

# Beyond economic growth

The role of trade unions  
in the transition to well-being

Peter Nitsche-Whitfield

Report 2023.03

etui.





# Beyond economic growth

The role of trade unions  
in the transition to well-being

Peter Nitsche-Whitfield



Report 2023.03

European Trade Union Institute

**Peter Nitsche-Whitfield** works in the field of sustainability and is a UNISON member. He recently completed a master's degree in economic policies for the global transition (EPOG+) and a traineeship at the ETUI. He has previously worked for GermanZero e.V. and obtained a BA in Philosophy, Politics and Economics.

This work builds on his initial research on trade union strategies in a post-growth Europe (Nitsche-Whitfield 2022a, 2022b).

Brussels, 2023  
© Publisher: ETUI aisbl, Brussels  
All rights reserved  
Print: ETUI printshop, Brussels

D/2023/10.574/08  
ISBN: 978-2-87452-663-3 (print version)  
ISBN: 978-2-87452-664-0 (electronic version)



The ETUI is co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the ETUI. Neither the European Union nor the ETUI can be held responsible for them.

# Contents

Abstract.....	4
1. Introduction.....	5
2. Ecological challenges and an end to growth.....	7
3. A well-being economy beyond growth: debunking GDP as an indicator measuring well-being .....	12
4. The central role of public services in a post-growth economy.....	20
5. Recommendations for moving beyond growth .....	24
6. Conclusion.....	28
References .....	29
List of figures .....	39
List of abbreviations.....	39

## **Abstract**

It is widely accepted that the pursuit of economic growth is becoming increasingly infeasible and undesirable, necessitating substantial changes to European economies.

European economic activity in terms of emissions, resource use, pollution and impacts on biodiversity is ecologically unsustainable. In the face of tipping points soon to be reached and cascading, inter-related ecological crises, the impacts of economic activities need to fall rapidly and substantially to avert disaster. It is no longer possible to decouple growth from ecological impacts sufficiently within the required timespan. Furthermore, even disregarding the necessity to reduce ecological impacts, a multitude of reasons – from energy crises to demographic change – are leading many economists to question European growth prospects.

In any case, curbing ecologically damaging practices will be key to addressing the multiple crises Europe is facing. The pursuit of evermore undifferentiated GDP growth will therefore not deliver for working people in terms of well-being and social progress. GDP is particularly unsuitable for measuring the benefits of public services and accounting for inequality. Therefore, trade unions should strengthen their collaboration with the growing group of actors calling for a move beyond growth and a focus on well-being.

Public services are key in this, as their collective nature minimises ecological impacts while improving the well-being of more people. Universal basic services provided on a collective basis have substantially smaller ecological footprints than providing for the same needs on an individual basis. Public services can also provide good-quality and meaningful jobs. Universal basic services should be an inalienable part of any just transition, as they are at the core of strong and effective social protection systems. Lastly, focusing on universal quality public services has the added benefit of making economies less reliant on economic growth for securing well-being.

A labour-nature alliance will be indispensable to bringing about a social-ecological transformation beyond growth. Actions of solidarity between environmentalists and trade unionists are thus an important step to a better future. Trade unions can play a unique role in developing narratives showing how a Europe moving beyond GDP and towards redistribution and social justice could improve lives and livelihoods across the continent.

# 1. Introduction

Europe is clearly facing multiple crises in 2022. Ecological and climate breakdown as well as biodiversity loss are threatening our livelihoods, a global pandemic is continuing to have an impact on our health, rising inequality is undermining societal cohesion, and the recent invasion of Ukraine by Russia threatens world security. These crises have in turn triggered the current cost-of-living crisis and the coming recession, highlighting how our economic system is no longer delivering on its promises of increased well-being and social progress. The health crisis has shown how past attempts to return European countries to a growth path by implementing austerity and privatisation policies have contributed to the current situation. As we come out of the pandemic, a focus on GDP growth is again side-lining vital public services, thus undermining a key pillar of security and well-being. Moreover, the recent IPCC report on climate mitigation (IPCC 2022a: 2/42) found that '[e]conomic growth (measured as GDP) and its main components, GDP per capita and population growth, remained the strongest drivers of GHG [greenhouse gas] emissions in the last decade'. Thus, ecological impacts need to be reduced to a level that the biosphere can support, while securing human well-being and reducing inequality. In this context, both the feasibility and desirability of the pursuit of evermore economic growth need to be questioned. This working paper highlights how public services can be a foundation for a Europe beyond economic growth and which role trade unions can play in the well-being transition.

Europe's current resource, energy and land use is unsustainable, and could not be reproduced on a global scale, as they rely on the exploitation of labour and nature. The concept of an Imperial Mode of Living and Producing introduced by Ulrich Brand and Markus Wissen (2012, 2018; Kopp et al. 2019: 7) characterises this situation, highlighting the exclusive group of beneficiaries and the shifting of costs for expansion and intensification onto labour, nature, and future generations. Furthermore, this mode of living has made us reliant on neocolonial extraction in the Global South as well as dependent on authoritarian regimes, as can be seen with Europe's energy reliance on Russia. Simultaneously, other factors such as demographic change, the Russian invasion of Ukraine and the Covid pandemic are undermining growth prospects. This has led to economists arguing that our economies are seeing increasingly clear patterns of low or no growth, implying that the pursuit of economic growth is already becoming less feasible.

On the other hand, ecological economists studying degrowth and well-being have found that human needs can be satisfied much more effectively through a principle of ‘public luxury, private sufficiency’ (Monbiot 2017, 2021; Gough 2021: 21-23; Hickel 2020b: 230-231; IPCC 2022a: 5/25, 107), thus questioning the necessity of growth for increasing human well-being. Public services and the so-called foundational economy (Foundational Economy 2020) are key to securing human well-being. By satisfying basic needs, the foundational economy (Gough 2021: 10, 25-27) of ‘utilities, infrastructure, public services, distribution systems, [and] retail banking’ has a direct impact on the quality of life. This was especially visible during the health crisis in which public services hit by austerity measures and privatisation were less able to cope with the pandemic. Measures for economic recovery should thus not aim at austerity and privatisation-fuelled growth but rather focus on strengthening public services to enable a smooth transition to a decarbonised economy.

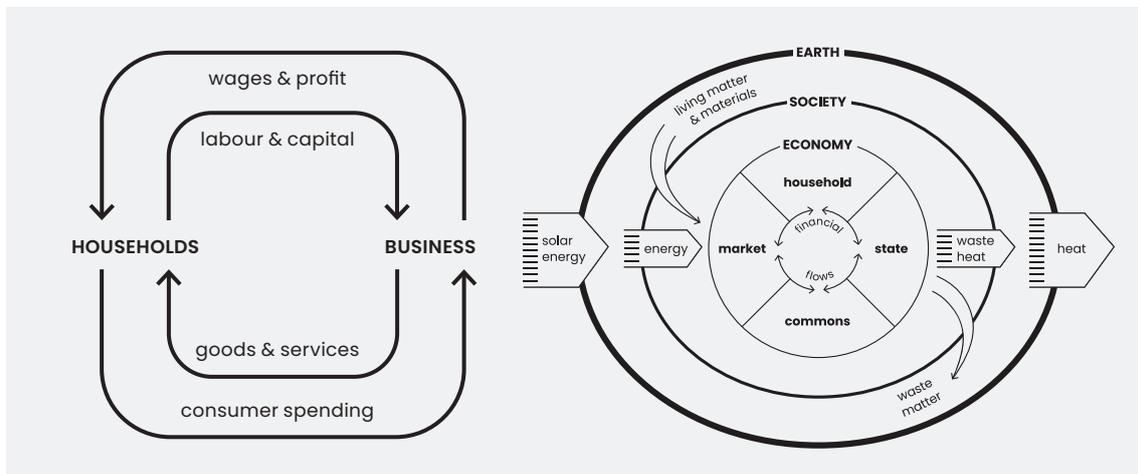
Historically, trade unions have played an important role in ensuring improvements in human well-being. They are important political actors representing working people’s interests through lobbying for better working conditions, social protection systems and other improvements to workers’ quality of life. However, they have recently undergone decades of decline due to the victories of neoliberal economic policies (Kreinin et al. 2022: 6, 12-13, 15, 20-21; Hyman 2001; Horgan 2021: 131-133) and a weakening of their capacity for collective action. Hence, trade unions are looking for ways to regain their strength while engaging with the so-called twin transitions of digitalisation and greening the economy (Pochet 2017), and developing strategies to respond to future crises. By highlighting the benefits of high-quality public services in response to a world without growth, trade unions can work towards a sustainable increase in workers’ quality of life compatible with reducing ecological impacts. In this context, participating in the beyond-GDP and beyond-growth debates is a first step for trade unions towards developing a positive vision of a post-growth Europe beyond neoliberal economic policy.

In its second section, this working paper outlines the ecological and economic reasons for moving beyond growth and GDP, demonstrating the infeasibility of continuing to pursue economic growth in Europe. The third section underlines the benefits of shifting to an economy focused on well-being and equality instead of profits and GDP growth. This is followed by a section highlighting the importance of public services in a post-growth economy, focusing on their foundational and transformational nature. The fifth section outlines what a post-growth Europe means for trade unions and public services, while the last section provides recommendations for fostering a labour-nature alliance to ensure a social-ecological transformation.

## 2. Ecological challenges and an end to growth

Economic growth is currently the main goal of economic policy. Mainstream economists spend a vast amount of time refining growth models and trying to find ways to increase growth. In their models, growth may appear as an increased speed of flows through a circular flow diagram (Figure 1: left). Alternatively, growth is seen as originating from the combination of the factors of production of capital and labour, with mostly unexplained technology accounting for most of the variation in outcomes (Fine 2003). However, the mainstream view of the economy neglects the fact that economic systems are embedded within social structures, and that both economic and social structures are embedded within biophysical structures (Spash and Guisan 2021: 205; Spash 2017, 2020b; Polanyi 1944; Jo and Todorova 2017; Figure 1).

Figure 1 Circular flow diagram and embedded economy



Source: Raworth 2017: 64, 71; © Creative Commons

Economies require inputs and produce both desirable and undesirable outputs (Krausmann 2017). As Krausmann (2017: 109) puts it, ‘the production and reproduction of [society’s] [...] biophysical structures [requires] [...] flows of materials and energy’. These activities necessarily also create pollution and waste (Georgescu-Roegen 1971; Mayumi 2017; Figure 1: right). This means that any economic activity will have some kind of ecological impact and that the level of impact cannot exceed the limits of ecological systems for their long-term sustainability.

## **We are facing multiple, interrelated, and non-linearly cascading ecological crises**

However, thermodynamic and resource concerns are just one aspect of our ecological crises (cf. Fanning et al. 2022). More importantly, the recent IPCC (2022, 2022a, 2021) and IPBES (2019) reports have highlighted that our climate and ecological systems are heading for breakdown unless radical action is taken to bring the social metabolism back to a level that the biosphere can accommodate. Unlike mechanical systems, which are the basis of much of economic thinking (Georgescu-Roegen 1979), ecological systems are highly complex and interconnected (Hickel 2020b: 274-282; Monbiot 2016: 79-87), with any change being irreversible and non-linear (Devictor 2017). Hence, nature cannot simply be understood as natural capital commensurable with financial or productive forms of capital. Similarly, nature cannot be seen as a commodity. Nature is incommensurable, as it cannot simply be replaced (Spash and Smith 2019; O'Neill 2017). Extinct species remain extinct forever. Destroyed ecosystems remain lost. Even rewilding can only do so much to return areas to nature (Devictor 2017). Furthermore, ecological destruction does not proceed in a linear fashion but may reach tipping points, especially, but not only, in the context of climate breakdown. The vast difference in the effects of 1.5°C in global heating versus those of 2°C is an example of this (IPCC 2018). On top of this, once an (un)certain threshold is exceeded, global heating may become locked in for the next millennia through feedback loops, possibly leading to a destructive spiral of ecological breakdown (Lenton et al. 2019; IPCC 2021). The consequences of the predicted collapse of ecosystems and climate breakdown would be devastating for working people around the planet, with climate scientists warning that there is a 'closing window of opportunity to secure a liveable and sustainable future for all' (IPCC 2022b: SPM-35).

