

# Looking for a ‘just transition’: Sustainable forestry in Sweden and biodiverse beet sugar production in Denmark

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## Abstract

This article aims to identify contradictions between visions of just transition and their realisation in practice, particularly the extent to which labour and nature are respected, with examples of forestry in Sweden and the beet sugar industry in Denmark. The case studies provide insight into the formation and local implementations of the just transition vision promoted by the ITUC and ILO, representing a call for the ecological modernisation of the economy. The cases illustrate its Northern European roots and limitations. Although a multi-scalar perspective positions union agency as embedded in interwoven spatial scales, particular power relations remain prevalent. Despite being formally represented through social dialogue structures at the national and European levels, Swedish and Danish unions appear to have limited involvement at the local level, with environmental and social justice effectively defined by corporate social responsibility policies. The apparent consensus hides a series of challenges: employment rights and protections in the transition, including for a significant number of migrant workers, meaningful union involvement on the ground, and a light-touch approach to environmental concerns so as not to disrupt production objectives. Ultimately, nature and labour remain positioned against each other, and unions are caught between environmentalists and employers.

## Keywords

Climate change, Denmark, just transition, multi-scalar approach, Sweden, trade unions

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## Introduction

In ‘Trade unions and climate change’ Rätzzel and Uzzell (2011: 1222) tantalisingly conclude that ‘to conceptualise nature as a partner in human development instead of seeing it as a victim would enable a decisive shift in existing climate change policies’. To this consideration might be added Marx’s (Marx, 1875[1970]: 13) insistence that labour is ‘a force’ (not just partner) of nature and Engels’ (Engels, 1875[1970]: 47) that ‘nature does not just *exist* but *comes into being* and *goes out of being*’. The suggestion is that exploitation of nature goes together with exploitation of labour, both subject to change, and that the integral relation of labour to nature needs to be part of union policies for a just transition to the zero-carbon economy to combat climate change. This is our starting point, the aim being to identify how just transition policies need to shift if nature becomes not just object of exploitation, a commodity, but like labour the subject of change, of history.

Although unions collaborate in pursuing the ‘just transition’ agenda, very different interpretations and realisations are evident. Drawing on Hampton’s (2015) three-fold distinction between market-based approaches to climate change, ecological modernisation, and radical transformation, our research indicates that, whilst all unions begin with the conflict between profit-driven capitalism on the one hand, and workers’ interests and environmental protection on the other, most global, European and national unions adopt an ecological modernisation perspective. This involves environmental sustainability measures, technology utilisation, social reform, and labour market regulation, achieved through social dialogue between governments, employers and unions (Clarke and Sahin-Dikmen, 2021). Some, however, argue that the union seat at (inter)governmental negotiations does not come with powers to influence and shape outcomes and that a socially transformative approach, empowering workers as active agents and involving public ownership, is necessary (Clarke and Sahin-Dikmen, 2020; Sweeney and Treat, 2018).

Studies of just transition reveal that in practice the green transition pursued and its outcomes vary, including in relation to nature and the role of labour. This is because interventions depend on the strength of union engagement on the ground and face myriad challenges (JTRC, 2018; Lundström 2018; Sheldon et al., 2018), including: stakeholder conflicts, even where strong social dialogue exists (Galgóczi, 2020); difficulties in building alliances between environmental and labour organisations (Snell, 2018); limited opportunities for community and grassroots involvement (JTRC, 2019); inadequate national and local government provision (ETUC, 2016; Galgóczi, 2015; ILO, 2018a); and poor quality employment and working conditions (Stavis, 2013; Wegmann, 2020). Such challenges raise questions of how far union strategies to address climate change at European and global levels are adequate and realisable locally, and what the obstacles to implementation are.

In this article, the contradictions between unions’ visions of just transition and their realisation in practice, particularly the extent to which labour and nature are respected, are analysed through the cases of Swedish forestry and beet sugar production promoted as examples of ‘just transition’ policy enactment by their respective European sectoral

unions – the European Federation of Building and Woodworkers (EFBWW) and the European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT) – and global sectoral unions, the Building Workers International (BWI) and IUF (covering food, farm, hotels and more). These sectoral union federations shape and adopt the ITUC (International Trade Union Confederation) and ILO (International Labour Organisation) vision of environmental and social reform through social dialogue. This vision represents a version of ecological modernisation and contrasts with calls for radical transformative strategies and interventions from global sectoral unions such as Public Services International (PSI) and International Transport Federation (ITF), seeking to empower workers to challenge existing social relations of production and the profit-driven economic growth model (Felli, 2014; Hampton, 2015; ITF, 2010; Morena et al., 2019; Stevis and Felli, 2015).

