

Chapter 2

Sustainable welfare, degrowth and eco-social policies in Europe

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Introduction

Environmental thresholds are being approached or crossed (Steffen *et al.* 2015). In the case of climate change, scientists agree that the increase in the average global temperature over the past century is due in large part to greenhouse gas emissions, primarily stemming from fossil fuel combustion and landuse changes such as deforestation. In its Fifth Assessment Report on the Physical Science Basis for Climate Change, the Intergovernmental Panel on Climate Change (IPCC 2014) highlights that concentrations of CO₂ and other greenhouse gases in the atmosphere have risen to levels unprecedented for at least the last 800,000 years, with the burning of fossil fuels the main reason behind a 40% increase in CO₂ concentrations since the Industrial Revolution. The International Environmental Agency reports that global carbon emissions hit another record high in 2017¹. In recent decades, climate change has impacted natural and human systems on all continents and across the oceans. By the end of the 21st century, the IPCC projects the global surface temperature increase will exceed 1.5°C relative to the period 1850-1900 in all but the lowest and most optimistic scenarios considered. However, it seems increasingly likely that this threshold will be exceeded, causing uncontrollable climate change with frequent droughts, floods and storms plus largely unpredictable climate feedback effects. Other scenarios predict global temperatures to rise by as much as 4.8°C. Coupled with the unprecedented speed of the temperature rise, this is far outside the experience of human civilization. Warming of 4°C or more would expose more than 70% of the world's population to deadly heat stress, while 3°C is regarded as a crucial factor for the extinction of more than 50% of species (Ramanathan *et al.* 2017). The risks of abrupt and irreversible changes increase with the magnitude of the warming. Many aspects of climate change and its associated impacts will continue for centuries, even if anthropogenic emissions of greenhouse gases are stopped fairly soon. Beyond 2100, the IPCC expects warming to continue, the Arctic sea ice cover to shrink and thin and the Northern Hemisphere spring snow cover as well as the global glacier volume to decrease further.

Though the most negative impacts on human livelihoods are expected to occur in the developing countries, there are also significant implications for European populations. Direct risks include more heatwaves, forest fires and rising sea levels threatening coastal communities. Indirect effects for Europe include a degraded coastal infrastructure

1. See <https://www.nytimes.com/reuters/2018/03/22/world/asia/22reuters-energy-carbon-iea.html>

impeding shipping, epidemics and rising levels of distress migration from tropical Africa and South Asia. The European Union (EU) is also likely to suffer from disruptions in vital energy and food supplies coupled with rising and volatile prices, disturbances in international economic networks and chains, growing restrictions on free trade and the corresponding weakening of global governance. Both direct and indirect climate change impacts will necessitate public investment and policy reconfigurations, whereby traditional social policies are likely to face increasing fiscal competition from prioritised environmental policies such as strengthening sea defences and removing housing from flood plains (Gough and Meadowcraft 2011: 494). This competition is likely to be aggravated by measures such as carbon budgets or carbon taxes aimed at reducing carbon emissions.

Ambitious climate policies have distributional repercussions which threaten to make them unpopular with electorates. These distributional effects have been addressed in theories of climate justice and in models of burden sharing between rich and poor countries (Roberts and Parks 2006; Koch 2012). Yet even within the rich countries such effects question the feasibility of decarbonisation strategies in economically advanced democratic societies. Different societal groups have different responsibilities for fighting climate change, and experience different impacts. Responsibilities and impacts often work in opposing ways, constituting a 'double injustice' (Walker 2012), since the groups likely to be affected most by climate change are the ones least responsible for causing it. If rich countries and, within the rich countries, richer households continue to pay less than what climate expertise regards as necessary, this may even turn into a 'triple injustice', since the poor are the least able to bear the financial burden of climate policies. For example, low-income households spend a relatively high proportion of their income on energy-intensive needs such as heating and/or cooling and would thus be hardest hit by a general rise in energy prices (Büchs *et al.* 2011). A growing body of literature (Fitzpatrick 2011; Koch and Mont 2016) argues that welfare policies qualitatively different from those that emerged in the post-World War II context will be necessary to counteract the distributional consequences of ambitious climate policy targets such as those set forth in the 2015 Paris Agreement.²