## **Green growth is an unworkable solution**

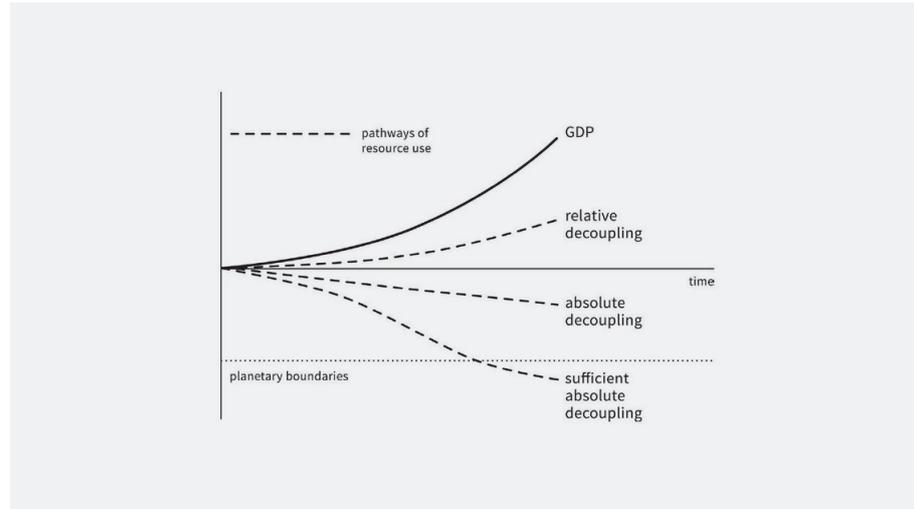
The mainstream proposal to address these issues is to promote green and inclusive growth (Spash 2021; GCEC 2014), as advocated by a range of actors from the World Economic Forum to the World Bank, most governments, corporations and also many trade unions.<sup>1</sup> The key argument for green growth is that decoupling economic activities from emissions and environmental impacts is possible. While some findings on relative decoupling exist (IPCC 2022a: 2/42; Parrique 2022; Haberl et al. 2020; Naqvi 2021), relative decoupling does not necessarily lead to absolute decoupling. As Figure 2 illustrates, absolute decoupling is required to reduce the level of ecological impacts. Furthermore, even the sparse findings on an absolute decoupling of economic growth from emissions reveal that it is insufficient for reducing ecological impacts to the level required to limit global warming to 1.5°C or even 2°C. In addition, emissions associated with imports to Europe further complicate the matter in a world of globalisation and production offshoring

---

1. A list of actors linked to green growth can be found in the 'Better Growth Better Climate' report (GCEC 2014: 69-70).

(Gough 2021: 12). Thus, to return to a level of ecological impacts in line with biophysical boundaries, global, permanent and sufficient absolute decoupling is required.

Figure 2 Sufficient absolute decoupling



Source: Raworth 2017: 259

Moreover, this decoupling has to occur across multiple ecological crises. Even if one indicator, such as emissions, were to fall sufficiently, other ecological challenges remain. For instance, as Galgóczi (2014: 59-61) argues, the decoupling of European economic growth from resource inputs is not occurring, meaning that the EU target of reducing resource input to one fifth of current levels by 2050 remains out of reach within ‘an outdated and reckless growth model’. According to recent data, GDP growth is becoming more resource-intensive, meaning that the global economy is recoupling and not decoupling from ecological impacts (Hickel 2020b: 103-105). To underline the illustration in figure 2, global resource extraction has breached the sustainable level of around 50 billion tonnes a year in 2000 (Bringezu 2015). At over 100 billion tonnes in 2021 and expected to grow to 170 billion tonnes in 2050 (Circle Economy 2022: 9), resource extraction is still growing rapidly, undermining the capacity of the biosphere to regenerate as green growth advocates suggest.

### Rebound effects are a key reason for the failure of decoupling

The rebound effect is one key reason why decoupling ecological impacts from economic growth is so difficult (Brand and Niedermoser 2017: 163; Mayrhofer and Wiese 2020: 39; Brand 2019: 84; Santarius 2014; Parrique 2019: 101-105). Technological fixes or improvements in efficiency regularly make products cheaper, thus allowing for their higher consumption, leading to the same end result in terms of ecological impacts. Even more problematically, the Jevons

Paradox can lead to situations where increased efficiency actually leads to higher absolute levels of consumption and ecological impacts due to relative reductions in prices (Hickel 2020b: 154-157). For instance, people with more fuel-efficient cars tend to drive more as the relative cost of driving has fallen. This casts doubt on the hope that technological fixes can solve the current conjuncture of cascading social and ecological crises which require an end to growth in emissions, energy, and resource use today (Spash 2020a, 2020b, 2021; Parrique 2019; Hickel 2020b: 126-165).

When looking at our ecological crises holistically, the evidence is stacked against technological fixes decoupling economic activities from ecological impacts (Parrique et al. 2019; Parrique 2022; Fletcher and Rammelt 2017; Krausmann 2017: 114-116; Barry 2013). Thus, transforming the entire economy to climate neutrality requires systemic changes (IPCC 2022a: 13/78) – and these will become harder the larger the activities concerned are.

### **Patterns of secular stagnation further strengthen the infeasibility of economic growth**

In addition to the ecological infeasibility of a continued pursuit of economic growth, Europe's economic outlook further undermines the possibility of sustained economic growth. After years of growth up to the 2008 financial crash, patterns of secular stagnation, i.e. low or no growth, are developing in Europe (Teulings and Baldwin 2014; Stocker et al. 2014; Switalski 2014: 7; Parrique 2019: 121-130; Dörre and Becker 2018: 39-47), with growth slowing (Mayrhofer and Wiese 2020: 16-17; Dorling 2021: 230-261, 284; Piketty 2014: 72-109) and becoming more uneven (IMF 2015). Labour productivity is no longer rising (Urban 2018: 342; Mayrhofer and Wiese 2020: 14-15), while there are supply side issues such as reaching 'peak everything' (ibid: 38, Heinberg 2007), which means that further growth in the extraction of evermore resources is becoming increasingly difficult as the most easily accessible resources have already been extracted (UNEP 2011: 22-25; Brockway et al. 2019; Hall et al. 2014; Haberl et al. 2020; Diesendorf and Wiedmann 2020; Kreinin et al. 2022: 13).

There is a long list of further supply side challenges for future economic growth. Firstly, demographic ageing is causing the working age population to shrink (Mayrhofer and Wiese 2020: 37-38; Switalski 2014; Dorling 2021: 140-229; Parrique 2019: 125-126; OECD 2020). Secondly, the Russian invasion of Ukraine is threatening European energy supplies, requiring a rapid reduction in energy use and giving renewed urgency to replacing fossil fuels with renewable alternatives. Thirdly, antibiotics resistance linked to the overuse of antibiotics in factory farming is set to produce a further global health crisis (Jonas et al. 2017; Antimicrobial Resistance Collaborators 2022; Horgan 2021: 110-112) which, alongside the growing likelihood of pandemics (IPBES 2020; Lawler et al. 2021), will have negative consequences for economic growth. Moreover, global food production is being increasingly impacted by biodiversity collapse, especially in terms of pollination (IPBES 2016) and soil erosion linked to intensive agriculture (Monbiot 2022). Lastly, climate

breakdown will increase vulnerability to these threats, bringing about more extreme weather events (Otto 2019) and requiring major adaptation measures (IPCC 2022b; ETUC 2020).

On the other hand, there is also demand-side saturation due to inequality slowing growth (Mayrhofer and Wiese 2020: 40), as those who would like to consume more cannot afford to do so, meaning that capital is simply accumulating instead of providing better standards of living (Laurent and Pochet 2015: 7-14). At the same time, inequality is increasing emissions due to an increased focus on conspicuous consumption and the disproportionate emissions of the very rich (IPCC 2022a: 5/27-29; Chancel et al. 2021: 114-135; Wilkinson and Pickett 2010). The feasibility of a continued pursuit of economic growth must thus be seriously questioned.

### **3. A well-being economy beyond growth: debunking GDP as an indicator measuring well-being**

The debate on whether GDP is the right indicator to measure value creation, social progress and well-being goes back decades (Stiglitz et al. 2009; OECD 2020; SDSN and IEEP 2019; Daly and Posner 2012). However, our current crises and the fiftieth anniversary of the Limits to Growth Report (Meadows et al. 1972) are giving this debate a new sense of urgency.

A simple examination of European GDP data throws doubt on the utility of continuing to pursue economic growth throughout Europe. As Mayrhofer and Wiese (2020: 36) argue, a mere 3% increase in global GDP in 2020 would have equated to adding the entirety of the 1970 global economy to 2020's economy. In the first decade of the new millennium alone, European Union GDP per capita in current US\$ terms more than doubled. Even German GDP per capita in terms of purchasing power parity more than doubled in the first two decades of the new millennium.<sup>2</sup> According to these figures, one would think that we should be stunningly rich today, but in Europe, poverty, inequality (Chancel et al. 2021), youth unemployment and ecological catastrophe paint a different picture. As Laurent (2021a: 12-16; 21-23) has shown, GDP growth has been decoupling from growth in employment and wages, while Brand and Niedermoser argue it has been decoupled from wealth (2019: 178) and that productivity and wages (2017: 169-170) have also decoupled from economic growth. This is topped off by the IPCC's (2022: 2/42) findings that '[g]lobally, GDP per capita remained by far the strongest upward driver [of GHG emissions], increasing almost in tandem with energy consumption and CO<sub>2</sub> emissions up until 2015' and that 'efficiency gains were outpaced by an increase in worldwide GDP'.

Nonetheless, economic growth remains the key indicator of economic success in the early 21<sup>st</sup> century, with policymakers and the media keeping a keen eye on its development. Yet looking at the findings above, this means that mainstream economics contains an unresolved contradiction: why, given that we are so rich in terms of GDP, do we have so many crises and such a high level of poverty and lack of social cohesion?

---

2. Own calculations based on <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=EU> and <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?locations=DE>.

### **GDP is a flawed indicator that does not measure social progress**

A first explanation of this contradiction is that GDP is not measuring our performance in achieving our goals and thus not the right indicator. GDP simply measures the added exchange value, i.e., the monetary value, of goods and services produced in a territory. Spending money, regardless of its impact, has a positive effect on GDP. Immensely large health bills due to privatised healthcare, the cleaning up of an oil spill, or the sale of wood from an old-growth forest all increase GDP although they are not socially desirable. While using GDP as the chief indicator appears to be reasonable for monitoring recessions and their social repercussions, GDP continues to be used to assess the economic development of nations (Laurent 2021b: 84-93). Yet when looking at indicators such as the Genuine Progress Index, which accounts for the social and ecological losses induced by economic activity, economic growth has already ground to a halt (Van der Slycken 2021; Kubiszewski et al. 2013). Furthermore, social progress has many dimensions, as exemplified by the 17 Sustainable Development Goals. While having a single indicator can be helpful, composite indicators such as the Genuine Progress Index or the Human Development Index do not necessarily provide a clear picture to policymakers as their aggregation of data hides the individual components. Instead, a dashboard approach including various indicators would be better suited to tracking the different elements of well-being and human flourishing.

### **A focus on GDP undervalues public services**

A second reason for this contradiction is the way public services are treated in terms of GDP. Public services are key to the well-being and flourishing of communities but tend to be undervalued by GDP. The standard way of accounting for public services is to measure the wages paid to staff. However, this disregards the surplus value for society created by public services. This use value is often immeasurably larger than the exchange value of public services. In other words, the benefits of public services outweigh the money that goes into them. For instance, the value of a life or the value of a good education cannot – and should not – be quantified, but is clearly key to human well-being.

The same is the case in an even more extreme form with all non-market goods and services, which are only valued by GDP if they are sold (Nenning 2022). For example, unpaid care work, which is predominantly performed by women and crucial for well-being, is not taken into account. Therefore, a focus on GDP also reinforces gender inequalities by systematically undervaluing the for the most part female sides of the economy.

This mis-valuation of desirable and undesirable practices creates destructive incentives. For example, it may be undesirable to account for productivity growth in public services as this can be detrimental in areas such as care, which are reliant on quality and human relationships. A focus on GDP may also increase the incentive of politicians to privatise public services, in order to grow the accounted exchange value for these services. This increase in

monetary exchange value associated with privatisation can easily go hand-in-hand with a reduction in use value due to misaligned incentives such as questionable operations for private patients, while others are not receiving the care they require (EPSU 2014).