Our case studies are significant in focussing on sectors in which climate adaptation and mitigation measures do not necessarily involve phasing out entire industries or loss of employment, whereas much research on just transition practices is on industries required to transform more substantially (e.g. automobile) or be phased out (e.g. coal mining) (Galcóczy, 2019). A just transition applies to all sectors – from agriculture to transport, public services, construction, and forestry, though there is little insight into green transitions in such sectors, to what extent just transition guidelines are applicable, what role labour plays, and the relationship to nature entailed. The two cases illustrate that the just transition vision advocated by ITUC and ILO is implicitly modelled on social dialogue and the coordinated market economies of Europe. Through analysis of these cases, we address the questions of how just transition policy proposals articulated at European and global levels are implemented in two European countries and two sectors and what challenges are faced on the ground in addressing climate change and empowering labour and nature.

## The just transition context

As the representative of labour within the ILO, the ITUC introduced the just transition concept into the United Nations (UN) environment and development agenda, connecting climate action with ILO's core mandate: decent work, poverty eradication, social protection, and employment rights (ILO, 2018b; Olsen and Kempter, 2013). Through campaigning, lobbying and participation in inter-governmental negotiations, the original emphasis of a 'just transition' to an environmentally and socially sustainable economy has evolved from protecting workers and communities into detailed proposals articulated in ILO Just Transition Guidelines. Climate action has, in turn, become core to ITUC's political strategy, aiming to establish unions as powerful actors with a distinctive contribution to international efforts (Rosemberg, 2013). As described by a policy officer interviewed, ITUC brings a social and labour perspective to the market-oriented, technology-heavy solutions prevailing at climate negotiations of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP), reframing climate change as a multi-dimensional issue with economic, social, and environmental aspects.

The ILO Just Transition Guidelines represent a framework for implementing just transition at global, national and enterprise levels, addressing both the transition *process*, involving ‘meaningful social dialogue at all levels’, and its *outcome* – ‘decent work for all in an inclusive society’ (ILO, 2018a: 2). Detailed consideration is given to governance, macro-economic policies, sustainability in specific industries, and social measures and recommendations for areas of policy (e.g. skills development, occupational safety and health, social protection, employment rights). Tripartism is advocated, entailing collaboration and social dialogue between governments, employers, and unions to achieve ‘strong social consensus on the goal and pathways to sustainability’ and meet emission reduction targets (ILO, 2015:5). Central governments are to put in place an initial policy, regulatory and institutional framework to facilitate planning, implementation, monitoring, and financing. The social partners are expected to play a role at all stages and levels (i.e. industry, local and enterprise) (ILO, 2015: 10) by raising awareness among members and promoting their active participation in social dialogue through collective agreements and bargaining and by influencing public procurement to include labour standards (ILO, 2018a: 3). Employers are to disclose transition risks and opportunities, take steps to ensure a just transition for workers and communities, and develop emission reduction plans, covering also supply chains.

We can observe this approach to just transition at work in the European Union (EU). At European level, the European Trade Union Confederation (ETUC), representing in the first place the national union confederations from across Europe, works with EU institutions and employer organisations as a formal social partner, progressing the just transition process within established social dialogue structures. Whilst calling for stronger implementation measures, ETUC formulates its climate proposals in relation to EU policy, particularly the binding targets set, and evaluates and monitors EU-wide climate policies to ensure equitable and socially responsible implementation of transition plans. It calls for an industrial-scale Circular Economy Action Plan and supports practical interventions, showcasing best practice examples, such as the cases discussed here, to raise awareness and build capacity within unions (ETUC, 2020a; b, 2018). European sectoral union federations, in turn, contribute to policy formation and shape the just transition vision by interpreting and implementing ETUC’s recommendations in industries across different countries, linking calls for environmental transformation with issues such as employment rights, exploitation of migrant workers, health and safety, and unionisation.

Global and European labour organisations thus share many common policies. All pursue Just Transition guidelines, integrating social and employment aspects into environmental policies. All promote tripartism and social dialogue and greater union participation in climate action initiatives to mainstream just transition policy proposals and bring climate change up the agenda. And all put forward a reform programme, more radical for some than others, through cooperation with employers and governments, support for the public sector and public procurement measures.

## Theoretical concerns framing our research

The ITUC's just transition iteration challenges the jobs versus environment dichotomy as a 'false choice' in constructing a conflictual relationship between labour and the environment (Rätzl and Uzzell, 2011). Indeed, the ILO (2015) Guidelines are intended to integrate, on the one hand, social and employment aspects into environmental policies to ensure decent work in the green economy and, on the other, environmental concerns into employment policies to engender change in production and consumption practices and, in this respect, to address both environmental and labour issues. Nevertheless, the integration of environmental and employment policies is not straightforward. Climate action tends to respond to pragmatic, sector specific environmental issues, though also a potential organising strategy to rebuild unions' power, such as through collaboration with environmental movements and civil society organisations. In terms of employment, the green economy vision as a generator of sustainable and decent employment is developed and disseminated through ongoing knowledge exchange and collaboration, with education and training playing an important part in supporting unions involved in green transitions.