An alternative eco-welfare governance network would need to redistribute not only carbon emissions, but also work, time, income and wealth (Büchs and Koch 2017). Social policies will need to address the inequalities and conflicts that are likely to emerge as a result of the decarbonisation of production and consumption patterns (Pye *et al.* 2008) and it will be increasingly necessary to formulate them in ways creating synergies with environmental goals, yet also acceptable to the electorate. This chapter starts by comparing and contrasting possible government reactions to climate change: irrational optimism, green growth and degrowth (Section 1). Against this background it then critically discusses current climate and sustainability policies in the EU as a whole and in selected Member States (Section 2). Section 3 goes on to introduce the alternative concept of 'sustainable welfare', a concept integrating environmental sustainability and

2. At the Paris 'Conference of the Parties' (COP21) in December 2015, 195 countries adopted a legally-binding global climate deal. It sets out in general terms a global action plan to limit global warming to 'well below 2°C'. See https://ec.europa.eu/clima/policies/international/negotiations/paris_en

social welfare research. Section 4 recommends the development and implementation of ‘eco-social policies’ to simultaneously address social inequality and environmental sustainability concerns. The final section summarises the key findings and concludes.

1. Irrational optimism, green growth and degrowth

At its 2015 summit in Paris, the United Nations Framework Convention on Climate Change recognised that climate change requires global responses, with the rich countries (including the EU) bearing disproportionate responsibility for quickly reducing greenhouse gas emissions. To have a 66% or greater chance of staying below the 1.5°C target, a drastic reduction in emissions from 2020 in a straight line to zero (IPCC 2014) will be necessary. Policy initiatives to achieve this goal have to consider the fact that institutional and technological path dependency binds governments to the pursuit of growth. While EU Member State governments promote consumer freedom in their quest for economic growth, they are also responsible for protecting the social and common good and for defending ecological limits. In order to understand the different ways that governments deal with these partially contradictory goals and with climate change, Ian Gough (2011) suggests three scenarios.

The first scenario, ‘*irrational optimism*’, is associated with freer markets and technological optimism as well as with mainstream US Republican positions. The idea prevails that faster growth will ‘equip future populations to cope with climate change, mainly through adaptation ...’ (Gough 2011: 16). Favoured solutions are deregulated drilling for oil and fracking in combination with federal subsidies and loan guarantees for alternative energy sources, in particular nuclear energy, carbon capture and storage and ‘negative-emission’ technologies. However, the successful implementation of these technologies is also factored into the Paris Agreement calculations, extending the time period available for mitigating climate change. It assumes that during this century enormous negative emissions will be achieved by sucking several billion tonnes of CO₂ out of the atmosphere each year. Yet a number of leading climate scientists argue that there is no evidence that this will work on the required scale (Anderson and Peters 2016: 183). Though Anderson and Peters recommend making negative-emission technologies the subject of further ‘research, development, and potentially deployment’, they warn against proceeding with the mitigation agenda on the premise that such processes will work at the calculated scale. Instead, they call for adoption of the ‘precautionary principle’, i.e. developing climate change mitigation scenarios and targets based on existing and operational technologies.

The second scenario, ‘*green growth*’ or ecological modernisation, has been actively promoted by the Organisation of Economic Cooperation and Development (OECD), the World Bank, the United Nations (UN) Environment Programme as well as the EU and its Member States since 2011 (see OECD 2011). According to the proponents of green growth, the pursuit of environmental goals including climate change mitigation will require a much more active state than in previous decades, setting goals and targets, managing risks, promoting industrial policy, realigning prices and countering negative business interests. By reducing energy and material consumption and the EU’s dependency on

the fragile geopolitics of energy supply, providing jobs in the expanding ‘green’ sector and meeting carbon emission reduction targets, the intention is to achieve synergies between economic, ecological and also social welfare goals. Central to any evaluation of the feasibility of green growth strategies is the distinction between ‘absolute’ and ‘relative’ decoupling of gross domestic product (GDP) growth from carbon emissions and resource use. While resource usage has declined relative to GDP in a number of developed countries, they have either not done so in absolute terms at all or not to the extent needed to allow the Paris targets to be met (Koch 2012; Antal and Van Den Bergh 2014). Not only have improvements in energy efficiency in recent decades been offset by increases in the overall scale of economic activity, but the prospects for further improving energy efficiency in the future to the required extent are minimal. Indeed, comparative research (Fritz and Koch 2016; O’Neill *et al.* 2018) continues to indicate a strong link between the level of economic development measured in GDP per capita, on the one hand, and carbon emissions and ecological production and consumption footprints, on the other.