### **GDP does not account for inequality or the ecological costs of growth**

Thirdly, GDP per capita accounts for average incomes and thus misses the important differences in well-being caused by inequality. GDP and growth measures are especially inept at measuring environmental inequality, such as pollution differences by area (Wilkinson and Pickett 2010). Pollution is a key reason for divergences in life expectancy and healthy lifetimes between the richest and poorest (Nenning 2020). Disregarding the differential impacts of growth, and thus of environmental factors from climate change to air pollution, hides a key factor in well-being.

Lastly, as the previous section highlighted, ecological costs associated with GDP growth further undermine the desirability of economic growth.

### **Reasons for the continued dominance of GDP**

This leads to the question why growth is still so high on the agenda, with the EU Green Deal being called Europe's new growth strategy. In a report for the New Economics Foundation funded by the European Commission, Seaford (2013) develops a detailed analysis of the barriers to introducing alternative beyond-growth indicators. These include data problems (as there are no unified international beyond-growth measurement methods), issues around the complexity of using multiple beyond-growth indicators, the complexity of measuring well-being, and political resistance to change. Economic actors who benefit from the status quo and are also politically powerful tend to oppose the introduction of new measures which could highlight the negative consequences of their practices (Parrique 2019: 59). After all, economic growth has delivered increased material wealth for the richest and is at the core of capitalism. Furthermore, there is what Parrique (2019: 67-76) calls Growthism, a deeply entrenched ideology that constantly pushes for more and is linked to extractivism, productivism, commercialism and consumerism.

A further reason is that our economic systems have become reliant on economic growth for their stability. This means that in turn slow and negative growth can easily lead to social disaster (Raworth 2017; Barry 2013) in the form of job losses and cutbacks for the most vulnerable, making any loss in income highly problematic.

## **Degrowth by design is an alternative to degrowth by disaster**

Degrowth academics and activists aim to provide a solution to this challenge. The term ‘degrowth’ covers a body of research on the ineffectiveness of existing environmental action in addressing our ecological crises. Accepting the absolute limits of energy and resource use (Fressoz 2014) linked to thermodynamics (Krausmann 2017; Georgescu-Roegen 1971; Mayumi 2017) as well as the much more devastating effects of climate breakdown, degrowth highlights the need for absolute reductions in the ecological impacts of economic activity. Hence, degrowth calls for an end to the current growth regime and for a planned shrinkage of ecologically destructive economic activities to a required minimum (Spash 2012; Hickel 2020; Hickel and Kallis 2020; Kallis 2011, 2015; Kallis et al. 2018; Laurent 2021a, 2021b; Parrique 2019; Georgescu-Roegen 1971; Asara et al. 2015). Hickel (2021: 29) thus summarises degrowth as a ‘planned reduction of excess energy and resource use to bring the economy back into balance with the living world in a safe, just and equitable way’. Such degrowth by design aims to prevent degrowth by disaster and should thus not be misunderstood as a managed recession but rather seen as a planned transformation of the economy (Hickel 2020a: 3-4).

## **The discourse about moving ‘beyond growth’ is gaining prominence**

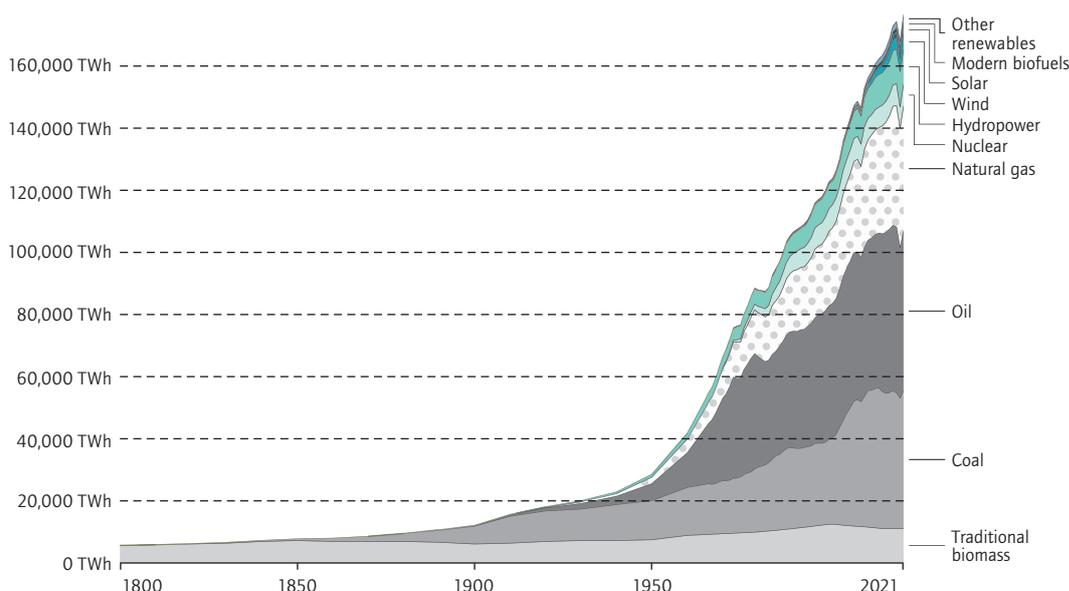
While discussions around degrowth remain a niche issue, recent years have seen a rise in discussions around moving beyond growth, with countries such as Scotland, Wales, New Zealand and Finland collaborating to build well-being economies through the Well-being Economy Governments partnership (Hough-Stewart and Meynen 2022). Furthermore, the case for a move beyond growth is bolstered by scientists’ assertions of the need to shift from a ‘GDP growth-oriented economy’ to a ‘low-carbon energy-services, well-being, and equity-oriented economy’ (IPCC 2022a: TS/99). Recently, mainstream environmental non-governmental organisations (ENGOS) such as the World Wildlife Fund and the European Environmental Bureau (EEB), which represents 180 ENGOS in 38 European countries, put forward a briefing paper entitled ‘This is the moment to go beyond GDP’ together with the Well-being Economy Alliance (EEB et al. 2022). They highlight the many alternative ways of measuring well-being, sustainability, and inclusion, instead of GDP. Trade unions have also been engaging with the beyond-growth agenda. For instance, the ETUC has developed a more holistic indicator for Sustainable Development Goal 8 ‘Good jobs and economic growth’ focusing on economic well-being, employment quality and labour vulnerability (ETUC 2021).

Furthermore, economists are also studying post-growth, a concept related to degrowth, which problematises economic growth but tends to be less radical. Advocates generally criticise GDP as *the* key economic indicator, often asserting that growth will end. Adherents of post-growth views either advocate continued economic growth for the majority of humanity (Jackson 2021) or are agnostic on the issue, as exemplified by Kate Raworth (2017) (EEA 2022).

### Ecologically destructive sectors will need to shrink

In any case, tackling ‘undifferentiated economic growth’ (Barry 2013: 231) is key to addressing the multiple crises Europe is facing. While it is clear that fossil fuel use, land use and resource extraction cannot grow endlessly, even with a move beyond growth, certain sectors will need to grow to replace existing yet unsustainable practices (Gough 2021: 25-27; Hardt et al. 2021). As Galgóczi (2014) argues, investments in renewable energy are currently insufficient to replace current energy needs, further complicating the current energy crisis and meaning that we remain on a path to ‘energy additions’ (simply adding renewables to an energy mix still heavily reliant on fossil fuels, Fressoz 2014) rather than an energy transition (see Figure 3). Conversely, a rise in public services focused on satisfying the basic needs of all will allow ecologically costly individualised consumption to shrink.

Figure 3 Global primary energy consumption by source



Note: Primary energy is calculated based on the ‘substitution method’ which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as fossil fuels.  
Source: <https://ourworldindata.org/global-energy-200-years>

### Quality and sufficiency can reduce the need for work

Furthermore, a focus on quality and sufficiency going hand-in-hand with a move beyond growth could reduce the amount of wasted and meaningless work done in society (Graeber 2018). For instance, reducing consumerist advertising could lower demand without harming well-being (Hickel 2020b: 213-216). Similarly, ending planned obsolescence would allow living standards to be upheld or even increased while simultaneously reducing

ecological footprints (Hickel 2020b: 209-212; Brand and Niedermoser 2017: 171-172). Furthermore, endorsing the principles of a circular economy would bring down material and product requirements. By reusing, repairing, recycling and re-manufacturing products, material resource use is reduced, with the focus shifted to the related services supporting this shift in the logic of production and consumption.

The obstacle in the way of this shift are the lock-ins holding the current systems in place. As long as the environmental costs of virgin materials are not borne by their producers, while re-using or recycling materials requires substantial amounts of labour and energy, reused or recycled products are not competitive in the market. Furthermore, the infrastructure and regulations enabling a circular economy are not in place, making for instance single-use plastics cheap and hindering the effective repurposing of items. The introduction of ten-year guarantees on white goods or the blanket requirement to provide replacement parts for machines could alter company interests and bring about a shift towards the provision of quality services, with the focus moving towards providing working appliances and the services they provide us with.

### **Social-ecological working time reduction could provide a triple dividend**

As a focus on reducing emissions and resource use entails a reduction in the amount of work and vice-versa (Frey 2019), a corresponding issue is the redistribution of the remaining work to avoid unemployment. Thus, a beyond-growth approach focusing on well-being within sustainable limits will require working time reduction (WTR) for both social and ecological reasons. Instead of translating further improvements in productivity and technological progress into more individual consumption, workers could benefit in terms of time wealth. Fortunately, many trade unions are already in favour of WTR (Keil and Kreinin 2022: 11; De Spiegelaere and Piasna 2021; IGM 2017; TUC 2019), with Fórsa (2021), CGT (2021), GPA (2021) and ÖGB (2020) demanding a move towards a 4-day week, citing reduced emissions as one reason for this. This also makes sense in light of the long history of trade union demands for reduced working hours (Eichmann 2017: 103-106).

This is promising, since research has found that WTR may result in a better quality of life for workers, a better distribution of work in shrinking sectors, and less pressure on our ecological systems (Dupressoir 2011: 46-17; Schor 1992, 2005; Hoffmann and Paulsen 2020: 344-345; Mayrhofer and Wiese 2020: 29-31, 50-51; Brand 2019: 86; IPCC 2022a: 5/27; Kreinin et al. 2022: 16; De Spiegelaere and Piasna 2021: 25-46; Frey 2019; Gerold and Nocker 2018; Knight et al. 2013).

Reducing the amount of time individuals spend in employment allows for improved quality of life through time wealth while also helping individuals to break the work-spend cycle, by which the pressures of work necessitate higher spending and consumption (Schor 1992). At the same time, society-wide

working time reduction and redistribution of the remaining work will allow unemployment to be reduced by creating jobs to offset the reduced working hours. Hence, WTR promises a ‘triple dividend: reducing unemployment, cutting carbon emissions, and providing people with an enhanced quality of life’ (Räthzel and Uzzell 2011: 1215, referring to Schor 2010).

By decoupling employment from growth, WTR has the additional benefit of undermining the growth and jobs treadmill (Mayrhofer and Wiese 2020: 20-21; Gould et al. 2008; Kreinin et al. 2022: 15, tracing back to Schnaiberg 1980). Currently, this treadmill requires extra growth to offset job losses from productivity gains, thus locking in the pursuit of economic growth. The ‘growth imperative’ can thus create a dilemma for trade unions: growth needs to be questioned but cannot be questioned due to its links to jobs (Brand and Niedermoser 2017: 166, 168). Individual WTR to offset job losses by redistributing work will allow for increased well-being and end dependence on growth. On the other hand, WTR at a societal level may also provide an imperative to reduce socially unproductive work, thus driving a shift towards meaningful work that is highly conducive to well-being (Graeber 2018). Combining these discourses on the social and ecological aims of WTR, which cover both the redistribution and reduction of work, will be a key element of the beyond-growth agenda.