As well as considering the extent to which employment and environmental issues are integrated or conflictual, our analysis seeks to determine the approach to addressing climate change that our cases represent, elaborating on Hampton's (2015) framework by incorporating the relation of labour to nature and assessing how far nature is an object of exploitation and economic concerns prevail over environmental protection. Thus, a *market-based approach* assumes that both labour and nature are commodities, objects of exploitation through technological solutions, and separated from each other. *Ecological modernisation* too defends the notion of labour and nature as separate realms but sees them as interacting and that sustainable production is achieved through technological change and the – albeit restricted – role of labour (Pellizzoni, 2011). Finally, *radical transformation* assumes a relational view of labour and nature, as a web of relations between labour and working and living habitats (Barca and Leonardo, 2018), whereby labour is conceived as a social relationship governed by rules (Hyman, 2007) and embedded in nature.

A final theoretical consideration concerns the ways that just transition guidelines, presumed to represent common labour ambitions, are adapted to different national and local contexts (Velucu and Barca, 2020). Despite their seemingly abstract character, these high-level strategies remain material in that they exist in unilateral relation to a concrete local reality, itself representing an internally divided unity of diverse social relations and practices (Ilyenkov 1982). Addressing the relation between different levels suggests an approach such as adopted by Pernicka et al. (2016), whereby union strategies are embedded in multiple scales of social relations and institutional frameworks, including global, national, regional, local, and sectoral. While relations, conflicts and practices at each level have a bearing on other levels and are mediated across time, there is also space for union actors – though not necessarily in congruence – to shape the policy and strategy formation process and its outcomes. Lundström (2018), in his study of the greening of transport in Sweden, illustrates the importance of analysing implementation of the just

transition vision at different levels, pinpointing contradictions between climate policy developments of unions at national and international levels and the interests of members locally. For instance, he highlights that bringing climate change into the daily concerns of union members depends on the efforts of local union officers, which often appear far removed from European and global unions' policy departments and from international climate negotiations. A multi-scalar approach is thus pertinent to understanding how our case studies are shaped by union policies and practices, from local to global, and the interactions between the different levels.

Three theoretical considerations thus frame our analysis of the two case studies: the 'jobs versus environment' dilemma; incorporation of nature into Hampton's tripartite schema; and the need for a multi-scalar, multi-dimensional approach. Through the focus here on local initiatives and the social relations entailed in two European countries, it is possible to assess how climate policies address different realities, in what respect interventions are exemplary or restricted, and how the just transition iteration is circumscribed in practice. Our research therefore holds a lens to local and national contexts, through which we can discern how far employment considerations conflict with environmental ones, labour and nature are integrated, and climate policies are realised at local level.

## Methodology

The article draws on two research projects, *Just Transitions and Global Labour Organisations: Depth, Breadth and Worker Agency* and *Labour Unions and Green Transitions in Europe*,<sup>1</sup> each seeking to: (i) assess climate change policy proposals and interventions emanating from union organisations; (ii) and identify and investigate innovative examples involving unions.

On global and European unions, data were gathered through:

- (i) Reviewing documents published by unions, including reports, discussion and position papers, and union website searches.
- (ii) In-depth interviews in 2019 with union officers involved in developing climate policies, including global unions (BWI, PSI, ITF, IndustriALL, and Education International), and European federations, particularly those covering food and agricultural production (EFFAT) and construction and forestry (EFBWW).
- (iii) Interviews with the ETUC and its research and training centre, the European Trade Union Institute (ETUI) in 2016 and ITUC and ILO in 2019 on their just transition strategy and relationship with global unions.
- (iv) Analysis of global union climate strategies, assessing disparities between ILO's, ITUC's and sectoral global unions' just transition visions.

Analysis of global and European just transition policies is therefore underpinned by an extensive document analysis over a 3-year period and interviews with policy officers involved in their development. In both research projects, one of our aims was to identify examples of union involvement in the green transition. The case studies examined in this

article were selected as interviewees referred to them as ‘good practice’ examples of the implementation of just transition policies pursued at the European and global levels.

The case study investigations were completed late 2019 and early 2020. The Swedish case involved visiting a logging site in Vasteras and interviews with:

- four officers from head office of GS (*Facket för skogs-, trä-och grafisk bransch*), the sector union for forestry, woodworking and graphic industries, including: general secretary, national negotiating officer, international officer, and union representative on Swedish National Forestry Board,
- two local union representatives in Vasteras,
- representative of the Swedish Wood Building Council (*Trabyggnadskansliet*),
- two employees on logging site of Sveaskog, the state-owned forestry company’
- co-directors of ARVET, a private company promoting wood construction.

Subsequently, in 2023, an interview was conducted with an expert to ETUC, whose efforts to introduce climate change policies into the Swedish Transport Workers’ Union featured in [Lundström’s \(2018\)](#) article.

The Danish case was less a comparator than providing a backup against which to test findings from the Swedish case. The empirical research was thus less intensive, involving visiting a farm and sugar factory in Lolland and conducting interviews with:

- policy advisor from sector union 3F (*Faglig Faelles Forbund*),
- deputy chairman of 3F in Lolland, a former Nordzucker employee for 40 years,
- sugar beet farmer,
- representative from beet sugar manufacturer, Nordzucker.