In many respects due to the lack of evidence for absolute decoupling of GDP growth, material resource use and carbon emissions, a third scenario has been tabled: that of ‘no-’, ‘post-’ or ‘degrowth’. There are now a range of heterogeneous approaches³ that have in common the questioning of what some describe as a structural ‘imperative’ (Daly and Farley 2010; Koch 2018) or the ‘obsession with growth in public policy’ (EuroMemo Group 2018) and a joint search for ecologically and socially sustainable alternatives. All growth-critical perspectives have a common starting point: that the ecological crisis and the increase in social inequality are basic features of high-consumption capitalism and its spread from North America and Europe to the rest of the world. The common goal is thus to re-embed production and consumption patterns into planetary limits through a decrease in material and energy throughputs, particularly in rich countries, i.e. including EU Member States. The emerging research perspective of ‘sustainable welfare’, introduced in Section 3 below, specifically addresses the role of social policy in an ecological and social transition beyond the growth imperative.

2. Climate and sustainability policies in the European Union

In Article 194 of the Treaty on the Functioning of the European Union, the EU has committed itself to an integrated energy and climate strategy based on the three principles of sustainability, energy security and competitiveness, seen as mutually reinforcing. ‘Decarbonisation’ is not only regarded as a means to reduce greenhouse gas emissions but also as ‘... an advantage for Europe as an early mover in the growing global market for energy-related goods and services’ (European Commission 2011a: 9). Hence, as the EU does not regard economic growth as conflicting with environmental sustainability targets, it follows Gough’s second scenario (Section 1 above), the ‘green growth’ strategy. The EU has decided to reduce its emissions by 80-95% by 2050 compared to the 1990 level (European Commission 2011b). To reach this long-term

3. For an overview of the different growth-critical positions see Khan and Clark (2016) and Büchs and Koch (2017).

target, it follows a ‘target and timetable’ approach, with progressively faster reductions of 20% by 2020, 40% by 2030, and 80-95% by 2050⁴.

The ‘green growth’ character of EU policies is especially exemplified in the architecture of goals, priorities, flagship initiatives and targets of the current Europe 2020 Strategy, which pursues ‘smart’, ‘sustainable’ and ‘inclusive’ growth (European Commission 2010: 3; for critical reviews of the 2020 Strategy, see Vanhercke 2011 and Sabato *et al.* 2018). Growth is meant to be ‘resource-efficient, sustainable and competitive’ at the same time. Displaying a somewhat rose-tinted view of the future, the Commission envisions the EU ‘prospering in a low-carbon, resource-constrained world while preventing environmental degradation, biodiversity loss and unsustainable use of resources’ (European Commission 2010: 12). On the one hand, the 2020 Strategy explicitly combines goals and initiatives on economic development, the environment and social welfare. On the other hand, however, it is often unclear how exactly these – allegedly mutually reinforcing – goals are to be combined. Koch *et al.* (2016: 710) note that the EU fails to explicitly discuss the ‘potential tensions between its ambitious climate targets and its other policy goals such as economic growth, material prosperity and social welfare.’ Having instead incorporated potentially conflicting policy goals in its 2020 Strategy, one can only speculate what will happen if it becomes obvious that one of these goals will not be met within the defined period. Will, for example, economic growth be slowed down if the Paris climate targets are not reached? This appears doubtful given the general priority put on growth and ‘market solutions’ in EU policymaking and, particularly, the fact that the Juncker Commission decided to withdraw environmental objectives from the European Semester Annual Growth Survey and the associated Country-specific Recommendations, leaving their pursuit to other policy domains. Not only does the EU refrain from prioritising environmental goals, but also the co-existence of a plethora of other non-environmental goals raises a number of policy coordination challenges. In practice, much of the burden to coordinate economic, social and environmental priorities to meet the goals defined at European level is left to the Member States (see below).

