

JOURNAL FÜR ENTWICKLUNGSPOLITIK

vol. XXXIX 3/4-2023

JUST TRANSITION – A GLOBAL PERSPECTIVE

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Published by:
Mattersburger Kreis für Entwicklungspolitik
an den österreichischen Universitäten

Journal für Entwicklungspolitik (JEP)
Austrian Journal of Development Studies

Publisher: Mattersburger Kreis für Entwicklungspolitik an den österreichischen Universitäten

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JULIA EDER, HALLIKI KREININ, FLORIAN WUKOVITSCH
Introduction: Just Transition – A Global Perspective

The looming ecological crisis calls for urgent action and profound social, economic and political changes, including the challenging of established institutions, behaviours and norms – especially in the field of work (IPCC 2022). Global societies in the industrialised North have so far failed to transform their production and consumption systems to function within the planetary boundaries (Steffen et al. 2015; Richardson et al. 2023; Rockström et al. 2009), because there are vested interests in maintaining the status quo, while workers' welfare is tied to the continuation of productivist systems through wage labour – facilitating the so-called 'jobs blackmail' (Barca 2019). Labour and capital have historically formed two sides of the modern industrial capitalist model of production, which, although no longer sustainable, has also brought material benefits to workers: social peace between capital and labour has been bought by increasing material wealth at the expense of the environment, as well as of labour and nature elsewhere (Galgóczi 2020; Keil/Kreinin 2022; Schnaiberg 1980).

Transforming the current socio-economic system to live within planetary limits requires a fundamental transformation of the modern industrial capitalist production model. It depends on both the liberation of labour from the jobs blackmail and on setting limits to the expansion of capital accumulation on the back of labour and nature (Barca 2015; 2019). Promoting structural change towards ecological sustainability affects the economic structures of production and the workers employed in the sectors that need to be transformed, downsized or phased out, as well as their communities. For deep social transformation to be accepted, the material 'survival' interests of workers must be taken into account. The history of social progress (e.g., child labour laws) in industrialised coun-

tries shows that transforming the exploitative business logic of the productivist economic system requires strict government policies to limit the exploitation of both labour and nature (Rätzzel/Uzzell 2009).

Climate action will only be successful if social impacts are considered holistically, and vice versa. From a historical perspective, this includes climate justice (a fair and equitable distribution of the burdens of addressing the climate crisis, as well as the inclusion and protection of the rights of the most vulnerable to its effects) and global production conditions, as well as past and present power and dependency relations. The core question is, therefore: how can the costs of the climate crisis be shared fairly and respectfully among humanity, in space and time, but also with respect to other species and the environment? In order to avoid increasing social inequality and deprivation, as well as sharply rising regional disparities that could accompany any transformation(s) towards greater sustainability, trade unions have developed ideas on how a 'just transition' to a low-carbon economy could take place, as there is a growing recognition within the labour movement that addressing the environmental crises requires deep changes (Galgóczi 2020). However, unions have historically also varied in their positions on issues around just transition, as, in particular, unions representing carbon-intensive industries have prioritised job security and expressed concerns about rapid change (Keil/Kreinin 2022; Kreinin 2021).

Just transition originally emerged in the North American trade union movement as a response to the burgeoning environmental movement, and as a way of addressing tensions between environmental and socio-economic goals in specific regions and communities (Galgóczi 2020; Snell 2018; Stevis/Felli 2015). The initial focus of just transition was on securing the livelihoods of workers within existing wage labour-based welfare systems in the transition to low-carbon economies, in other words on job losses in a handful of developed countries, rather than challenging the productivist logic at the heart of environmental crises more broadly (McCauley/Heffron 2018). It converged on more localised environmental problems, such as local chemical pollution from continued industrial production, and localised welfare solutions to the closure of industries, such as ensuring state funding for worker retraining and investment in jobs in new sustainable sectors (Snell 2018; Stevis/Felli 2015).