Case study analysis, therefore, is based on document analysis, literature review, interviews and field observations and juxtaposes an overview of global, European and national policies with rich local insights from enterprise representatives, long-standing local union officers and workers. Interviews relied largely on notetaking by the two researchers, given difficulties recording in the forest, in factories, and on the farm. Both cases represent the Scandinavian industrial relations system, generally structured along sectoral lines, bi-partite, and based on social partners enjoying considerable autonomy and playing a crucial role in labour market regulation ([ILO, 2017](#)). For both countries too, overall unionisation rates are relatively high, at around 70%. The high coverage rate of collective bargaining is related to well-established employer organisations and the strong presence of unions at firm level, whilst the social dialogue model means unions are involved in climate change policy discussions.

Despite efforts of triangulation in data collection and in-depth attention to the context of each case ([Yin, 2014](#)), limitations remain. The case study design was developed iteratively and for ease of access; enterprises and participants were selected on a convenience basis and are not necessarily representative of the sector. It is also not possible, nor is it the aim, to reach firm conclusions about the ecological modernisation model of just transition based on two case studies. However, the national and European unions in

both sectors directly contribute to the development of the just transition vision put forward by the ITUC and ILO, as well as promoting the cases as good practice examples. Our cases can, therefore, be seen as living examples of the kind of just transition envisaged and present us with a unique opportunity to examine its merits and weaknesses. Through them we thus hold a lens onto the formation and implementation of this vision in the European context and create space to reflect on visions and practices of just transition.

### **‘Sustainable’ forestry**

Our first case, forestry, represents a major EU industry, employing about 520,000 people and accounting for 0.2 % of GDP in 2018 (Eurostat 2021). Varying from family holdings to state forests and large company-owned estates, the forested area, covering 43% of EU landmass, is slowly increasing, though rising temperatures threaten some tree species. EU policies include the Forest Strategy 2014-20, which provides a framework for sustainable forest management, balancing the multiple functions of forests, and efficient use of resources (EU 2013). In 2023 the European Parliament and Council agreed on the Nature Restoration Law to restore ecosystems – at least 30% of habitats in poor condition by 2030, 60% by 2040, and 90% by 2050, including a forestry model putting ‘people and nature first’ (Olden, 2023: 5). This law is important given the role of European forests in mitigating climate change through carbon sequestration, biodiversity, protection of soil from erosion, and as a public amenity. When sustainably managed, forests store carbon, but are at risk from illegal logging and clearance for farming purposes, leading to deforestation, the largest source of CO<sub>2</sub> emissions after fossil fuel use, setting off a cycle of soil degradation, destroying a climate friendly resource, and dislocating communities. Clearcutting, used extensively across Europe, including in Sweden, leaks CO<sub>2</sub>, destroys functioning ecosystems, threatens the livelihoods of indigenous Sámi people, and reduces biodiversity, with many species threatened with extinction particularly where forests are unprotected (Olden, 2023). Environmental organisations such as the Worldwide Fund for Nature thus call for ‘closer-to-nature’ forestry and reduced levels of forest harvesting’, plus ‘more protection of valuable forest areas’ (WWF, 2024: 30).

As calls to expand and protect forests across Europe grow, there is increasing demand for wood as biofuel or for wood-based building materials, which are easier to recycle and reuse than carbon-intensive cement. However, claims by the biomass industry to be a renewable sector and that burning trees for fuel, for instance for power plants, represents a substitute for fossil fuels are hotly contested by environmentalists, arguing that biomass is not carbon neutral and emits more CO<sub>2</sub> than coal (Protect the Forest Sweden and Greenpeace Nordic, 2021). Environmentalists therefore call for replacing the clearcutting and plantation model by a biodiverse ecosystem based on multiple use, providing greater variety of employment and considerable benefits to society.

### *Swedish forestry*

In Sweden, where 70% of the country is covered by forests, 80% cultivated, the Forestry Act, originating in 1903, emphasises sustainability, aiming to give environmental



conservation equal importance to production goals and increase the ratio of trees planted to those felled to 2:1. The industry claims that, as a result, over the last century the volume of Swedish forests doubled and carbon stocks in forests and forest soil quadrupled at the same time as over 4 billion cubic metres of timber were felled. However, CO<sub>2</sub> net storage in Sweden's forests has in recent years plummeted, most old growth forest has been lost through clearcutting, and 72% of forest is less than hundred years old (Olden, 2023).

The forest visited is managed by Sveaskog, a state-owned limited company owning 14% of productive forest land, and employing 846, of whom a quarter are women, plus engaging contractors who account for 2,400 employment opportunities (Sveaskog, 2015a, 2018). Sveaskog boasts its conservation of the forest ecosystem, including biodiversity, supplies sawlogs to sawmills, pulpwood to pulp and paper mills and biofuel to energy companies, and produces and sells tree seedlings (Sveaskog, 2015b, 2016). Spruce and pine, better for sawmills, are felled about 80 years after planting and trees for paper mills 30–60 years after and, in between planting and felling, maintenance is required, involving brushing and thinning. Climate change is, however, resulting in higher temperatures, more forest fires and a bug problem that companies claim can only be controlled by cutting or burning down trees; transport too accounts for nearly two-thirds of CO<sub>2</sub> emissions generated (Sveaskog, 2015a, 2015c).