The main policy instrument through which the EU aims to achieve its climate targets is the EU Emissions Trading Scheme (EU ETS), covering 45% of total greenhouse gas emissions caused by power generation, manufacturing and aviation in the EU and EEA countries⁵. The 2020 target is to reduce emissions in the EU ETS sectors by 21% compared to 2005, while the 2030 target is to reduce them by 43%. Emission allowances are partly sold and partly allocated for free based on previous emissions (‘grand-fathering’). Companies have to apply for allowances based on their annual emissions. Allowances are tradable and carbon reduction requirements can be offset through projects in developing countries via ‘flexible mechanisms’. However, far too

4. In March 2007, the European Council adopted the ‘20 20 20’- strategy (European Commission 2007), setting three policy targets for 2020: a 20% reduction in emissions, a 20% increase in efficiency, and 20% of energy to come from renewables. The emission reduction and renewable energy targets are binding, while the energy efficiency target is a ‘soft’ target.
5. In addition, the ‘Effort Sharing Decision’ established binding annual greenhouse gas emission targets for Member States for the period 2013-2020. These targets concern emissions from most sectors not included in the EU ETS, such as transport, buildings, agriculture and waste.

many emission allowances were initially handed out for free, notably to economic sectors claiming that they would otherwise face a competitive disadvantage. As a result, the market price for a tonne of CO₂ fell to around 5 Euro in 2017 (EuroMemo Group 2018). This is generally considered as having virtually no effect at all on curbing emissions, amplifying the risk of locking in a high-emissions infrastructure for many years to come.

The key to the success of any carbon emissions market is whether it is possible to create scarcity for allowances, allowing price signalling to work. This completely failed in the first two trading periods and there is controversy over whether better results will be achieved in the nearer future. While some observers regard the design flaws of the existing policy instruments as repairable (Newell and Paterson 2010; Michaelowa 2011), an increasing number of authors do not consider it likely that existing carbon markets can be re-regulated – let alone extended to the rest of the world – in a way making a peak of global carbon emissions a realistic possibility in the relatively near future (Spash 2010; Lohmann 2011; Koch 2014). The latter authors regard policy alternatives such as direct regulation and the taxation of greenhouse gas emissions as more suited to meeting ambitious climate targets. Similarly, in relation to the post-2020 period, a joint statement of a coalition of non-governmental organisations (NGOs) issued in November 2017 expects little improvement in the effectiveness of the EU ETS and insists on the necessity of far-going structural changes (Climate Action Network Europe 2017a). The same NGO umbrella organisation highlights the problematic fact that the EU and its Member States continue to subsidise fossil fuels (Climate Action Network Europe 2017b). In addition, the European Environmental Agency (2016) expects that, under current policies, transport activity – the sector with the greatest share of emissions – is likely to continue growing, with an increase in related emissions. It concludes that the EU's 2050 decarbonisation objective can be achieved 'only in the context of a major transformation of the EU's socio-technical systems such as the energy, food, mobility and urban systems' (EEA 2017: 13).

In addition to the Paris Agreement, the international community, including all EU Member States, reached another key milestone for global sustainability in 2015. In New York, the UN unanimously adopted the Sustainable Development Goals (SDGs). These represent a comprehensive global agenda, comprising a list of 17 goals and 169 targets. Themes range from poverty, health, education and inequality, through to energy, infrastructure, climate change, peace and good governance. Many targets apply to the global North as well as to the global South. EU Member States have begun to translate the international SDGs into national sustainability strategies and targets. This requires the continuing improvement of governance networks to promote coherence between different challenges and policy areas (Koch *et al.* 2016). The corresponding policy challenges often transcend traditional organisational boundaries, administrative levels and ministerial sectors. The complex nature of the issues requires interlinked administrative responses involving multi-sector and multi-level solutions. Responses frequently imply horizontal coordination across policy sectors and areas of ministerial responsibility and/or vertical coordination across levels of administration.

First results from the *Sustainable European Welfare States* project⁶ covering Germany, Italy, Norway and the UK indicate that governance networks implemented to cope with these new governance challenges vary considerably from country to country (Takle *et al.* 2017). In Germany and Norway, lead departments have been established, tasked with coordinating policies, and their respective ministries of finance have a power of veto within the sustainability governance network. In Italy the ministry for environment is a key player, drawing up the national sustainability goals. In the UK, by contrast, the national SDGs are administered in different ministries and are thus subject to different coordination mechanisms.

Looking specifically at the crucial link between social and climate policies, this is addressed and conceptualised in different ways. In Germany, all government departments take account of this link, while in Italy, for example, this is not the case at all. In Norway, it is just the environmental departments which consider the link between social and climate policies, while the ministries of labour and social affairs do not. Overall, however, interviewees from different government departments in Italy, Germany, Norway and the UK have rather different, imprecise and partially contradictory views on the links and potential synergies between climate and social policies. Some cross-sectoral work related to the SDGs is emerging, but this is as yet largely limited to good intentions and ambitions. All countries have in fact fallen short of developing coordinated public policies for a sustainable welfare state and coordinated eco-social policies.