After the birth of just transition in the 1960s and 1970s, the concept was revived in the 1990s and 2000s as the environmental crisis came into sharper focus. While continuing to be an important reference point for the trade union movement, just transition has been taken up by various other actors such as NGOs, IGOs, companies, civil society organisations and governments. This has led to some contestation over the concrete meaning of just transition and generated competing, sometimes even contradictory, understandings of just transition (Clarke/Lipsig-Mummé; 2020; Kalt, 2021; Kyriazi/Miró, 2023). For example, the European Commission included a just transition mechanism in its European Green Deal agenda, which aims for green growth (European Commission, n.d.; Kyriazi/Miró, 2023), while more radical definitions moved “from a simple call for job creation in the green economy to a radical critique of capitalism and rejection of market solutions” (Barca 2015: 392). Thus, while the primary focus on labour markets and paid employment as the core domain of welfare has been maintained, the scope of the concept has broadened significantly over time (Stavis/Felli 2015; Barca 2015).

Discrepancies in the strategic mobilisation of justice claims have revolved around what justice entails, for example, whether there exists a right to unsustainable lifestyles in the Global North. Another fundamental question related to this issue is that of who deserves justice. Is it people in the Global North, people in the Global South, or both? Which groups in society need to be considered separately? Do we want justice only for the present or also for future generations? And, does our understanding of justice encompass only humans or also other species (Kalt, 2021; Evans/Phelan 2016)? While it has been suggested that the lack of a single definition may provide the necessary flexibility to tailor the term to specific circumstances in order to effectively translate theory into practice (Snell 2018), it has also been easily co-opted by business and fossil fuel interests (and sometimes the trade unions aligned with these industries) as a means of delaying climate action (Evans/Phelan 2016; Kalt 2021). Indeed, both RWE (the German energy giant) and Royal Dutch Shell PLC – among the 100 companies most responsible for fossil fuel emissions (Griffin 2017) – claim to be fighting for a just transition, while at the same time funding climate denial (Franta 2021b; 2021a).

In response to these challenges of co-optation, researchers have suggested the need to refocus just transition on issues of (1) distributional, (2) procedural and (3) restorative justice, in other words, by focusing on the equitable distribution of both the benefits and burdens associated with transitioning, making sure that communities affected are included in decision-making, and repairing the historical and ongoing harms caused by unsustainable practices (McCauley/Heffron, 2018). Although transformative just transition narratives that integrate labour and climate justice demands are urgently needed, very few actors have made such broad just transition demands (Kalt 2021). Many unions in the Global North have referred to both distributive and procedural forms of justice but have struggled more so with restorative justice demands.

The notion of just transition has also clearly entered the academic debate. In addition to review articles and analytical contributions, some of which are cited in the opening paragraphs of this introduction, there exists a growing number of case studies of concrete experiences of just transition. These tend to focus on the management of structural change in a particular region or industry, but the shifts in the transnational division of labour and the implications for different actors in the Global South (or European peripheries) are currently understudied. For example, in their paper “Just Transition in the European automotive industry – insights from the affected stakeholder”, Demitry et al. (2022) discuss four challenges – or gaps – that emerge in the transition to electric mobility in the European automotive industry. The first gap, although referred to as the “geographical gap”, only highlights the different levels of adaptation pressure that regions in Europe will face (Demitry et al. 2022: 21-22). The Global South is not considered.

The Western centrism of just transition can be traced back to the concept’s origins in the Northern trade union movement. The focus was on affected workers in specific extractive or manufacturing industries and individual production sites in the Global North. Solidarity often stopped at national or, sometimes, European borders. The impact of the transition on workers along the value chain and other actors, e.g., in extractive industries, often in other regions of the world, was usually ignored. A broader global shift towards sustainability and against the exploitation of labour

and nature includes an understanding of the need to stay within planetary limits, while avoiding “green sacrifice zones” that harm labour and the environment in the global South for the “greening” of the North (Kalt 2021; Krause et al. 2022; Zografos and Robbins 2020).

This special issue aims to contribute to the ongoing debate in the trade union movement and academia by broadening the understanding of what it means to take a ‘global perspective’ on just transition, and how current concepts of ‘just transition’ could be adapted or expanded to address transnational labour solidarity and reduce global inequality.