### **A necessary re-politicisation of redistribution**

Lastly, a move beyond growth will re-politicise inequality. While redistribution is often seen as becoming more difficult to attain in a post-growth context, this understanding stems from the view that redistribution has mostly occurred with regard to new income and that it is more difficult to take resources away from any group. However, 46% of global income gained from growth since 1980 has gone to the richest 5% (Hickel 2020b: 191-193), thus exacerbating inequality. This was possible due to the power of capital over both nature and labour, now characterised to a large extent by rent-seeking behaviour (Stiglitz 2012; Piketty 2014; Mayrhofer and Wiese 2020: 27; IPCC 2022a: TS-106; Hickel 2020b: 163, 191-196; Stratford 2020). Indeed, the rights of capital to nature are a major free gift to capital (Stiglitz 2012).

Neoliberal economic arguments frequently claim that inequality is necessary for growth, while in reality inequality-fuelled growth creates poverty (Barry 2013: 235). Thus, growth has been used to justify inequality, as in the infamous Kuznets curve (Hickel 2017; Niedermoser 2017). Moving beyond growth will thus allow policymakers to improve well-being more directly. As inequality is a better predictor of many social outcomes than GDP in rich nations (Wilkinson and Pickett 2010), reducing inequality will be a key target for an explicitly post-growth economy. Hence, a re-politicisation of inequality will allow trade unions to counter its root causes and reverse decades of redistribution benefitting the rich (Hickel 2020b: 176-184; Niedermoser 2017).

The upcoming transformation processes will engender a major redistributive process, providing trade unions with the opportunity and necessity to secure redistribution in a progressive way. Nonetheless, it is important to remember that climate and ecological breakdown will be the largest redistributors in coming decades. Indeed, climate breakdown is always linked to social issues related to increasing inequality and poverty (ETUC 2020). For instance, extreme weather conditions hit workers hard by worsening their working conditions (Dupressoir 2011; Galgoczi 2017; ETF 2020: 7) or destroying the infrastructure their livelihoods depend on (Gerhardt et al. 2017: 40).

For trade unions, it is thus important to remember that inequality is intrinsically linked to ecological issues, as inequality is synonymous with unequal access to ecological resources. Focusing on increasing profits and exchange value, which serves the interests of capital, should not be a trade union priority. Instead, a renewed understanding of the importance of use value for human needs should take precedence (Gil 2013; Marx, 1867: ch. 1).

## **4. The central role of public services in a post-growth economy**

As seen in the last section, moving beyond growth does not imply an end to human flourishing. As Hickel (2020: 232-236) argues, it is rather the opposite: degrowth proposals aim to restore access to the abundance of nature to all and end the capitalist need for scarcity to enforce exploitative labour relations. This will require a move beyond aims of relative reductions or efficiency and instead will entail prioritising sufficiency (Brand and Niedermoser 2017: 163; Stengel 2011; Gough 2021: 21-23) and human needs (Coote and Yazici 2020; Max-Neef et al. 1991; Nussbaum 2013; Gough 2015, 2021; Brand and Niedermoser 2017: 171-172; IPCC 2022: 5/29).

### **Public services are a key part of the foundational economy**

Such a focus on human needs quickly highlights the central role of public services in delivering well-being and equality (Gough 2019). As Mackenzie and Shillington (2009) argue for Canada, public services are the best deal that workers will get: childcare, healthcare, education, public transport, and public housing all have a direct impact on our well-being and human flourishing and are substantially cheaper if organised and provided collectively rather than on an individual basis.

Taxes on higher incomes and unsustainable practices will need to be increased (Mayrhofer and Wiese 2020: 48-9) to provide the state with the resources necessary to provide basic services and enable the transformation of the economy. The state has the power to shrink the rentier economy while growing the foundational economy, which is embedded in local communities and provides 40% of jobs (Gough 2021: 8). After all, the welfare state has a long history of enabling societal change, from providing healthcare and childcare to subsidising and taxing particular practices. Taxes on non-labour incomes should be raised in particular, as seen in Gough's (2021: 8) proposal to shift taxes to 'wealth, land, data, inheritance, unhealthy consumption, financial transactions and pollution'.

### **Public provision of services reduces ecological footprints**

Providing services collectively rather than individually is also key to reducing both ecological impacts and inequality and can effectively combine the collective approach of trade unions with the ecological approach of the environmental movement (Gough 2021: 18). For instance, improved public transport creates meaningful jobs, improves mobility and reduces emissions (Jakopovich 2009: 81-82; Segert 2017; Gerhardt et al. 2017). Trade union

organising in rail and urban public transport sectors is already promoting basic public services (ETF 2020: 2-3, 10; Mattioli et al. 2020). The same is the case with other amenities such as parks, libraries and public housing, which can satisfy basic human needs much more effectively than their private provision. The public provision of services can also reduce the work-spend cycle (Schor 1992), in which people get stuck in jobs with high workloads in order to pay for basic services such as mobility or healthcare, which they require to be able to work in these jobs.

### **Universal basic services can be the transformational core of a just transition**

Furthermore, public services can play a key role in enabling a smooth transition away from fossil fuels and ecologically destructive practices. Introducing universal basic services (UBS) would provide everyone with free basic services, thus strengthening social support systems (Gough 2019; Coote and Yazici 2020; Coote et al. 2019; Button and Coote 2021). Services such as healthcare and education are provided free at the point of use in many countries already. Extending this to ensure universal access to further basic, i.e. satiable, services such as public transport, housing and information will allow inequality to be reduced and well-being to be secured for all. Furthermore, in a more volatile world, there is a need for protection from extreme weather events and thus a new kind of social-ecological protection (Laurent 2021a: 31-33). Having such a strong support system in place reduces the fear and resistance towards changes in the world of work as it reduces the negative consequences of economic restructuring for both individuals and communities.

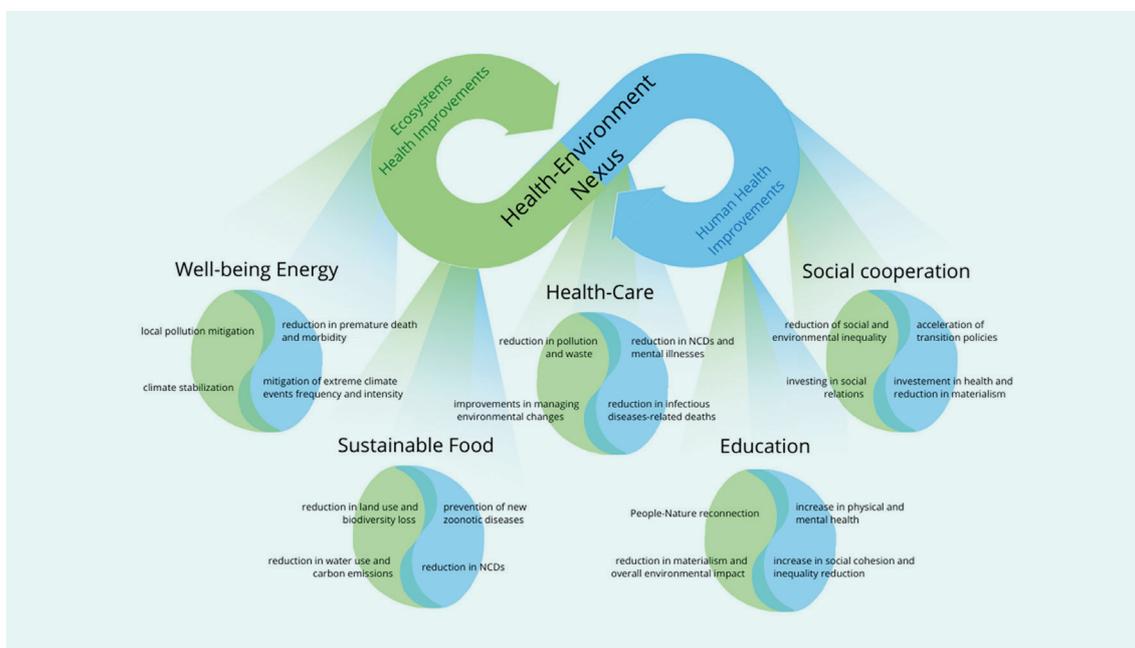
UBS could thus become a key pillar of trade union just transition demands, encompassing five pillars, as developed by the ETUC (Galgóczy 2014: 66; Laurent and Pochet 2015: 21): firstly, dialogue with governments and key stakeholders; secondly, the pursuit of green and decent jobs; thirdly, the strengthening of green skills; fourthly, upholding human and labour rights; and lastly, strong and effective social protection systems. Without this last pillar, of which public services are a key part, there can be no truly just transition. Thus, universal basic services are highly promising, especially in their potential for service and public sector unions (Brand and Niedermoser 2017: 67, 70, 186-187; Gough 2021: 7-8, 17).

### **Public services can weaken the growth dependence of our economies**

As outlined in the second chapter, we need to adapt to a future without growth. As Bohnenberger and Fritz (2020) argue, welfare states also need to adapt to a no-growth scenario. This will require public services to be as efficient as possible to increase well-being without requiring further growth. Luckily, investing in public services can bring about a positive spiral of improvements in well-being which can then pay for further improvements, ending the requirement for further growth and making the economy less growth-dependent.

Laurent’s 2021a report for the ETUI highlighted how many parts of what he calls the ‘well-being transition’ are mutually reinforcing, especially in the field of health (Figure 4; Laurent et al. 2021, 2022; Mastini et al. 2021; Kopp et al. 2019). A key to this is to focus on preventive action across fields to reduce health costs. For instance, strong ecological legislation can improve health outcomes, reducing health expenditure and releasing funds to provide a safety net for climate impacts. Similarly, by ensuring that there is a basic safety net of emergency services, impacts of wildfires and other extreme weather events will be smaller, meaning that damage costs will be lower (EPSU 2022).

Figure 4 The Health-Environment Nexus



Source: Laurent et al. 2022

Returning to the public provision of services can provide further benefits. An EPSU report (2019b) has shown that the public sector is not less efficient than the private sector and can be more effective in providing high-quality services without shifting costs to labour, nature or society. This makes sense as public companies can employ economies of scale, have reduced transaction costs and generate fewer moral hazards related to asymmetric information (Gough 2019). Furthermore, as the current cost-of-living crisis highlights, the privatisation of energy companies has undermined the provision of a key basic service in many countries by neglecting the importance of energy supply stability (IndustriAll Europe n.d.: 14; Wegmann 2019). The focus on profits meant that many companies sold off their previously unprofitable gas storage capacities and are now reluctant to purchase gas for storage when prices are high.

Yet relying on the public provision of universal basic services does not necessarily mean returning to single national energy providers. Public services can be provided in many ways (Coote and Yazici 2020). A mix of re-municipalisation, cooperatives, and publicly-owned companies for natural monopolies could refocus the energy sector on the public good (Weghmann 2019; EPSU 2019a). This will allow for different ways to be tried out to decarbonise the energy system and help increase the democratic oversight of the public provision of universal basic services. Furthermore, municipalities and cooperatives are not as beholden to the growth imperative, thus reducing the pressure for economic growth in a large sector of the economy.

Lastly, the state can also play a key role in the transformation. By investing in public research and development and promoting green procurement and social-ecological conditionality, it can play a key role in upscaling sustainable technologies (Dupressoir 2011; EPSU 2019a). Furthermore, a quality public administration enabling regulatory changes, providing planning permissions and ensuring tax justice will also be key to implementing any social-ecological transformation. Governments can also insist that strings are attached to any public funding going to companies.

### **Public services can provide meaningful jobs in a transformed economy**

The increased need for public services could also allow for a slow shift of workers from shrinking sectors into growing and improving public services. This will especially be the case if the quality of public services is raised through reducing the working time of public sector employees, allowing carers and nurses for example to live better lives and thus be less exhausted at work, as seen in the Svartedalen experiment (De Spiegelaere and Piasna 2021: 71-73). Here, care workers in Göteborg, Sweden, worked 30 hours a week, six hours a day, resulting in higher quality care work, less absenteeism and higher work satisfaction. Although this scheme was abandoned due to supposedly high costs, the benefits for worker health and those being cared for were substantial.

Such a strengthening of public services could be accompanied by a job guarantee, for instance through a public job programme (Hickel 2020: 223). This could provide workers from sunset industries with jobs in sunrise sectors. However, these jobs need to be of sufficient quality and must not undermine the value of existing jobs. As Gough (2021: 17) argues, a job guarantee creates the danger of workfare, and could lead to bullshit jobs if there is no state capacity to create meaningful jobs (Graeber 2018). Gough (2021: 17) thus emphasises that these jobs should not ‘displace existing public service jobs. ETUC calls for quality, long-term jobs to counter these threats.’