In sum, while the EU has recognised that climate change is a serious threat to human wellbeing and has committed itself to ambitious greenhouse gas reduction targets, it is doubtful whether the general policy strategy of ‘green growth’ and ‘decarbonisation’ via the establishment of carbon markets will deliver. On the contrary, carbon emissions covered by the EU ETS rose in 2017 compared to 2016⁷, while in relation to the post-2020 period Member States’ projections indicate slower, not faster emissions reductions (EEA 2017), putting the longer-term reductions way off track. Similarly, all attempts up to now to achieve synergies across economic, social and ecological sustainability targets in selected Member States give little reason for cheer. The remainder of this chapter therefore takes up Gough’s third policy scenario for dealing with climate change: the attempt to achieve social welfare within environmental limits and in the absence of economic growth.

3. Sustainable welfare without economic growth

Despite the necessity to link social welfare and climate policies, until recently there has been a lack of theorising on their intersection, with scholars tending to carry out research into the two areas without much cross-fertilisation. Social welfare is commonly

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6. Funded by the Norwegian Research Council, this project generates knowledge about how researchers and policymakers may tackle issues of social welfare and environmental sustainability in coordinated and mutually supportive ways across policy fields (see <https://blogg.hioa.no/sustainablewelfare/>).
 7. According to data provided by Sandbag (see <https://sandbag.org.uk/project/eu-emissions-rise-for-first-time-in-7-years/>), total EU ETS stationary emissions rose by 0.3%, from 1750 million tonnes in 2016 to 1756 million tonnes in 2017.

conceptualised in socio-economic terms, highlighting equity and distributive issues within growing economies in terms of GDP, while social policy is often seen as the public management of social risks such as ill-health or unemployment. Much current welfare literature focuses on the crisis of post-war welfare state arrangements and on the readjustments and recalibrations following the 2008 financial and economic crisis (Kazepov 2010; Hemerijck 2013). Conversely, environmental concerns, raised as early as the 1970s, remain largely ignored in social policy debates (Schoyen and Hvinden 2017). One exception to this rule is the International Labour Organization (ILO 2015; see Stevis and Felli 2015), which has issued guidelines for a ‘just transition’ towards environmentally sustainable economies and societies. Yet the majority of academic social policy scholars do not regard the direct and indirect climate change-related challenges as ‘social’ risks – and, as a corollary, continue to ignore climate change in their studies. Although much recent research suggests that Western production and consumption standards cannot be generalised to the rest of the world due to ecological and planetary limits (Fritz and Koch 2016; O’Neill *et al.* 2018), neither policymakers nor welfare scholars have paid much attention to the relevance and potential implications of ecological sustainability issues and climate change, in particular with regard to social policy and welfare theory.

The emerging concept of ‘sustainable welfare’ (Koch and Mont 2016) recognises the long-term implications of contemporary production and consumption patterns, and, accordingly, raises normative questions such as whose welfare should be represented in current welfare societies. Brandstedt and Emmelin (2016) argue that the distributive principles underlying existing welfare systems would need to be extended to include those affected in other countries and in the future. Current welfare provision would need to consider that satisfying present welfare demands should not undermine the ability of future generations to meet their welfare needs. This includes the recognition of critical thresholds and limitations, and also of the fact that needs, aspirations and wants must be reviewed – and possibly restrained. Hence, the understanding of climate change as a devastating threat, in particular, and the very idea of environmental sustainability, in general, constitute a challenge to ‘business as usual’ in social policy and have significant implications for the scope and direction of welfare policies, which need to give greater weight to distribution and justice across nations and generations. Within the concept of ‘sustainable welfare’, the key welfare concern is not the provision and distribution of material riches to the ‘happy few’ in Western societies, but rather the satisfaction of basic needs for all humans now and in the future (Koch *et al.* 2017).