### *Union involvement in forestry*

At global level, forestry is addressed by the Building Workers International (BWI), whose climate policy underlines the root causes of climate change – the damaging nature of profit-driven production, the neo-liberal market and global trade policies – and criticises limited progress made by inter-governmental initiatives (BWI, 2015, 2013a, 2013b, 2013c; ILO 2018b). A 2023 report argues that a Just Transition ‘requires a fundamental socio-economic transformation of the global economy’ and stresses the crucial role of the forestry sector in ‘cutting emissions, reducing the use of fossil-fuels-based materials, preserving the ecosystem’ (BWI, 2023: 1, 5). BWI recommends sustainable forestry practices, such as: adaptive forest management to introduce species suitable to new climatic conditions; action to prevent deforestation and pursue reforestation, utilising the forest's carbon capture capacity and responding to increasing demands for wood; certified management systems to codify labour standards; and meaningful union involvement (BWI, 2015).

Like BWI, the European sectoral union federation EFBWW highlights forests' carbon storage potential and sees wood-based solutions offering a renewable, recyclable green construction material. Its forestry-related priorities for a green economy include: a just transition plan; democracy at work and social dialogue, with unions involved in designing new industrial models; a paradigm shift towards economic rationality based on sustainable investment for social cohesion rather than precarious work and social abuse; public and private recovery measures to create direct employment and stable jobs; equal treatment and fair mobility for workers through a new European framework for decent and high-quality working conditions with special regard to protecting migrant workers; and gender equality (EFBWW 2020).

At national level, the Swedish union GS-Facket, organises workers in the forestry, woodworking, and graphic industries and collaborates with EFBWW and BWI in developing climate strategies. GS has long involvement in sustainable forestry and is consulted by government in developing the national forestry programme. One GS interviewee represents the union on the Swedish Forestry Board (SFB), linking different interests, including unions, employers, and environmentalists, and concerned with, for instance, climate change and biodiversity. However, a GS survey suggested that climate change is not the most important issue for members.

### *Employment and working conditions in Swedish forestry*

For the Swedish union GS, protecting employment and workers' health and safety is a priority, including risks associated with planting, chemicals into which trees are often dipped, and exposure of workers to ticks carrying diseases. Working time is another issue. Logging sites, on which usually two teams work, doing two shifts over 16 hours, can be far away so journey times are long and not paid for; driving home after a late shift can be particularly tiring. Though improving health and safety in physical terms, the use of machinery means more surveillance and pressure to produce, which is stressful. In protecting employment conditions, the union can, however, find itself stuck in between the dialogue with employers and environmentalists, with environmentalists arguing for selective cutting and protecting key habitats, whereas employers support clearcutting and protecting production – demonstrating a clear conflict between employment and environment, in which the former takes precedence.

On the Sveaskog site visited, despite stones and hills, the unionised harvester driver interviewed is expected to cut 60-80 trees per hour, about 30 cubic metres, amounting to 80,000 cubic metres annually. The computerised system remotely monitors whatever the driver is doing, logging when the machine is idle, how many trees are cut, etc. The job is complex and includes operating and maintaining the machinery and the computerised system installed, selecting trees according to timber quality and size for particular end product destination, and cutting them in required sizes. Felling is planned in detail, according to what is known as 'mosaic' rather than 'clear' cutting, and the forwarder machine driver then clears and carries away logs. The utilisation of machinery has meant fewer forestry jobs, and the union tries to ensure that workers have the support needed to retrain. Initial training is 3 years, and for logging, 4-5 years of experience with machines is required, and continuing education involves attending courses every year. According to the union representatives interviewed, all forestry workers within the union's remit know about the forest's role in climate change.

There are about 5,000 forestry workers, only 30-50 are women, and the unionisation rate is 50%–60%. The Swedish Forestry Board regulates the forestry sector and it is conditional on signing a collective agreement that companies are certified by the standard-setting Forest Stewardship Council (FSC), a voluntary certification scheme much criticised for its ineffectiveness and seen as a means to 'greenwash' forest and ecosystem destruction (Conniff, 2018; Greenpeace, 2021). Some workers have become self-employed as companies sought to avoid employing directly, though investment in