## 5. Recommendations for moving beyond growth

This discussion paper has so far shown the need for strategies to bring about a social-ecological transformation addressing our multiple crises (Spash 2021; OECD 2020) holistically. The aim of this last part is to provide concrete recommendations for moving beyond growth. Creating a labour-nature alliance of environmentalists and workers (Nitsche-Whitfield 2022a; Jakopovich 2009; Laurent 2021a: 24-5; Flemming and Reuter 2020: 327-330) will be crucial to changing the power relations and making such change possible. To build such an alliance, gaining knowledge of ecological crises, entering into dialogue with ecological actors, building new narratives and being active for a future social-ecological contract (Gough 2021) will be key.

### **Dialogue with the environmental movement can support the development of a labour-nature alliance**

Constructive and open dialogue between environmental and labour movements will allow positions to be refined, while reducing tensions and increasing understanding. Organising around the terms #Peoplenotprofit and #systemchangenotclimatechange, the climate movement and ENGOs are developing a growing understanding that a just transition incorporating social issues is necessary to make change acceptable, opening space for trade unions to engage in these issues.

Thus, both trade unions and ENGOs should be conscious of the social and ecological impacts of their demands and attempt to understand their respective campaigns. Membership of trade unions such as Ver.di and IG Bauen-Agrar-Umwelt in the Climate Alliance Germany is thus a highly promising development, allowing direct trade union engagement in the dialogue on climate action (Staude 2022).<sup>3</sup> Similarly, the approach of the Austrian Chamber of Labour (Kammer für Arbeiter und Angestellte), the organisation representing all Austrian employees, is encouraging in that it has been actively connecting trade unionists, academics and activists in debates on issues of social-ecological transformation and (de)growth (Universität Kassel 2022; Neier et al. 2022). EPSU's work on trade agreements such as CETA, on public procurement rules or on the right to water and energy are good European-level (and international) examples of such alliances.

---

3. See <https://www.klima-allianz.de/ueber-uns/unsere-mitglieder/mitglied/verdi> and <https://www.klima-allianz.de/ueber-uns/unsere-mitglieder/mitglied/industriegewerkschaft-bauen-agrar-umwelt>.

### **Joint actions will strengthen the social power of a labour-nature alliance**

To strengthen this dialogue, solidarity should be shown wherever there is a project of common interest or not conflicting with one's own goals. One key project that trade unionists and ecologists ought to put high on the agenda is the issue of working time reduction and universal basic services, as discussed above. Others could be the support for each other's climate and labour strikes, as happened in Glasgow during the last COP (Gebrial 2021) or in Fridays for Future's support for Ver.di strikes by public transport workers in Germany (Krüger 2020; Scholz 2021; EPSU 2019a). These acts of solidarity have the potential to create symbolic capital with the other side and reframe the existing understanding of the respective movements. Hence, players bridging these worlds such as the Trade Unions for Energy Democracy movement (Sweeney and Treat 2018), which has affirmed the need to question green growth (Clarke and Lipsig-Mummé 2020: 357), XR Trade Unionists<sup>4</sup> or the German Initiative Gewerkschafterinnen und Gewerkschafter für Klimaschutz (Hartmann 2018)<sup>5</sup> can play a key role in getting the ball rolling. Repeatedly rallying around common issues can lead in stages to stronger win-win situations and institutionalised cooperation (Jakopovich 2009: 91-92).

By combining the interests of labour with the values of ecological activists (Jakopovich 2009: 84-85), a truly powerful coalition could come together to support a joint vision of a future where the basic needs of all Europeans are taken care of through UBS, where nobody has too much work thanks to WTR, while everyone who wants work can find work in a meaningful profession thanks to a job guarantee. Bringing about such an outcome will require political conflicts with capital and the building of a strong alliance (Nitsche-Whitfield 2022a).

Such an alliance will need to develop radical new tactics, such as strikes supported by consumer boycotts (ibid: 78), as happened in the case of energy unions in the Philippines which connected consumers with trade unionists and forced electricity companies to improve conditions (Gebrial 2021). Such action bringing about positive change will require organising on the ground, focusing especially on those who do not yet agree with the proposals of a social-ecological transition but could be persuaded to do so (McAlevey 2020). The fact that trade unions now face substantially more hurdles to their organising in many European countries and are thus forced to organise more deeply could be used as a chance to redefine the role of trade unions in people's lives (Horgan 2021: 134-135). In this way, trade unions could counter neoliberal individualisation and return to consciousness-raising within the working class through communal activities (Brand and Niedermoser 2017: 167).

---

4. See <https://actionnetwork.org/groups/xr-tu-extinction-rebellion-trade-unionists>.

5. See <https://www.labournet.de/politik/gw/gw-in-d/gewerkschafterinnen-fuer-klimaschutz/> and <https://www.dgb-bildungswerk.de/weltweit/transformation-gewerkschaft-staendiger-mission-fuers-klima>.

## **We need to develop narratives beyond the growth imperative that are focused on well-being**

Bringing about change will require narratives that create a new common sense uniting the causes of labour and nature in a post-growth world (Kalt 2021). While this shift will need to happen at a societal level, trade unions can counter neoliberal narratives and point to the potential of a democratic social-ecological transformation, WTR and UBS.

Climate justice (Laurent and Pochet 2015: 14), well-being (OECD 2020), or approaches such as ‘doughnut economics’ (Raworth 2017) are promising terms for trade union organising. This is in line with Switalski’s (2014: 8) claim that ‘[j]ustice will be the organising value in the Europe of the post-growth age’ and with Barry’s (2013: 230) observation that trade unions could replace economic growth with economic security. Similarly, trade unions may endorse a narrative linking sufficiency with security, as stable livelihoods are a key aim of trade unions (Keil and Kreinin 2022: 16).

Furthermore, there needs to be clarity about the ecological and social limits set to constrain human activities in coming years. Ecological activists must move ‘beyond middle-class environmentalism (Barca 2019; Hampton 2015), and [...] appeal to the material interests of workers’ (Keil and Kreinin 2022: 8). It is important to make visible the origins of our ecological crises in an economic system dependent on economic growth and incapable of delivering on its promises in order to align interests with values (Jakopovich 2009). While communicating that Europe has been living beyond its means without being seen as advocating austerity is a difficult task for trade unions to undertake, there is a societal need to confront the illusion of perpetual growth. Moreover, to find real solutions, there needs to be clarity on the effects of ecological transformation, including head-on discussions about employment effects and required societal changes.

Thus, trade unions should aim to reduce their use of GDP and focus more on using indicators around well-being and inequality (Parrique 2019: 56-57). Tackling the problem of excessive wealth head-on is part of this. Trade unions do not need to call for GDP growth or back the growth imperative to work towards their key objectives. High-quality jobs, universal basic services, a protected environment and working time reduction are best targeted directly, as merely increasing its size will not change the way the economy is organised.

When talking about inequality and the share of national production that goes to labour, the wage share of GDP has long been a key measure. While it still makes sense to compare the monetary amounts that labour and capital receive, this simple comparison leaves out key aspects of inequality. Here again, a focus solely on monetary values hides the vast difference to living standards that public services can make.

Furthermore, simple indicators of income and wealth inequality only serve to show that our economies are not providing increased well-being but uphold the interests of shareholders and financialisation. In addition, as trade unions have long recognised, using debt-to-GDP ratios to assess a state's indebtedness is frequently used as an argument for austerity, without assessing what kind of debt a state holds. Besides GDP not accounting for all work done in society, monetary debt is not the only form of debt. The real question is whether states are using debt to invest in a bright future and reduce ecological burdens for future generations or are just using debt to reduce taxes for the wealthy, thus further boosting inequality.

Lastly, trade unions should engage in the discussion around choosing and mainstreaming key indicators of well-being, allowing comparability and public recognition to be strengthened (Hough-Stewart and Meynen 2022).

Highlighting the concrete gains from a social-ecological transformation is also important. This would make the gains and losses of both transformation and inaction more visible and the costs more easily comparable. At the moment, job losses directly stemming from transformation are most visible, while the costs of inaction remain side-lined. This narrative of jobs vs climate has been supported by fossil capital to entice labour support for their unsustainable business models (Kalt 2021: 13-15). Pointing to the meaningful work that needs to be done in the ecological transition and to policies such as WTR which can break the jobs and growth treadmill (Mayrhofer and Wiese 2020; Laurent 2021a) is a way forward in these debates. Using the opportunities in the discourse, such as that around the European Green Deal, thus enables trade unions to put forward positive alternatives countering the plans of capital (Thomas and Doerflinger 2020: 394). Similarly, trade unions should take up the original meaning of a just transition as applying to workers and not let fossil capital reinterpret it as requiring subsidies for capital instead (Spash 2020d).

Overall, narratives will be key to building a strong labour-nature alliance, while both trade unions and ecological movements should take care to highlight linkages between their interests and policy priorities. More trade unions should thus move away from hedging strategies (Thomas and Doerflinger 2020) and make it clear that their narratives cannot be interpreted as supporting climate delay (Lamb et al. 2020). Small battles with fossil capital for better working conditions and environmental outcomes can then come together and strengthen a joint position favouring a strong social-ecological alliance (Henriksson 2012: 83).

## 6. Conclusion

This working paper has shown how present and future ecological challenges will entail a radical change to European modes of production and consumption and thus provide an opportunity for the re-ordering of power relations. Since this also provides opportunities for authoritarian, anti-labour and extractivist actors to entrench their position, it is vital that trade unions and ecological activists drive this transformation arm in arm.

The pursuit of continued economic growth based on extraction and exploitation is destined to create more crises undermining the purpose of growth. Put simply, growth has become uneconomical. GDP does not adequately account for the key economic issues of the 21<sup>st</sup> century: resources, biodiversity, emissions, and inequality. Hence, there needs to be a planned move towards social-economic systems beyond growth that address the issue of inequality. Public services will play a key role in this as they allow for the ecologically effective satisfaction of basic human needs.

Trade unions are set to be key players in creating a social-ecological transformation beyond growth. To be successful in pushing for a transition to well-being, joint action in a labour-nature alliance will be key.