In his recent work, Gough (2017) addresses issues of intergenerational concerns and universality in the context of climate change. Underlining the necessity to tackle climate change, he suggests ‘policy auditing’, a principle under which critical thresholds for a ‘minimally decent life’ are constantly (re-)defined in light of the advancement of academic and practical knowledge. While it is, in principle, possible to satisfy basic human needs on a global scale, the degree to which more than basic needs can be provided on a planet with finite resources remains subject to scientific inquiry. The sustainable welfare perspective may also constitute a theoretical and normative framework for redesigning existing policies in an ‘eco-social’ direction. As also recognised by the SDGs, achieving the Paris climate targets will require greater coordination of welfare

and climate policies. A range of eco-social policy proposals (Büchs and Koch, 2017) exist. If integrated into a comprehensive policy strategy, these have the potential to bring about a redistribution of carbon emissions, work, time, income and wealth in the rich countries, which scholars such as Daly and Farley (2010), Jackson (2011) and Gough (2017) regard as indispensable for a re-embedding of Western production and consumption levels within planetary levels (Steffen *et al.* 2015), while allowing development space for poorer countries.

4. Eco-social policies for sustainable welfare and degrowth

Gough (2017) recently advocated a three-stage process to reconcile wellbeing and welfare with planetary stability. For EU countries, the first stage would address improvements in eco-efficiency within green growth strategies. This would, in turn, require a shift from liberal to more coordinated forms of capitalism. The second, which he terms ‘recomposing consumption’, would require a shift from coordinated to a more reflexive form of capitalism. Though Gough (2017: 15) considers the third stage, ‘degrowth’, as in principle ‘incompatible with the accumulation drive of any form of capitalism’, he nevertheless highlights that a degrowth transition to a global steady-state economy is ‘ultimately – and quite soon – essential for our future prosperity, if not our very existence.’ First presented by ecological economist Herman Daly (see Daly and Farley 2010), a steady-state economy aims to keep the throughput of material and energy in production and consumption processes at sustainable levels and as low as possible. Of course, interim strategies, in which crucial significance is attached to social policy, are of vital importance as bridges between the three stages. For example, green growth and degrowth strategies do not necessarily have to be regarded as mutually exclusive if one stage leads to another. Indeed, some of the ‘eco-social’ policies referred to in this section may figure in both. However, I agree with Gough that, to have a realistic chance of staying within the 1.5°C range, green growth policies in the EU would need to turn into degrowth and sustainable welfare policies fairly soon. This would require a combination of bottom-up mobilisations of European citizens and top-down regulation or an ‘active interventionist “innovation state”, with substantial public investment, state banking, subsidies and other incentives to private investment and greater regulation and planning’ (Gough 2017: 197). The investment functions of social policy would need to be enlarged and more closely integrated with environmental investment.

Sustainable welfare is oriented towards satisfying human needs within ecological limits, from an intergenerational and global perspective. Accordingly, existing economic, social and environmental policy goals as well as material welfare standards would need to be reviewed from the aspect of their potential for generalisation. Beyond basic human needs, material welfare and wellbeing would be made secondary to environmental sustainability (Koch and Mont 2016). To effectively mitigate climate change and to simultaneously allow for the needs of all human beings to be satisfied now and in the future, production and consumption patterns would need to be organised in such a way that the global material and energy throughput and the associated biophysical flows do not exceed the critical levels identified by climate and sustainability scientists. Here, the EU could play a crucial role in helping create global institutions tasked with the ecological

governance of the world economy, even if these initially leave out Trump's America. Accordingly, economic growth as a policy goal would be deprioritised and replaced by biophysical parameters within which both global markets and regional, national and local economies can evolve. In EU countries, state 'eco-social policies' would generally need to address the 'double injustice' (as referred to in the *Introduction*) whereby the poorest household groups, i.e. the ones least responsible for such environmental damage as climate change, are worst placed to cope with mitigation and adaptation. For example, ecological investment in retrofitting houses has only a chance of being perceived as legitimate if it is accompanied by countervailing social policies that, among other things, assist homeowners in paying for ecologically useful measures.

Corresponding European public policy initiatives could be informed and guided by sustainable welfare and need theories. Gough's 'dual strategy' may provide a collective and critical way of distinguishing between basic needs and luxuries in a particular national or local setting (Gough 2017: 169). Accordingly, citizens, 'experts' and government representatives would work together in democratic forums to identify the goods and services necessary to satisfy a given need, and the level of satisfaction within a particular social and cultural context. One example could be 'social tariffs', i.e. energy tariffs adjusted to energy needs. While such schemes already exist in certain EU Member States, they would need to be extended and partially modified to distinguish between need components and luxuries. This would require energy companies to 'operate a "rising block tariff", with lower tariffs for initial units of electricity or gas consumed, and higher tariffs for successive units' (Gough 2017: 140). Hence, social tariffs would recognise the basic need component of the first block of household energy as well as the choice element in successive units. While the total average price of domestic energy would continue to rise over time, much of the financial burden would be directed towards high-consumption households.