Dimitris Stevis, J. Mijin Cha, Vivian Price and Todd E. Vachon present findings from the Just Transition Listening Project, launched in early 2020 by the Labor Network for Sustainability, a U.S.-based nonprofit that promotes worker environmentalism. The project aims to build an empirical database of just transition experiences in the United States. For the paper, they analyse seven different just transition cases in terms of breadth (what and who is covered), depth (socio-ecological goals, i.e. maintaining the status quo vs. pursuing reformist or transformative objectives) and ambition (modest or far-reaching changes). Using community-engaged oral history as a methodological basis, and relying on interviews, they document the lived experiences of working people. This provides analytical insights into the study of the varieties of just transitions, ranging from single-issue approaches to broader political change. While Initiative 1631 in Washington State was about establishing the first state-level carbon fee on emissions in the US, with the revenue going to fund environmental and social programmes, the case of the GM Lordstown plant closure in 2019 focused on finding alternative employment opportunities or minimal support for affected workers.

Rosa Lehmann and Pedro Alarcón challenge the concept of a ‘just transition’ by analysing the political economy and political ecology of Mexico and Ecuador in the context of the climate-driven phase of global capitalism and extractivist relations between the global North and South. They argue that while these countries provide raw materials and energy resources to the global economy, the transition to green technologies reproduces existing inequalities. Mexico and Ecuador are used as empirical examples because of their reliance on fossil fuel extractivism

and reserves of minerals needed for renewable energy technologies. While the authors consider the transition to renewable energy to be important for achieving climate goals, they suggest that it needs to be examined within a framework of justice in terms of energy, climate and environmental concerns – considering the allocation of resources between Global North and South. In the short term, incomplete transition policies in the Global North as well as Europe’s energy crisis are driving countries such as Mexico and Ecuador to continue intensifying fossil fuel extraction in environmentally sensitive regions. ‘Green hydrogen’ for export to the Global North perpetuates economic imbalances and dependency in the Global South, creating new ‘sacrifice zones’ for renewable energy production, and reproducing socio-environmental inequalities. The authors also discuss the role of the state in shaping these transitions, with unresolved questions about (state) financing of the transition, state involvement, and the overall fairness of the process, as well as the phenomenon of rent-seeking and the state’s participation in the e-technology value chain. While state policies are arenas for negotiation and development, there’s growing opposition to resource-driven models due to their negative socio-environmental impacts, with contradictions between the pursuit of national development and global sustainability.

Kristina Dietz and Louisa Prause analyse how the European transition to electric mobility affects workers and other actors in the global production networks linked to the production of electric drive systems (batteries). The authors ask to what extent the transition to alternative propulsion systems contributes to a just mobility transition. They argue that the conventional concept of a just transition needs to be extended in two ways. First, they propose the introduction of a multidimensional conception of justice, including fair distribution, recognition, and participation. Second, they argue that spatial inequalities should be taken into account by addressing different scales and considering the specific roles and embeddedness of actors in global production networks. The focus of their paper is on the commodity dimension of the e-mobility transition. For the transition to climate-neutral propulsion systems, Europe needs a large number of raw materials from countries in the Global South, e.g. copper, nickel, cobalt and lithium. It is therefore important who has access to raw materials and

who controls their extraction in the global and European peripheries. The global energy and mobility transition has the potential to reproduce or even to reinforce global inequality. However, this still depends on how the actors in specific contexts assess and respond to the green commodity boom. Based on their analysis, Dietz and Prause discuss some features that a ‘global just transition’ in the automotive sector would require.

Using the Czech Republic as an illustrative case of the EU’s semi-periphery, Mikuláš Černík, Martin Černý, Patrik Gažo and Eva Fraňková explain how the implementation of EU just transition policies has serious shortcomings in addressing socio-economic and, especially, power inequalities in regions that have been structurally disadvantaged for a long time and where trust in public institutions is relatively low. Going beyond ‘pro forma’ participation, they seek to understand the potential for meaningful participation that would open up a space for balancing the structural inequalities through deliberative processes. They argue that this requires, above all, the participation of large, dispersed groups such as workers in sectors at risk. To this end, they analyse the representation of workers in national and regional stakeholder platforms which are focused on structural changes in the energy system, in particular the phase-out of coal, and find that it was quite minimal and mediated by union representatives. Complementing the analysis of these platforms with insights from previous studies and stakeholder interviews, they identify main challenges to meaningful participation, such as a lack of transparency in the selection of participants, a lack of clarity about how to influence outcomes, and a lack of shared understanding of the overarching goals of a just transition. Based on this, they propose four guiding principles for meaningful participation: accountable stakeholder mapping, inclusion of underrepresented groups, long-term multi-method interaction, and clearly articulated goals throughout. Finally, they argue that meaningful participation is about balancing the roles of experts (e.g., representatives of industry) and non-experts (e.g., workers) in an effort to close the gap in the ability to influence just transition policies, as also suggested by post-normal science.

