **PRIMA Program:** The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) is a joint research program aimed at improving sustainable management of water and food systems. Swedish actors in agriculture and sustainable food production have participated in PRIMA projects to develop climate-smart farming methods and enhance food security.

These projects help build capacity and strengthen the resilience of vulnerable groups in Sweden, particularly in sectors dependent on climate-sensitive resources. Through international collaborations, Swedish organizations gain access to new innovations, funding, and expertise, enabling them to push for a faster and more inclusive green transition.

Examples of Cross-Border Projects:

- Interreg Baltic Sea Program: interreg-baltic.eu
- LIFE IP Rich Waters: richwaters.se
- PRIMA Program: prima-med.org

6. Conclusion and Recommendations

Sweden's efforts for a green transition are comprehensive and multifaceted, with political initiatives, educational programs, advocacy campaigns, and international collaborations playing central roles. These efforts aim to achieve environmental sustainability and social inclusion, with a particular focus on vulnerable groups such as low-educated adults, immigrants, and women.

Educational Programs and Lifelong Learning

Education is one of the cornerstones of the transition efforts. Through agencies such as the Swedish National Agency for Education (Skolverket), the Swedish Council for Higher Education (UHR), and the Swedish National Council of Adult Education (Folkbildningsrådet), environmental education and sustainable development are integrated into both formal and non-formal education. Initiatives like study circles organized by ABF and the Studieförbundet Vuxenskolan have been particularly effective in raising awareness and developing practical skills for a sustainable future. Educational programs focusing on green and digital skills, tailored for different societal groups, play a key role in preparing both the next generation and the current workforce for a sustainable future.

Collaboration with Civil Society Organizations

Collaboration with CSOs is crucial for a just transition. Organizations like the Swedish Society for Nature Conservation (Naturskyddsföreningen), Fridays for Future, and Greenpeace Sweden have a strong presence in environmental work and advocacy. Additionally, the trade union movement plays a vital role in ensuring that workers' interests are addressed during the transition. These CSOs mobilize local communities, push for policy changes, and offer educational resources that complement government efforts.

International Collaborations and Cross-Border Projects

International cooperation further strengthens Sweden's efforts in the green transition. Through projects under the Interreg Baltic Sea Program and the LIFE Program, Swedish organizations gain access to expertise, funding, and best practices to tackle environmental challenges. These projects contribute to knowledge exchange, capacity building, and the development of innovative solutions. Collaboration with international partners helps Sweden implement new technologies and sustainable methods that benefit both the environment and vulnerable communities.

Challenges and Recommendations

Despite these successes, challenges remain, such as limited resources, bureaucratic hurdles, and the need for increased public awareness. To overcome these obstacles, the following measures should be taken:

- 1. Expand and diversify educational programs** to cover more aspects of environmental sustainability and green skills. Special efforts should be made to make these programs accessible to vulnerable groups through subsidies and targeted campaigns.
- 2. Strengthen collaboration with CSOs** by leveraging their grassroots networks, broader community engagement and advocacy for a just transition can be promoted. The trade union movement can collaborate with environmental organizations to ensure workers in fossil-dependent sectors have access to reskilling programs.
- 3. Increase funding for both government and CSO-led initiatives** create grants and financial incentives to support small-scale community projects and startups focused on sustainability.

4. **Launch comprehensive awareness campaigns on the importance of the green transition.** using various media channels and organizing local events can help reach wider audiences.
5. **Encourage interdisciplinary collaboration within the education system,** integrating subjects such as natural sciences, social sciences, and economics to give students a comprehensive understanding of sustainability and a just transition.
6. **Engage more in cross-border projects by seeking new international partnerships,** this can help foster innovation and provide valuable support in addressing climate challenges at the local level.

By addressing these recommendations, Sweden can further solidify its role as a leader in a sustainable and inclusive green transition. This benefits both the environment and society, especially the most vulnerable groups.

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