Looking beyond the energy sector, and in relation to Gough's second stage of an ecological and social transition, European public and social policy initiatives can help adjust consumption. En route to a global steady-state economy, Western consumption rates would need to decrease disproportionately, allowing (future) citizens in other parts of the world to enjoy an improved material standard of living. For example, Daly and Farley (2010: 442) argue that on a planet with finite resources the present generation should develop a 'sense of obligation toward future generations', i.e. entitling the latter to the same development opportunities as the former. Overconsumption would be regarded as a 'negative externality', with such consumers required to pay for the negative impacts imposed on others. Again, sustainable welfare approaches may be applied to develop a safe 'consumption corridor' between 'minimum standards, allowing every individual to live a good life, and maximum standards, ensuring a limit on every individual's use of natural and social resources.' (Gough 2017: 197-198) More concretely, the EU and its Member States can encourage certain forms of consumption (for example, vegetarian diets, local holidays, the use of public transport and cycling) and discourage others (for example, eating meat, holidaying in distant locations, car and plane use). Kasser (2009: 178) suggests a threefold strategy involving a decrease in the extent to which people are exposed to lifestyle models of conspicuous consumption, for example by banning advertisements aimed at children; the support of people's resilience, for example, by

teaching individuals how to decode advertisement messages; and helping people to act in accordance with ‘intrinsic’ goals, for example by encouraging ethical consumption. Such policy initiatives may be facilitated by growing public dissatisfaction with consumerist lifestyles. According to Soper (2016), European citizens are increasingly disenchanted with the consumer culture because of its negative side effects such as time scarcity, high levels of stress, traffic congestion, and due to the increasing displacement of other pleasures of life and well-being by the shopping mall culture.

Ecological economists regard a redistribution of wealth and income both within and across countries and in an intergenerational perspective as a crucial element of a wider ecological and social transition. In degrowth circles, especially, maximum limits on income and wealth are seen as critical to maintaining global warming within the 1.5°C range. Upon reaching maximum income, people would be incentivised to devote their further energy to non-economic pursuits. However, there is a lack of concrete proposals as to how a maximum limit on income and wealth could be implemented for example in the EU. At the other end of the scale, various authors address structural inequality through either minimum or basic income schemes co-financed from general revenues, an increasingly progressive income tax, eco-taxes and/or from depletion and emission certificates auctions. Andersson (2009: 3), for example, assumes equivalence between basic income financed by green taxes and the distribution of equal and transferable rights to use scarce environmental resources and to emit a given quantity of greenhouse gases. A number of authors postulate a new fiscal architecture to finance a postgrowth economy and the associated sustainable welfare system. Jackson (2011), for example, suggests an ecological tax reform, the general direction of which would be a shift in the burden of taxation from ‘economic goods (e.g. incomes) to ecological bads (e.g. pollution)’. If the tax base were linked to the throughput of finite resources, external costs, which private enterprises currently enjoy as ‘free gifts’ from nature, would be internalised and taken into account in their cost calculations. Again, the EU could push for a global coordination of tax reforms and a shift in the tax burden from taxes on labour to taxes on activities causing environmental damage, high-carbon luxuries, as well as on profits and rental income.

However, Bailey (2015: 795) argues that the revenue surplus resulting from such reforms may well not compensate for the tax losses that rich countries would be exposed to in the absence of GDP growth. In fact, reduced ‘levels of (taxable) economic activity’ threaten the ‘public sector funding base of welfare states’ and impede ‘the state’s traditional mechanisms of “crisis management”’. Hence, if traditional and national growth–tax–expenditure models are no longer viable, democratic policy-auditing practices would need to delineate how welfare and environmental states may be recalibrated – and in all likelihood downscaled – to meet human needs within environmental limits. Since existing welfare states ensure – via the same redistributive mechanisms that limit social inequality – that a sizeable percentage of the population partakes in environmentally harmful consumption practices (Koch and Fritz 2014), smaller welfare states may be acceptable as long as these are embedded in economic systems that provide relatively egalitarian outcomes and costs related to inequality, (unhealthy) work-life balances and environmental deterioration. Society would then need to find democratic ways to legitimise appropriate policy auditing and state downscaling.