expensive machinery means heavy indebtedness. Recruiting young people is challenging as companies do not invest and prefer to employ migrants. Indeed, a key union issue is the employment every summer of an estimated 10,000 temporary migrant workers from Poland, Romania, Ukraine and other EU and non-EU countries in planting new trees and brushing, carried out manually, with some staying through the winter (Olden, 2023). Forestry migrant workers are brought over by employment agencies on low wages, suffer poor working and employment conditions, are given little training, and live in inadequate, temporary accommodation. Not being permanent employees, a hierarchical order of workers is created and the forestry union GS has difficulty building relations and recruiting them into the union (Oloffson, 2023). Following union efforts, legislation requires a contract with the agency and the employing company has to sign an agreement with the union, which does not accept anyone working outside the collective agreement, below the minimum rate, without covering tax and national insurance or paying into a pension scheme for migrant workers. However, much time is spent chasing employers to implement collective agreements and monitoring is impossible as migrants are spread across a huge area and move around between May and October. Planters are paid by piece, such as the number of trees planted, and, though having minimum wage and working hours' restriction rights, employers do not inform them of these, and they work 10-12 hours per day.

### *Sustainable forestry?*

The picture that emerges of Swedish forestry is not one in which employment and environmental policies are integrated, and the Forestry Act aim of giving environmental and nature conservation equal importance to production goals appears long forsaken. Global, European and national sector unions' climate policies call for the sustainable management of forests as ecosystems, acknowledging the pressure arising from the demand for wood as raw material. In practice, this is played out in competing versions of 'sustainable' forestry by environmentalists and employers, with unions stuck in the middle. A strategy of increased production, for instance, through planting faster growing trees, clearcutting and less care for the surrounding ecosystem, may mean more employment but positions labour against nature. Just transition policies also address problems for forestry workers raised by interviewees in Sweden, including self-employment, conditions for migrants, and lack of women in the sector. Yet, in practice, these remain unresolved.

Whilst the national union strives to maintain the collective agreement for forestry workers and pursues an ecological modernisation approach, its role is restricted, and labour and environmental issues are separated. Indeed, much forestry is outside union reach and, unlike the unionised workers employed by Sveaskog, migrant workers are as badly exploited as the land on which they are put to work, with both labour and nature treated as commodities according to a market-based model. Just as Lundström (2018) found for Swedish transport, the result is a mismatch between policy proclamations of transforming the economic model at global and European levels and what happens on the ground. It is difficult to envisage the targets set by the EU's Nature Restoration Law being

met without a radical transformation of the current forestry model. The case, therefore, illustrates the contested notion of just transition, including what is meant by environmental protection, the conflicted position of unions, and the limited powers of both unions and environmental organisations in the process.

## Beet sugar production

Similar contradictions are evident in the EU's beet sugar industry, which encompasses beet farms and sugar factories in 19 Member States, mostly in northern European rural areas, providing 23,700 jobs in 107 factories and a further 338,500 in the supply chain, with transportation between farm, factory, and retailers a significant component. Since the industry was deregulated in 2005, half the factories have closed, with sugar production ceasing in five countries. In Denmark, where beet sugar production has a long history, there are only two sugar factories remaining, owned by Nordzucker Group and transformed through digital monitoring of production. Here, as across the EU, sugar beet production has changed significantly; compared to 6,000 growers 10 years ago, today there are 800. As automation became too costly for small farms, they were replaced by fewer and bigger farms.

The industry produces 50% of the world's beet sugar, with sugar factories playing a significant role in the local economy by providing skilled industrial employment (CEFS and EFFAT, 2019). EU production quotas were lifted in 2017 and yields fell with the banning of insecticides. As a result, the European Federation of Food, Agriculture and Tourism Trade Unions Federation (EFFAT) and the European Association of Sugar Manufacturers (CEFS) began a joint project entitled *A transforming European sugar industry – New and better jobs in a competitive, innovative and sustainable industry*, culminating in a conference in 2021. Here, employers argued for removing regulatory barriers to intra-EU skills mobility, whilst workers' representatives claimed the sector's sustainability should be foremost social, concerned with its ageing workforce and limited availability of skilled workers, and enhancing its attractiveness to younger generations through improved working conditions (EFFAT, 2021).

There are significant environmental and social problems associated with beet sugar, above all the harmful impact of sugar consumption on human health, being implicated in, for instance, obesity, diabetes, cardiovascular disease, and metabolic disturbances, but also of beet sugar production on soil erosion. Sugar beet is a hard-wearing crop and harvesting it, especially late in the year when soil is wet, leads to large quantities of soil being lifted from fields, stuck to the crop and farm machinery. In addition, neonicotinoids insecticides used for sugar beet farming harm other wildlife and natural predators essential for plant protection, especially bees, and there are concerns about water contamination (FoE, 2018). As a result, the EU banned neonicotinoids in 2018, and subsequent derogations, which were applied to protect sugar beet crops from infestations of disease-carrying aphids and authorised seeds treated with these pesticides, were revoked (EU Court of Justice, 2023). Environmental groups call for scaling down the use of good soil for beet sugar production and addressing high sugar consumption by exploring potential supply constraints (e.g. FoE, 2018).