## References

- Antimicrobial Resistance Collaborators (2022) Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis, *Lancet*, 399 (10325), 629-655. [https://doi.org/10.1016/S0140-6736\(21\)02724-0](https://doi.org/10.1016/S0140-6736(21)02724-0).
- Asara V., Otero I., Demaria F. and Corbera E. (2015) Socially sustainable degrowth as a social-ecological transformation: repoliticizing sustainability, *Sustainability Science*, (10), 375–384. <https://doi.org/10.1007/s11625-015-0321-9>.
- Barca S. (2019) Labour and the ecological crisis: The eco-modernist dilemma in western Marxism(s) (1970s-2000s), *Geoforum*, 98, 226-235. <https://doi.org/10.1016/j.geoforum.2017.07.011>.
- Barry J. (2013) Trade unions and the transition away from 'actually existing unsustainability': From economic crisis to a new political economy beyond growth, in Rätzl N. and Uzzell D. (eds.) *Trade Unions in the Green Economy: Working for the Environment*, Routledge, 227-240. <https://doi.org/10.4324/9780203109670>.
- Blechner N. (2021) Deutsche Solarbranche vor dem Comeback? Tagesschau. <https://www.tagesschau.de/wirtschaft/deutsche-solarbranche-vor-dem-comeback-101.html>.
- Bohnenberger K. and Fritz M. (2020) Making welfare resilient: Creating stable & sustainable welfare systems in times of declining economic growth, *Transformation Policy Brief #2*, ZOE-Institute for future-fit economies. <https://zoe-institut.de/en/publication/making-welfare-resilient-2/>.
- Brand U. (2019) In der Wachstumsfalle: Die Gewerkschaften und der Klimawandel [In the growth trap: Trade unions and climate change], *Blätter für deutsche und internationale Politik*, (7), 79–88.
- Brand U. and Niedermoser K. (2017) *Die Rolle von Gewerkschaften bei der Gestaltung einer sozial-ökologischen Gesellschaft* [The role of trade unions in the construction/design of a social-ecological society], OGB Verlag.
- Brand U. and Niedermoser K. (2019) The role of trade unions in social-ecological transformation: Overcoming the impasse of the current growth model and the imperial mode of living, *Journal of Cleaner Production*, 225, 173–180. <https://doi.org/10.1016/j.jclepro.2019.03.284>.
- Brand U. and Wissen M. (2012) Global Environmental Politics and the Imperial Mode of Living: Articulations of State–Capital Relations in the Multiple Crisis, *Globalizations*, 9 (4), 547–560. <https://doi.org/10.1080/14747731.2012.699928>.
- Brand U. and Wissen M. (2018) *The limits to Capitalist Nature: Theorizing and Overcoming the Imperial Mode of Living*, Rowman & Littlefield.
- Bringezu S. (2015) Possible Target Corridor for Sustainable Use of Global Material Resources, *Resources*, 4 (1), 25-54. <https://doi.org/10.3390/resources4010025>.
- Brockway P.E., Owen A., Brand-Correa L.I. and Hardt L. (2019) Estimation of global final-stage energy-return-on-investment for fossil fuels with comparison to renewable energy sources, *Nature Energy*, 4, 612–621. <https://doi.org/10.1038/s41560-019-0425-z>.
- Button D. and Coote A. (2021) *A social Guarantee: The case for universal services*, New Economics Foundation. <https://neweconomics.org/2021/09/a-social-guarantee>.
- CGT (2021) 32 heures: Travailler moins, Travailler mieux, Travailler toutes et tous - C'est possible et urgent. <https://www.cgtservicespublics.fr/vos-droits/temps-de-travail-conges/temps-de-travail/campagne-32-heures/article/campagne-cgt-pour-les-32-heures-et-la-rtt>.
- Chancel L., Piketty T., Saez E. and Zucman G. (eds.) (2021) *World Inequality Report 2022*, World Inequality Lab. <https://wir2022.wid.world/>.

- Circle Economy (2022) The Circularity Gap Report 2022, Circle Economy. <https://www.circularity-gap.world/2022#Download-the-report>.
- Clarke L. and Lipsig-Mummé C. (2020) Future conditional: from just transition to radical transformation?, *European Journal of Industrial Relations*, 26 (4), 351-366. <https://doi.org/10.1177/0959680120951684>.
- Coote A., Kasliwal P. and Percy A. (2019) Universal basic services: theory and practice - A literature review, Institute for Global Prosperity. <https://www.ucl.ac.uk/bartlett/igp/publications/2022/feb/universal-basic-services-theory-and-practice-literature-review-2019>.
- Coote A. and Yazici E. (2020) Universal Quality Public Services: A policy briefing for trade unions, PSI. <https://publicservices.international/resources/publications/universal-quality-public-services-union-policy-brief?id=11752&lang=en>.
- Cunniah et al. (2012) Are "green" jobs decent?, *International Journal of Labour Research*, 4 (2), 131-248.
- Daly L. and Posner S. (2012) Beyond GDP: New Measures For A New Economy, Demos. <https://www.demos.org/research/beyond-gdp-new-measures-new-economy>.
- De Spiegelaere S. and Piasna A. (2017) The why and how of working time reduction, ETUI. <https://www.etui.org/publications/guides/the-why-and-how-of-working-time-reduction>.
- Devictor V. (2017) The Biophysical Realities of Ecosystems, in Spash C.L. (ed.), *Routledge Handbook of Ecological Economics: Nature and Society*, Routledge.
- Diesendorf M. and Wiedmann T. (2020) Implications of Trends in Energy Return on Energy Invested (EROI) for Transitioning to Renewable Electricity, *Ecological Economics*, 176, 106726. <https://doi.org/10.1016/j.ecolecon.2020.106726>.
- Dorling D. (2021) *Slowdown: The End of the Great Acceleration – and Why It's a Good Thing*, Yale University Press.
- Dorning C., Hornborg A., Abson D.J., von Wehrden H., Schaffartzik A., Giljum S., Engler J.-O., Feller R. L., Hubacek K. and Wieland H. (2021) Global patterns of ecologically unequal exchange: Implications for sustainability in the 21st century, *Ecological Economics*, 179, 106824. <https://doi.org/10.1016/j.ecolecon.2020.106824>.
- Dörre K. and Becker K. (2018) Nach dem raschen Wachstum: Doppelkrise und große Transformation [After rapid growth: double crisis and Great Transformation], in Schröder L. and Urban H.-J. (eds.) *Gute Arbeit – Ökologie der Arbeit - Impulse für einen nachhaltigen Umbau*. Ausgabe 2018, Bund Verlag, 35-58.
- Dupressoir S. (2011) Impact of climate change on public services in Europe, Discussion paper, EPSU.
- EEA(2020)Growth without economic growth, Briefing 28/2020, European Environment Agency. [https://www.eea.europa.eu/ds\\_resolveuid/bee0c89209641548564b046abcaf43e](https://www.eea.europa.eu/ds_resolveuid/bee0c89209641548564b046abcaf43e).
- Eichmann H. (2017) Arbeitszeitverkürzung als Ansatzpunkt gewerkschaftlicher Klimapolitik? [Working time reduction as starting point for trade union climate politics], in Brand U. and Niedermoser K. (eds.) *Gewerkschaften und die Gestaltung einer sozial-ökologischen Gesellschaft* [The role of trade unions in the construction/design of a social-ecological society], Verlag des Österreichischen Gewerkschaftsbundes, 93-128.
- EPSU (2014) EPSU Briefings: Challenging austerity. <https://www.epsu.org/article/epsu-briefings-challenging-austerity>.
- EPSU (2019a) School children and students Climate Strike 15 March: EPSU solidarity declaration, adopted at the EPSU Executive Committee 12 March 2019. <https://www.epsu.org/article/europe-s-public-service-unions-support-youth-climate-action-15-march-people-and-planet-over>.

- EPSU (2019b) EPSU Position on the European Green Deal: Challenging consensus on market-based solutions to fight climate breakdown. <https://www.epsu.org/article/epsu-position-european-green-deal>.
- EPSU (2020) Public and Private Sector efficiency, A report for EPSU by the Public Sector International Research Unit. <https://www.epsu.org/article/public-and-private-sector-efficiency>.
- EPSU (2022) Adaptation to climate change: has the European Union forgotten about firefighters and emergency services?. <https://www.epsu.org/article/climate-change-and-austerity-take-their-toll>.
- ETF (2020) EU Strategy for a Sustainable and Smart Mobility. <https://www.etf-europe.org/resource/etf-position-eu-strategy-for-a-sustainable-and-smart-mobility/>.
- ETUC (2020) A guide for trade unions: Adaptation to Climate Change and the world of work. <https://www.etuc.org/en/adaptation-climate-change>.
- ETUC (2021) ETUC's decent work & sustainable growth index: briefing note. [https://www.etuc.org/sites/default/files/document/file/2021-03/ETUCs%20DECENT%20WORK%20%20SUSTAINABLE%20GROWTH%20INDEX\\_Briefing%20Note\\_final.pdf](https://www.etuc.org/sites/default/files/document/file/2021-03/ETUCs%20DECENT%20WORK%20%20SUSTAINABLE%20GROWTH%20INDEX_Briefing%20Note_final.pdf).
- European Environmental Bureau, Wellbeing Economy Alliance and World Wildlife Fund (2022) This is the moment to go beyond GDP. <https://eeb.org/library/this-is-the-moment-to-go-beyond-gdp-briefing/>.
- Fannin A.L., O'Neill D.W., Hickel J. and Roux N. (2022) The social shortfall and ecological overshoot of nations, *Nature Sustainability* 5, 26–36. <https://doi.org/10.1038/s41893-021-00799-z>.
- Fine B. (2003) *New Growth Theory*, in Chang H.J. (ed.) *Rethinking Development Economics*, Anthem Press.
- Flemming J. and Reuter N. (2020) Trade Unions: Who can afford to degrow?, in Burkhart C., Schmelzer M. and Treu N. (eds.) *Degrowth in Movement(s): Exploring pathways for transformation*, Zer0 books, 318-332.
- Fletcher R. and Rammelt C. (2017) Decoupling: A Key Fantasy of the Post-2015 Sustainable Development Agenda, *Globalizations*, 14 (3), 450-467. <http://dx.doi.org/10.1080/14747731.2016.1263077>.
- Fressoz J.-B. (2014) Pour une histoire désorientée de l'énergie, 25èmes Journées Scientifiques de l'Environnement - L'économie verte en question. <https://hal.archives-ouvertes.fr/hal-00956441>.
- Frey P. (2019) The Ecological Limits of Work: on carbon emissions, carbon budgets and working time, *Autonomy Research*. <https://autonomy.work/portfolio/ecologicallimitscoverage/>.
- Fórsa (2021) Sign up for a four-day week. <https://www.forsa.ie/sign-up-for-a-four-day-week/>.
- Foundational Economy (2020) The foundational approach. <https://foundationaleconomycom.files.wordpress.com/2020/08/fe-approach-2020.pdf>.
- Galgóczi B. (2014) The changing role of trade unions in the sustainable development agenda, *International Review of Sociology*, 24 (1), 59-68. <https://doi.org/10.1080/03906701.2014.894346>.
- Galgóczi B. (2017) Public services and adaptation to climate change, EPSU. <https://www.epsu.org/article/epsu-feature-adaptation-climate-change>.
- GCEC (2014) *Better Growth Better Climate: The New Climate Economy Report. The Synthesis Report*, The Global Commission on the Economy and Climate.
- Gebrüder D. (2021) Planet B: Everything Must Change – Work, Podcast from Novara <https://novaramedia.com/2021/10/14/planet-b-everything-must-change-work/>.
- Georgescu-Roegen N. (1971) *The Entropy Law and the Economic Process*, Harvard University Press.

- Georgescu-Roegen N. (1979) Methods in economic science, *Journal of Economic Issues*, XIII (2), 317-328.
- Gerhardt A., Spittel A., Saeed S., Steiger D., Trunkwalter S. and Weituschat B. (2017) Trends – anticipating the impact of changes in transport on employment, working conditions, professions and skills, ETF. <https://www.etf-europe.org/resource/trends-global-changes-shaping-the-future-of-our-industry/>.
- Gerold S. and Nocker M. (2018) More Leisure or Higher Pay? A Mixed-methods Study on Reducing Working Time in Austria, *Ecological Economics*, 143, 27-36. <https://doi.org/10.1016/j.ecolecon.2017.06.016>.
- Gil B. M.-T. and González A. (2013) Moving towards eco-unionism, in Rätzl N. and Uzzell D. (eds.) *Trade Unions in the Green Economy: Working for the Environment*, Routledge. <https://doi.org/10.4324/9780203109670>.
- Gough I. (2015) Climate Change and Sustainable Welfare: The Centrality of Human Needs, *Cambridge Journal of Economics*, 39 (5), 1191–1214. <https://doi.org/10.1093/cje/bev039>.
- Gough I. (2019) Universal Basic Services: a theoretical and moral framework, *The Political Quarterly*, 90 (3), 534- 542. <https://doi.org/10.1111/1467-923X.12706>.
- Gough I. (2021) Climate change: the key challenge - A framework for an eco-social contract - Conference Report, ETUI.
- Gould K., Pellow D. and Schnaiberg A. (2008) *Treadmill of Production: Injustice and Unsustainability in the Global Economy*, Routledge. <https://doi.org/10.4324/9781315631479>.
- GPA (2021) Anspruch auf 4-Tage-Woche sicherstellen: Für bessere Arbeitsbedingungen und Klimaschutz [Ensuring the right to a 4-day week: For better working conditions and climate protection]. <https://www.gpa.at/themen/arbeitszeit/anspruch-auf-4-tage-woche-sicherstellen>.
- Graeber D. (2018) *Bullshit Jobs: A Theory*, Simon & Schuster.
- Haberl H. et al. (2020) A systematic review of the evidence on decoupling of GDP, resource use and GHG emissions, part II: synthesizing the insights, *Environmental Research Letters*, 15 (6), 065003. <https://doi.org/10.1088/1748-9326/ab842a>.
- Hall C., Lambert J. and Balogh S. (2014) EROI of different fuels and the implications for society, *Energy Policy*, 64, 141-152. <https://doi.org/10.1016/j.enpol.2013.05.049>.
- Hampton P. (2015) *Workers and Trade Unions for Climate Solidarity: Tackling climate change in a neoliberal world*, Routledge. <https://doi.org/10.4324/9781315732220>
- Hardt L., Barret J., Taylor P. G., Foxon, T. J. (2021) What structural change is needed for a post-growth economy: A framework of analysis and empirical evidence, *Ecological Economics*, 179, 106845. <https://doi.org/10.1016/j.ecolecon.2020.106845>.
- Hartmann K. (2018) Verdi rettet die Welt, *Der Freitag*. <https://www.freitag.de/autoren/der-freitag/verdi-rettet-die-welt>.
- Heinberg R. (2007) *Peak Everything: Waking Up to the Century of Declines*, New Society Publishers.
- Henriksson L. (2012) Cars, crisis, climate change and class struggle, Rätzl N. and Uzzell D. (eds.) *Trade Unions in the Green Economy: Working for the Environment*, Routledge, 74-86. <https://doi.org/10.4324/9780203109670>.
- Hickel J. (2017) Is global inequality getting better or worse? A critique of the World Bank's convergence narrative, *Third World Quarterly*, 38 (10), 2208-2222. <https://doi.org/10.1080/01436597.2017.1333414>.
- Hickel J. (2020a) What does degrowth mean? A few points of clarification, *Globalizations*, 18 (7), 1105-1111. <https://doi.org/10.1080/14747731.2020.1812222>.
- Hickel J. (2020b) *Less is more: how degrowth will save the world*, Penguin Random House.