In this situation, scholars have started to debate the relations between postgrowth economics, remuneration, employment and work in more general ways (Martínez-Alier *et al.* 2010: 1746). Moving towards a postgrowth economy would entail a significant cut in the percentage of time spent in paid work, with the aim of reducing unemployment and distributing working time more evenly across the population, breaking the circle of working to earn to consume, enabling a better work-life balance, and freeing up time for activities such as childcare and personal care or for voluntary work. Reducing the working week is, for example, at the heart of Victor's resilience scenario for the Canadian economy. In it, Victor (2008: 371) suggests that employment could be spread more evenly among the workforce, allowing the 'benefits of greater productivity' to be 'directed towards more leisure time, rather than increasing GDP', with shorter working hours a key ingredient. From a more general theoretical perspective, such a readjustment of employment, work and other activities presupposes placing them 'on a more equal footing, rather than seeing "work" as signifying a deficit, or a less valuable human activity than "employment"' (Barry 2012: 139)⁸.

Conclusions

Climate change and the crossing of planetary boundaries are a serious threat to human civilization and welfare. There is now global political agreement (with the exception of the United States) that greenhouse gas emissions have to be reduced radically and very soon. The climate change mitigation policies required to maintain global warming within the 1.5°C range to which EU Member States have committed themselves will have far-reaching distributional consequences. Countervailing public policies of a new 'eco-social' type will be necessary to help poorer household groups bear the financial burdens of mitigation policies and to make ambitious climate goals acceptable to the European electorate. In contrast to right-wing populist discourses à la *America First*, which lack any sympathy with the fate of millions in the global South who are already victims of climate change to which they have not contributed, democratic and solidary politics should target a transition of European production and consumption patterns that make the socially inclusive achievement of the climate goals agreed in the Paris Agreement a realistic possibility.

This chapter first compared and contrasted feasible government reactions to climate change: irrational optimism, green growth and degrowth. The advantage of the green growth path – the path adopted by the EU and its Member States – is obviously that it does not make any enemies. Not accidentally, there is broad socio-economic and political support for this policy course, ranging from green to liberal parties and from trade unions to employers' organisations. The belief that climate change mitigation is compatible with a largely uncoordinated and finance-driven capitalism is also reflected in the 'market-oriented' mitigation policy adopted. The EU ETS has turned out to be a

8. This section has only reviewed a selection of current or potential eco-social policies able to facilitate the kind of ecological and social transition needed to effectively mitigate climate change. Further proposals, whereby European and national public policies could lead or support civil society initiatives, include the role of commons and the cooperative economy, communal forms of living as well as alternative monetary systems and local currencies (see Büchs and Koch 2017: 112-119 for a critical review).

welcome windfall for major energy providers, which were allowed to sell on, on climate stock exchanges, the surplus emissions certificates that they had received for free, but it has contributed next to nothing to effective climate change mitigation. Neither have EU Member States made much progress in creating synergies through better coordination of their economic, social and environmental policies. Most importantly, given the lack of evidence of sufficient absolute decoupling of GDP growth, material resource use and greenhouse gas emissions, it is becoming increasingly obvious that the green growth and environmental modernisation course will not be sufficient to reach the climate targets that the EU has set itself. Sooner rather than later, these approaches will need to be transformed into degrowth and sustainable welfare policy strategies. Unlike in the green growth stage, EU policymakers will then have to take hard decisions and to curtail the material interests of powerful groups, if the climate targets are to be more than just paper tigers.

In this situation, approaches and policy proposals are being developed – and should be supported through EU research funding – which are geared towards social welfare and the satisfaction of (basic) human needs within environmental limits while deprioritising economic growth. On the one hand, the development of degrowth and sustainable welfare approaches, as well as specific eco-social policy proposals designed to facilitate the transition towards a steady-state economy is encouraging, suggesting that the potential for a good life within environmental limits in Europe is far from exhausted. On the other hand, however, the diversity of this list of proposals indicates that these are still mainly studied within separate silos and with too little cross-fertilisation. Much theoretical and practical work is still needed to combine, complement and unify these as yet fragmented policy proposals into a coherent strategy for the economic, political and ecological restructuring of European countries and their re-embedding within planetary boundaries.

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