Despite these concerns, the industry is seen to constitute a microcosm of the emerging circular bioeconomy and there is growing interest in alternative uses of the crop. It is subject to EU climate policies for agriculture, energy efficiency, and waste, designed to drive the sustainable use of natural resources, waste reduction and innovation in biotechnology to support the development of bio-based products and energy. These measures are intended to help tackle the agricultural production footprint, responsible for 10% of EU greenhouse gas emissions, reduce waste and support rural communities (EC, 2018). Bioeconomy across the EU employs around 18 million workers, 50% in agriculture, and the EU strategy is anticipated to create one million new jobs by 2030, predominantly in non-food sectors such as producing biofuels and bioenergy. In Denmark, the growing bioeconomy implies significant changes in sugar beet cultivation and sugar factories, particularly through biomass from agriculture, with investment directed to creating high value chains such as protein from various sources and producing biofuels from agricultural residues, including from sugar beet (Bentsen et al., 2019).

### *Union role in beet sugar production*

Just as the Swedish union GS works closely with the European and global unions, EFBWW and BWI respectively, regarding Swedish forestry, so the Danish union 3F works closely with the European and global federations EFFAT and IUF in responding to EU's bioeconomy strategy and social partner sustainability initiatives in the beet sugar industry. IUF's climate proposals criticise the limited attention paid to agriculture in international climate policies, demanding 'to be part of the solution, to negotiate with employers, governments and international institutions' (IUF, 2023) and calling for a 'rights-based approach', incorporating social justice, protection for impacted workers, burden sharing, union involvement at all levels, and adaptation measures to ensure occupational health and safety. At the sectoral European level, EFFAT, covering sugar beet farming and beet sugar production, works closely with the global IUF as well as ETUC and ITUC, whose climate proposals it echoes (EFFAT, 2019), emphasising: the role of government in setting up the institutional and regulatory framework and funding implementation; governance through social dialogue; and unions' advocacy role to ensure decent work. EFFAT is actively engaged with practical sustainability initiatives in agriculture, bioeconomy, and the sugar industry to ensure labour standards and good employment conditions and calls for opportunities for workers to upgrade skills and transfer to jobs in emerging sectors. Protecting jobs is a significant focus, particularly given the sugar factory closures since 2005 and the decline in beet farming.

As part of the process of integrating the just transition principle within the industry framework, EFFAT established the EU Beet Sugar Sustainability Partnership in 2013 jointly with the Association of European Sugar Producers (CEFS) and the International Confederation of European Beet Growers (CIBE) to set sustainability standards through technical measures addressing environmental protection and energy efficiency. Social and economic sustainability is defined as meeting ILO labour standards and decent work recommendations, and, though social dialogue is included, measures do not explicitly include union involvement and greater worker engagement in their further

development and implementation (EU BSSP, 2019, 2020). In the field, measures involve using appropriate seeds and plant varieties to ensure soil fertility, adopting low and no-till techniques for energy efficiency, irrigation for water preservation, preventing watercourse pollution, controlled pesticide use, and re-using post-harvest residues. In the factory, they entail using water from the beet, energy efficient transport, biological treatment of excess water for reuse, minimising dust, noise, and odours, and using by-products and ‘waste’ such as pulp, molasses, and beet tails for other purposes such as animal feed and biogas production.

The union 3F, the largest in Denmark, has 270,000 members and, amongst other sectors, organises agriculture, including farmers and factory workers in the sugar industry. Declining membership is, however, a concern, including in Lolland, the beet sugar-producing region visited south of Copenhagen. 3F has economy-wide ecological modernisation policies, developed together with the employers’ association, with circular bioeconomy central to its proposals (3F, 2015, 2016), which emphasise the employment creation potential. 3F played a leading role in EFFAT’s investigation into bioeconomy, benefitting from a dedicated officer’s expertise in advocating climate action. Nevertheless, and indicative of how the government envisages unions’ role, 3F was late to be invited onto the Danish National Bioeconomy Stakeholder Panel despite being on the EU’s bioeconomy stakeholder panel.

### *Danish beet sugar production: employment and working conditions*

The Lolland sugar beet farm visited illustrates the emerging circular bioeconomy incorporating beet, sustainable farming practices and energy efficiency measures. For the farmer, taking care of soil quality by rotating crops and regulating pesticides are priorities. Extensive legal restrictions are in place on pesticide use, type, amount, application time and method – all measures supported by 3F, although potentially causing a fall in yields. Increased attention is paid to creating a full circle of production minimising waste, from crops to animals, and utilising all possible resources. For example, straw from the farm, previously burnt and left in the field, is used in district heating and the farmhouse is heated with biogas from pigs. Environmentalists, however, argue that biogas is not a renewable energy solution to the polluting problems of concentrated animal feeding operations, but rather represents greenwashing as the production of biomethane from manure-to-energy projects is hazardous to local communities, locks farmers into more debt, and perpetuates the expansion of current harmful agriculture practices, while increasing fossil fuel infrastructure through gas pipelines (Gittleson et al., 2022). The ‘business case’ is, however, a significant driver of the farmer’s engagement with sustainability. Greater demand for solar and wind farms is anticipated, particularly from Copenhagen, encouraging him to invest in renewable energy generation by installing wind turbines and solar panels. He also expects biogas plant and pipe installation plans to gain speed as sugar factories are no longer allowed to use coal or heavy fuel and instead process residual flows from sugar beet, such as beet pulp, beet tips, foliage and molasses, fermented in biomass digesters to produce biogas.