- Hickel J. and Kallis G. (2020) Is green growth possible?, *New Political Economy*, 25 (4), 469-486. <https://doi.org/10.1080/13563467.2019.1598964>.
- Hoffmann M. and Paulsen R. (2020) Resolving the 'jobs-environment-dilemma'? The case for critiques of work in sustainability research, *Environmental Sociology*, 6 (4), 343-354. <https://doi.org/10.1080/23251042.2020.1790718>.
- Horgan A. (2021) *Lost in work: escaping capitalism*, Pluto Press.
- Hornborg A. (1998) Towards an ecological theory of unequal exchange: articulating world system theory and ecological economics, *Ecological Economics*, 25 (1), 127-136.
- Hough-Stewart L. and Meynen N. (2022) GDP is a useless measurement. But what should replace it?, *openDemocracy*. <https://www.opendemocracy.net/en/oureconomy/gdp-measurement-new-zealand-beyond-economic-growth/>.
- Hyman R. (2001) *Understanding European trade unionism: between market, class and society*, Sage.
- IGM (2017) *Mehr Zeit zum Leben: Arbeitszeitwünsche und Vereinbarkeitsbedarfe von Beschäftigten*, Arbeitspapier 2.
- IGM (2022) *Deutschlands Energieplan droht zu scheitern*. <https://www.igmetall.de/politik-und-gesellschaft/umwelt-und-energie/deutschlands-energieplan-droht-zu-scheitern>.
- IMF (2015) *World Economic Outlook. April 2005. Uneven growth: short- and long-term factors*. <https://www.imf.org/external/pubs/ft/weo/2015/01/pdf/text.pdf>.
- IndustriAll Europe (n.d.) *Manufacturing our Future: IndustriAll Europe's action plan for the Future of European Industry*. <https://news.industrial-all-europe.eu/p/manufacturingourfuture>.
- IPBES (2016) *The assessment report on pollinators, pollination and food production of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. <https://doi.org/10.5281/zenodo.3402856>.
- IPBES (2019) *The global assessment report on biodiversity and ecosystem services, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. <https://doi.org/10.5281/zenodo.3831673>.
- IPBES (2020) *Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. <https://doi.org/10.5281/zenodo.4147317>.
- IPCC (2018) *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*, Cambridge University Press. <https://doi.org/10.1017/9781009157940>.
- IPCC (2021) *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*.
- IPCC (2022a) *Climate Change 2022: Mitigation of Climate Change. Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*.
- IPCC (2022b) *Climate Change 2022: Impacts, Adaptation, and Vulnerability. IPCC Working Group II Sixth Assessment Report*.
- Jackson T. (2021) *Post growth: life after capitalism*, Polity.
- Jakopovich D. (2009) *Uniting to win: labor-environmental alliances*, *Capitalism Nature Socialism*, 20 (2), 74-96. <https://doi.org/10.1080/10455750902941102>.
- Jonas O. B. et al. (2017) *Drug-resistant infections: a threat to our economic future, final report*, World Bank Group. <http://documents.worldbank.org/curated/en/323311493396993758/final-report>.
- Kallis G. (2011) *In defence of degrowth*, *Ecological Economics*, 70 (5), 873-880.

- Kallis G. (2015) The degrowth alternative, Great Transition Initiative. <https://greattransition.org/publication/the-degrowth-alternative>.
- Kallis G. et al. (2018) Research on degrowth, *Annual Review of Environment and Resources*, 43 (1), 291-316. <https://doi.org/10.1146/annurev-environ-102017-025941>.
- Kalt T. (2021) Jobs vs. climate justice? Contentious narratives of labor and climate movements in the coal transition in Germany, *Environmental Politics*, 30 (7), 1135-1154. <https://doi.org/10.1080/09644016.2021.1892979>.
- Kalt T. (2022) Agents of transition or defenders of the status quo? Trade union strategies in green transitions, *Journal of Industrial Relations*, 64 (4), 499-521. <https://doi.org/10.1177/00221856211051794>.
- Keil A. K. and Kreinin H. (2022) Slowing the treadmill for a good life for All? German trade union narratives and social-ecological transformation, *Journal of Industrial Relations*, 64 (4), 564-584. <https://doi.org/10.1177/00221856221087413>.
- Knight K.W., Rosa E. A. and Schor J. B. (2013) Could working less reduce pressures on the environment? A cross-national panel analysis of OECD countries, 1970–2007, *Global Environmental Change*, 23 (4), 691-700. <https://doi.org/10.1016/j.gloenvcha.2013.02.017>.
- Kopp T. et al. (2019) *At the Expense of Others? How the imperial mode of living prevents a good life for all*, oekom verlag.
- Krausmann F. (2017) Social Metabolism, in Spash C.L. (ed.) *Routledge Handbook of Ecological Economics: Nature and Society*, Routledge, 108-118.
- Kreinin H., Artale W. M. and Kossow N. (2022) Trade unions and the multiple crisis of environment, society, economy and work: a Small case study of the European aviation sector, Policy Study, Foundation for European Progressive Studies.
- Krüger A. (2020) Verdi und Fridays for Future für ÖPNV: Klima- und Arbeitskampf vereint [Verdi and Fridays for Future for public transport: climate and work struggles united], TAZ. <https://taz.de/Verdi-und-Fridays-for-Future-fuer-OePNV/!5667797/>.
- Kubiszewski I. et al. (2013) Beyond GDP: measuring and achieving global genuine progress, *Ecological Economics*, 93, 57-68. <http://dx.doi.org/10.1016/j.ecolecon.2013.04.019>.
- Lamb W. et al. (2020) Discourses of climate delay, *Global Sustainability*, 3 (17). <https://doi.org/10.1017/sus.2020.13>.
- Laurent É. (2021a) From welfare to farewell: the European social-ecological state beyond economic growth, Working Paper 2021.04, ETUI.
- Laurent É. (2021b) *Sortir de la croissance, mode d'emploi, Les Liens qui Libèrent*.
- Laurent É. and Pochet P. (2015) *Towards a social-ecological transition: solidarity in the age of environmental challenge*, ETUI.
- Laurent É. et al. (2021) Five pathways toward health-environment policy in a well-being economy, Wellbeing Economy Alliance. <https://well-beingeconomy.org/five-pathways-towards-health-environment-policy-in-a-well-being-economy>.
- Laurent É et al. (2022) Toward health-environment policy: beyond the Rome Declaration, *Global Environmental Change*, 72, 102418. <https://doi.org/10.1016/j.gloenvcha.2021.102418>.
- Lawler O. K. et al. (2021) The COVID-19 pandemic is intricately linked to biodiversity loss and ecosystem health, *Lancet Planetary health*, 5 (11), e840–e850. [https://doi.org/10.1016/S2542-5196\(21\)00258-8](https://doi.org/10.1016/S2542-5196(21)00258-8).
- Lenton T. et al. (2019) Climate tipping points – too risky to bet against, *Nature*, 575 (7784), 592–595. <https://www.nature.com/articles/d41586-019-03595-0>.
- Mackenzie H. and Shillington R. (2009) Canada's quiet bargain: The benefits of public spending, Growing Gap Canadian Centre for policy alternatives. <https://cupe.ca/study-highlights-value-public-services>.

- Magalhães N. et al. (2019) The physical economy of France (1830–2015). The history of a parasite?, *Ecological Economics*, 157, 291–300.
- Marx K. (1867) *Das Kapital: Kritik der politischen Oekonomie, Erster Band, Buch I: Der Produktionsprozess des Kapitals*.
- Mastini R., Kallis G. and Hickel J. (2021) A green new deal without growth?, *Ecological Economics*, 179, 106832. <https://doi.org/10.1016/j.ecolecon.2020.106832>.
- Mattioli G. et al. (2020) The political economy of car dependence: A systems of provision approach, *Energy Research and Social Science*, 66, 101486. <https://doi.org/10.1016/j.erss.2020.101486>.
- Mayrhofer J. and Wiese K. (2020) Escaping the growth and jobs treadmill: a new policy agenda for postcoronavirus Europe, European Environmental Bureau and European Youth Forum. <https://eeb.org/wp-content/uploads/2020/11/EEB-REPORT-JOBTREADMILL.pdf>.
- Mayumi K.T. (2017) Thermodynamics: Relevance, Implications, Misuse and Ways Forward, in Spash C.L. (ed) *Routledge Handbook of Ecological Economics: Nature and Society*, Routledge, 89-98.
- Max-Neef M., Elizalde A. and Hopenhayn M. (1991) Development and human needs in Max-Neef M. (ed.) *Human Scale Development: Conception, Application and Further Reflections*, The Apex Press, 13–54.
- McAlevy J. (2020) It's Not Enough to Fight – Labor and the Left Have to Be Serious About How to Win, *Jacobin*. <https://jacobinmag.com/2020/10/jane-mcalevy-strike-school-organizing-mobilizing>.
- Meadows D. et al. (1972) *The Limits to Growth, A Report for the Club of Rome's Project on the Predicament of Mankind*. <https://www.donellameadows.org/wp-content/userfiles/Limits-to-Growth-digital-scan-version.pdf>.
- Monbiot G. (2016) How did we get into this mess? *Politics, Equality, Nature*, Verso.
- Monbiot G. (2017) Public luxury for all or private luxury for some: this is the choice we face, *The Guardian*. <https://www.theguardian.com/commentisfree/2017/may/31/private-wealth-labour-common-space>.
- Monbiot G. (2021) Private sufficiency, Public Luxury, Final plenary of the 2021 ISEE, ESEE & Degrowth International Conference. <https://www.youtube.com/watch?v=KWRRPed4Ds0>.
- Monbiot G. (2022) The secret world beneath our feet is mind-blowing – and the key to our planet's future, *The Guardian*. <https://www.theguardian.com/environment/2022/may/07/secret-world-beneath-our-feet-mind-blowing-key-to-planets-future>.
- Naqvi A. (2021) Decoupling trends of emissions across EU regions and the role of environmental policies, *Journal of Cleaner Production*, 323, 129130. <https://doi.org/10.1016/j.jclepro.2021.129130>.
- Neier T. et al. (2022) Sozial-ökologische Arbeitsmarktpolitik: Fördermaßnahmen der aktiven Arbeitsmarktpolitik in Österreich [Social-ecological labour market policies: support measures of active labour market policy in Austria], *Materialien zu Wirtschaft und Gesellschaft* 236, Kammer für Arbeiter und Angestellte für Wien. <https://emedien.arbeiterkammer.at/viewer/fullscreen/AC16683925/1/>.
- Neening L. (2022) The Gender Dimensions of the Climate Crisis and the European Green Deal, EPSU. <https://www.epsu.org/sites/default/files/article/files/EPSU%20Paper%20Climate%20Gender%20European%20Green%20Deal.pdf>.
- Niedermoser K. (2017) Wenn wir nicht mehr wachsen, wie verteilen wir dann um? ["If we do not grow any longer, how do we redistribute?"], *Österreichische Zeitschrift für Soziologie*, 42, 129-145. <https://doi.org/10.1007/s11614-017-0261-y>.
- Nitsche-Whitfield P. (2022a) Trade union strategies in a post-growth Europe, EPOG+ Master's thesis.