Martin Černý and Sebastian Luckeneder’s paper illustrates the dilemma of finding alternative job opportunities given a coal mining phase-out, in the context of which other mining sectors and their downstream value chains are often considered. The authors claim that while the

green transition requires a lot of mined materials (so-called energy transition metals and minerals, ETMs), neither are the jobs in such extractive industries nor the corresponding value chains environmentally sustainable. For this reason, they investigate feasible job alternatives beyond the extractive sectors' value chains. They review the just transition strategies of the Czech Republic, Poland, Germany, Indonesia, and India to understand the extent to which these countries are oriented towards replacing coal mining with ETM extraction and what job replacement strategies are evolving in this context. It turns out that none of these countries emphasises the creation of 'green' jobs in the sense of transitioning away from an economy based on extractive activities, nor is there sufficient commitment to identifying specific job alternatives. Therefore, they have set themselves the task of pinpointing feasible alternatives to coal mining jobs that do not require extensive retraining but could still fall into the category of 'green' jobs, with the most promising options being related to recycling, renewable energy and public transport infrastructure. They conclude that even those just transition strategies that minimise retraining requirements allow moving away from a modernist 'development' paradigm based largely on the primary extraction and processing of natural resources. Moreover, they emphasise that alternatives beyond the extractive sector can open up space for levelling global inequalities, for instance by changing the position of regions in global value chains from resource exporters to more localised economies.

In the final contribution to this special issue, Karin Küblböck and Ines Omann present the research project "AdJUST: Advancing the understanding of challenges, policy options and measures to achieve a just EU energy transition", which is a cooperation between several research institutions and other organisations. The project aims to further develop the concept of a European just transition through incorporating the views of different stakeholders into the process and, based on this, developing a common vision of a just transition. Furthermore, they examine the distributional effects of the transformation on enterprises and workers as well as on households. Finally, they focus on the relevance of institutions and their role in supporting a just transition.

All contributions provide relevant new insights for the deepening and broadening of the debate on how to tackle the global dimension of just

transition. However, there is still much more to consider and explore. We therefore hope that this special issue will stimulate further research on just transition adopting a global perspective.

This special issue is part of a cooperation project with the Vienna Chamber of Labour.

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DIMITRIS STEVIS, J. MIJIN CHA, VIVIAN PRICE, TODD E. VACHON
Varieties of Just Transitions: Lessons from the Just Transition
Listening Project (US)

Abstract Since 2015 there has been a proliferation of just transition policies and initiatives. As part of the Just Transition Listening Project, launched by the Labor Network for Sustainability in early 2020, we identified seven distinct just transition cases in the USA. The diversity of these cases calls for an analytical scheme that can differentiate amongst just transitions by recognising that a policy, such as a national or transnational Green New Deal, may be promising, but only for some within a country and the world political economy and at the expense of others. This research advances our understanding of the varieties of just transitions currently pursued in one country, the US, but also offers useful and pressing analytical insights into the study of just transitions, whether these transitions are local or transnational.

Keywords just transition, ecosocial coalitions, labour environmentalism, climate justice, community research

I. Introduction

Since 2015 there has been a proliferation of just transition policies and initiatives. While the theoretical, policy, and research agendas of just transition are growing (e.g., Stevis 2023; Vachon 2022; Wang/Lo 2021; Cha et al. 2020; Just Transition Research Collaborative (JTRC) 2018), there is a need for more empirical research on the challenges and experiences of people who face, or have faced, transition. We use the concept of tran-

sitions to encompass meaningful social or economic changes that have a major impact in people's lives, such as plant shutdowns, as well as to consider the broader idea of what is needed to achieve an equitable and sustainable society.