The beet sugar factory visited in Nakskov employs 143 blue-collar and 30 white-collar workers, organised by three unions, with 20 additional temporary workers employed when factories work non-stop during the campaign season from September to January. Relations with the employer were described by 3F as good and it is supportive of sustainability measures, such as reducing coal consumption and eliminating freshwater use. These are, however, agreed at the board level, without the involvement of employees or local union representatives; the union's role is seen as safeguarding workers' interests rather than scrutinising environmental initiatives. Work is mostly skilled and highly mechanised, and sustainability measures predominantly technical rather than social, driven by national legislation and directed by the Group's corporate sustainability policy (Nordzucker, 2013). Human resource policies address diversity, fair treatment, labour standards, human rights, privacy, harassment and discrimination, and health and safety. The company expresses commitment to working with beet suppliers to improve sustainable farming, to high-quality food standards and to scientific research on sugar. Future plans include measures to further reduce the carbon content of coal and biogas plant development. The growth of bioeconomy has also led to using by-products, such as lime, soil and stones, which are recycled for use in the agricultural, construction, chemical and pharmaceutical sectors.

The union emphasised the need for ongoing monitoring of work and employment conditions with the example of a transport company forced to sign the collective agreement as supplier contracts with Nordzucker depend on working with the union. It is also concerned to organise Eastern European workers employed on local farms in Lolland, a beet sugar-producing area with a long history of in-migration. The union's role in implementing sustainability measures on the farm and in the factory tends, however, to be marginal, and its reach does not extend to the migrant workforce.

### *Biodiverse beet sugar production?*

There are striking similarities between our two cases, with lack of integration of employment and environmental policies evident again in the Danish case and the Danish union also striving to maintain the collective agreement and pursuing an ecological modernisation approach to just transition. As with logging, the factory labour process is highly mechanised and, as in Sweden, the union role on the ground is restricted, with most seasonal migrant workers outside its reach and sustainability policies led by the employer. There is, as a result, a mismatch between unions' climate policies at the European level and what is happening on the ground, whilst the concerns of environmentalists about biogas, sugar consumption, soil degradation, and nature conservation seem hardly addressed. Indeed, whilst the range of interventions proposed places emphasis on addressing climate change, at the local level, there is a notable shift in language from just transition to 'sustainability', 'corporate sustainability policies' and the 'business case' for climate action. In contrast to the union's active role in climate policy development at the national and European levels, involvement at the local level is minimal.

## Conclusions

In many respects the two cases, beet sugar production in Denmark and sustainable forestry in Sweden, mirror the global vision of just transition in direction and approach (ILO's 'outcomes' and 'processes'). What is implemented is 'ecological modernisation' (Mol et al., 2009), aiming to modernise the respective industries with the aid of technology, energy efficiency measures and environmental sustainability initiatives without altering the social relations shaping the sectors. Both cases are built on social partnership, which means that union voice and labour rights are taken for granted. However, in practice, the social dialogue process also appears to restrict the involvement of environmentalists and meaningful worker input, particularly at the local level given the unequal power relations. Just transition guidelines, in turn, with their focus on the 'outcomes' of decent work and environmental sustainability, though an inspiration also at national and sectoral levels, can become a hindrance to considering the 'inputs' of labour and be watered down at ground level. At company level, transition strategies are led by employers with social and environmental justice defined by corporate social responsibility policies and characterised by technical environmental measures, within a regulatory framework in conformity with EU climate policy. The cases thus illustrate the limits of the just transition vision as currently articulated by ITUC and ILO.

This top-down approach to formulating a green transition strategy does not allow for direct input from forestry, farm or factory workers, enforcing a particular vision of green transition and leaving more radical and transformative approaches off the table. Concerns of environmentalists, such as clearcutting, soil degradation, biogas promotion, and the need for a broader definition of biodiversity, are largely unaddressed, so that employment and environmental policies remain in conflict. The key is for just transition to be more than an inspiration but also a resource for local and national unions to draw upon to mobilise and campaign for climate action. Though a dynamic, multi-scalar perspective regards union agency as embedded at different levels, particular power relations remain prevalent. The approaches taken by the national/sectoral unions discussed here are shaped by policies, strategies and ideas emanating from the European and global labour movements, which both empower and restrict them as they negotiate conflicting priorities on the ground. Currently, the vision of just transition excludes others involved in production, such as migrants, prioritising employment over the environment and premised on a dynamic of capitalist development that gave rise to climate change. The key problems identified are, therefore, lack of 'bottom up' worker involvement, marginalisation of migrant workers, side-stepping environmental concerns, and separating the exploitation of labour from that of nature.

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