- Nitsche-Whitfield P. (2022b) A labour-nature alliance for a social-ecological transformation, *Transfer*, 28 (3), 383-387. <https://doi.org/10.1177/10242589221126633>.
- Nussbaum M. (2013) *Creating Capabilities: The Human Development Approach*, Belknap Press.
- OECD (2020) *Beyond Growth: Towards a New Economic Approach*, OECD Publishing. <https://doi.org/10.1787/33a25ba3-en>.
- ÖGB (2020) 4 Gründe für eine 4-Tage-Woche [4 reasons for a 4-day week, OGB. <https://www.oegb.at/themen/arbeitsrecht/arbeitszeit/4-gruende-fuer-eine-4-tage-woche>.
- O'Neill J. (2017) Pluralism and Incommensurability, in Spash C. L. (ed.) *Routledge Handbook of Ecological Economics: Nature and Society*, Routledge.
- Otto F. (2019) *Wütendes Wetter: Auf der Suche nach den Schuldigen für Hitzewellen, Hochwasser und Stürme*, Ullstein Verlag.
- Parrique T. (2019) *The political economy of degrowth*, Université Clermont Auvergne; Stockholms universitet, NNT: 2019CLFAD003.
- Parrique T. (2022) Decoupling in the IPCC AR6 WGIII, Blog of Timothée Parrique. <https://timotheeparrique.com/decoupling-in-the-ipcc-ar6-wgiii/>.
- Parrique T. et al. (2019) Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability, European Environmental Bureau.
- Pochet P. (2017) Two futures and how to reconcile them, Foresight Brief #03 November 2017, ETUI.
- Polanyi K. (1944) (2001) *The great transformation: the political and economic origins of our time*, 2<sup>nd</sup> ed., Beacon Press.
- Räthzel N. and Uzzell D. (2011) Trade unions and climate change: the jobs versus environment dilemma, *Global Environmental Change*, 21 (4), 1215-1223.
- Raworth K. (2017) *Doughnut economics: seven ways to think like a 21<sup>st</sup> century economist*, Chelsea Green Publishing.
- Santarius T. (2014) Der Rebound Effekt: ein blinder Fleck der sozial-ökologischen Gesellschaftstransformation, *GAIA - Ecological Perspectives for Science and Society*, 23 (2), 109–117.
- Schnaiberg A. (1980) *The Environment, from Surplus to Scarcity*, Oxford University Press.
- Scholz N. (2021) Hand in Hand: Arbeitskampf Klimaschutz und Arbeitnehmer\*innenrechte werden oft gegeneinander ausgespielt. Ein Protest im Bosch-Werk München-Trudering zeigt, wie es anders geht, *Der Freitag*, Ausgabe 37/2021. <https://www.freitag.de/autoren/nina-scholz/hand-in-hand>.
- Schor J. (1992) The insidious cycle of work-and-spend, in *The overworked American: the unexpected decline of leisure*, Basic Books.
- Schor J. (2005) Sustainable Consumption and Worktime Reduction, *Journal of Industrial Ecology*, 9 (1–2), 37–50. <https://doi.org/10.1162/1088198054084581>.
- Schor J. (2010) *Plenitude: The New Economics of True Wealth*, The Penguin Press.
- SDSN and IEEP (2019) *The 2019 Europe Sustainable Development Report*, Sustainable Development Solutions Network and Institute for European Environmental Policy. <https://ieep.eu/publications/2019-europe-sustainable-development-report>.
- Seaford C. (2013) Report on results on action research: barriers to the use of alternative ('beyond GDP') indicators in policy making and how they are being overcome and can be overcome, BRAINPOoL deliverable 3.1, New Economics Foundation, a collaborative project funded by the European Commission under the FP7 programme (Contract no. 283024).

- Segert A. (2017) Gewerkschaftliche Strategien für nachhaltige Mobilität [Trade union Strategies for sustainable mobility], in Brand U. and Niedermoser K. (eds.) Die Rolle von Gewerkschaften bei der Gestaltung einer sozial-ökologischen Gesellschaft [The role of trade unions in the construction/design of a social-ecological society], ÖGB Verlag.
- Soder M., Niedermoser K. and Theine H. (2018) Beyond growth: new alliances for socio-ecological transformation in Austria, *Globalizations*, 15 (4), 520-535. <https://doi.org/10.1080/14747731.2018.1454680>.
- Spash C. L. (2012) Methodological and Ideological Options: New foundations for ecological economics, *Ecological Economics*, 77, 36-47. <https://doi.org/10.1016/j.ecolecon.2012.02.004>.
- Spash C. L. (2017) Social ecological economics, in Spash C. L. (ed.) *Routledge Handbook of Ecological Economics: Nature and Society*, Routledge, 3-16.
- Spash C. L. (2020a) Apologists for growth: passive revolutionaries in a passive revolution, *Globalizations*, 18 (7), 1123-1148. <https://doi.org/10.1080/14747731.2020.1824864>.
- Spash C. L. (2020b) The capitalist passive environmental revolution, *The Ecological Citizen*, 4 (1), 63-71.
- Spash C. L. (2020c) A tale of three paradigms: realising the revolutionary potential of ecological economics, *Ecological Economics*, 169. <https://doi.org/10.1016/j.ecolecon.2019.106518>.
- Spash C. L. (2020d) The Revolution will not be Corporatised!, *Environmental Values*, 29 (2), 121-130.
- Spash C. L. (2021) 'The economy' as if people mattered: revisiting critiques of economic growth in a time of crisis, *Globalizations*, 18 (7), 1087-1104. <https://doi.org/10.1080/14747731.2020.1761612>.
- Spash C. L. and Guisan A. (2021) A future social-ecological economics, *real-world economics review*, (96), 203-216. <http://www.paecon.net/PAERreview/issue96/SpashGuisan96.pdf>.
- Spash C. L. and Smith T. (2019) Of ecosystems and economies: re-connecting economics with reality, *real-world economics review*, (87), 212-229. <http://www.paecon.net/PAERreview/issue87/SpashSmith87.pdf>.
- Stade J. (2022) Die Gewerkschaften werden grüner und die Grünen gewerkschaftsnäher [Trade unions are becoming greener and the Greens move closer to trade unions], *Klimareporter*° interview with member of the German parliament Frank Bsirske. <https://www.klimareporter.de/deutschland/die-gewerkschaften-werden-gruener-und-die-gruenen-gewerkschaftsnaeher>.
- Stengel O. (2011) *Suffizienz. Die Konsumgesellschaft in der ökologischen Krise*, oekom Verlag.
- Stiglitz J. (2012) *The Price of Inequality: How Today's Divided Society Endangers Our Future*, W.W. Norton & Company.
- Stiglitz J., Sen A. and Fitoussi J.-P (2009) Report by the Commission on the Measurement of Economic Performance and Social Progress. <https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf>.
- Stocker A., Großmann A., Hinterberger F. and Wolte M. I. (2014) A low growth path in Austria: potential causes, consequences and policy options, *Empirica*, 41 (3), 445-465. <https://doi.org/10.1007/s10663-014-9267-x>.
- Stratford B. (2020) The Threat of Rent Extraction in a Resource-constrained Future, *Ecological Economics*, 169, 106524. <https://doi.org/10.1016/j.ecolecon.2019.106524>
- Sweeney S. and Treat J. (2018) *Trade Unions and Just Transition: The Search for a Transformative Politics*, Working Paper 11, Trade Unions for Energy Democracy.
- Switalski P. (2014) *Europe and the Spectre of Post-Growth Society*, Debates at the Council of Europe Schools of political studies 2012-2013, Council of Europe Publishing.

- Tae-Hee J. and Todorova Z. (2017) Social Provisioning Process: a heterodox view of the economy, in Jo T.-H., Chester L. and D'Ippoliti C. (eds.) *The Routledge Handbook of Heterodox Economics: theorizing, analyzing, and transforming capitalism*, Routledge, 29–40.
- Teulings C. and Baldwin R. (2014) *Secular Stagnation: Facts, Causes and Cures*, CEPR Press.
- Thomas A. and Doerflinger N. (2020) Trade union strategies on climate change mitigation: Between opposition, hedging and support, *European Journal of Industrial Relations*, 26 (4), 383–399. <https://doi.org/10.1177/0959680120951700>
- TUC (2019) A four-day week with decent pay for all? It's the future. <https://www.tuc.org.uk/blogs/four-day-week-decent-pay-all-its-future>.
- UNEP (2011) Decoupling natural resource use and environmental impacts from economic growth, A Report of the Working Group on Decoupling to the International Resource Panel, Fischer-Kowalski, M. et al. (eds.).
- Universität Kassel (2022) Akademie für sozialen und ökologischen Umbau [Academy for social and ecological transformation]. <https://www.uni-kassel.de/fb05/fachgruppen-und-institute/politikwissenschaft/fachgebiete/politische-theorie/forschung/akademie-fuer-sozialen-und-oekologischen-umbau>.
- Unite (2021) Ground-breaking deal by Unite saves Barnoldswick's Rolls-Royce factory and 350 jobs, [www.unitetheunion.org](http://www.unitetheunion.org), 14 January 2021. <https://www.unitetheunion.org/news-events/news/2021/january/ground-breaking-deal-by-unite-saves-barnoldswick-rolls-royce-factory-and-350-jobs/>.
- Urban H.-J. (2018) Ökologie der Arbeit: Ein offenes Feld gewerkschaftlicher Politik? [Ecology of work: an open field of trade union politics], in Schröder L. and Urban H.-J. (eds.) *Gute Arbeit – Ausgabe 2018. Ökologie der Arbeit – Impulse für einen nachhaltigen Umbau*, Bund Verlag, 329-349.
- Van der Slycken (2021) *Beyond GDP: alternative measures of economic welfare for the EU-15*, PhD Thesis, Universiteit Gent.
- Wegmann V. (2019) *Going Public: A Decarbonised, Affordable and Democratic Energy System for Europe*, EPSU. <https://www.epsu.org/article/going-public-decarbonised-affordable-and-democratic-energy-system-europe-new-epsu-report>.
- Wilkinson R. and Pickett K. (2010) *The Spirit Level: Why Equality is Better for Everyone*, Penguin Books.

All links were checked on 10/01/2023.

## List of figures

Figure 1	Circular flow diagram and embedded economy .....	7
Figure 2	Sufficient absolute decoupling.....	9
Figure 3	Global primary energy consumption by source.....	16
Figure 4	The Health-Environment Nexus.....	22

## List of abbreviations

CGT	Confédération Générale du Travail (French General Confederation of Labour)
EEA	European Energy Agency
EEB	European Environmental Bureau
ENGO	Environmental non-governmental organisation
EPSU	European Federation of Public Service Unions
ETF	European Transport Workers' Federation
ETUC	European Trade Union Confederation
ETUI	European Trade Union Institute
EU	European Union
GCEC	Global Commission on the Economy and Climate
IGM	Industriegewerkschaft Metall (German Industrial Union of Metalworkers)
IMF	International Monetary Fund
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
OECD	Organisation for Economic Co-operation and Development
ÖGB	Österreichischer Gewerkschaftsbund (Austrian Trade Union Confederation)
PSI	Public Services International
TUC	Trade Union Congress (UK)
UBS	Universal Basic Services
UNEP	United Nations Environment Programme
Ver.di	Vereinte Dienstleistungsgewerkschaft (German United Services Trade Union)
WEALL	Well-being Economy Alliance
WTR	Working time reduction



**European  
Trade Union Institute**  
Bd du Roi Albert II, 5  
1210 Brussels  
Belgium  
etui@etui.org  
www.etui.org

D/2023/10.574/08  
ISBN: 978-2-87452-663-3 (print version)  
ISBN: 978-2-87452-664-0 (electronic version)



9 782874 526633

**etui.**