To expand our collective understanding of transitions, the Just Transition Listening Project (JTLP) was launched in 2020 to provide an empirical database of transition experiences from the United States (U.S.). The Project was an initiative of the Labor Network for Sustainability (LNS), a U.S. based non-profit that promotes labour environmentalism through reports, campaigns, and member involvement.¹ The JTLP filled an important gap in the just transition literature by providing testimonials and oral histories from those that have experienced or face imminent employment transition. The effort culminated in a report released in 2021 (JTLP 2021) which centred on the problem of unjust transitions, the process of negotiating a just transition plan, and the pathways toward just transition policies (Cha et al. 2022). All together we identified seven distinct just transition cases, which we propose to examine more closely in this article by using a comparative method that is based on an analytical scheme, the goal of which is to ensure a holistic understanding of transitions (JTLC 2018; Stevis/Felli 2016). *Breadth* refers to what and who is covered by the transition policy. *Depth* refers to the ecosocial purpose of the transition policy. *Ambition* refers to whether the policy aims at modest or far-reaching changes. While one could equate depth with ambition, our research has highlighted the need to avoid methodological and political particularism and nationalism (Wimmer/Glick Schiller 2002) by recognising that policies may often be beneficial for some within the world political economy while being at the expense of others. Thus, this research advances our understanding of the politics of just transitions currently pursued in the US and proposes an analytical approach useful for interpreting other just transitions, both domestically and globally.

We begin with a brief review of relevant literature in order to situate our research. We then present our analytical framework before presenting our methods and applying the framework to our data. We conclude with a discussion of the implications of our case studies for developing just transition policies.

2. Just transitions: toward a critical analysis

The strategy for what we now call ‘just transition’ emerged in the 1970s from U.S. labour leader Tony Mazzocchi and others as an attempt to reconcile environmental and social concerns and subvert the “job blackmail” strategy that forces workers to work in unsafe and toxic environments or risk losing their jobs (Kazis/Grossman 1991; Leopold 2007; Stevis 2023). Mazzocchi argued that there should be support for transitioning workers who were displaced due to environmental policies and for workers exposed to hazardous and toxic materials (Labor Network for Sustainability and Strategic Practice 2016). This early version of just transition was strongly focused on supporting displaced workers and frontline communities and involved collaboration with environmental justice and community organisations. More importantly, just transition was embedded within a comprehensive political programme, the goal of which was to advance the social welfare state in the US (Labor Party 1996). In that sense it is useful to call the U.S. version of just transition ‘explicit’, because its intent was to explicitly address the challenges stemming from industrial transitions. In contrast, ‘implicit’ just transition policies are embedded in robust social welfare systems (Stevis 2023).

While the early calls for just transition were not centred on energy, the rise of climate change politics has increasingly connected just transition with energy issues in the minds of most analysts and practitioners (Bastos-Lima 2022; Schwane 2021; Stevis 2023). Yet, recognising that an energy transition impacts more than the energy workers themselves, such discussions of just transition further highlighted the environmental justice dimension, integrating ideals of justice into energy transitions (Williams/Doyon 2019). In understanding what makes a transition ‘just’, scholars note that past energy transitions have resulted in “winners and losers” (Eames/Hunt 2013). This research highlights that in addition to shifting from carbon-based to renewable sources of energy, social and economic factors also require consideration, including a deliberate analysis of who bears the burden from an energy transition, who benefits, and how any negative economic and social impacts can be mitigated in such a way that makes the transition just (Newell/Mulvaney 2013).

Breadth. By breadth we refer to the geographic and temporal scales and the sectoral and social scope of a policy, which we map against the geographic and temporal scales of the transition. Geographically, a just transition policy may be local, national, or international. The geographic scale of just transitions, however, gains meaning only if we contrast it to the geographic scale of the transitions they are intended to address (Gürtler et al. 2021). The cases discussed here are relatively local. Yet, it should be noted that, often, seemingly local cases, such as a plant shutdown, are due to global factors, such as deindustrialisation and corporate strategies. Accordingly, given the globalised nature of the world political economy, we must always ask whether a local transition leads to downward ('race to the bottom') or upward ('race to the top') harmonisation. Downward harmonisation is more likely to occur when a local or sectoral policy externalises its costs, leading others to do the same. Upward harmonisation is more likely if the just transition policy absorbs its costs and minimises negative externalities. Neither is easy, but a just transition that benefits some workers and communities at the expense of others within the same value chain cannot be considered a just transition (ITUC et al. 2022).

Many just transition policies envision decades of implementation, but we should ask whether the long term ecological and social provisions of the just transition are commensurate with the temporal footprint of the transition, meaning whether its provisions cover the legacies of the past without shifting its costs onto the future (Cha 2017; Weller 2019). While just transition literature frequently addresses the social aspect of transitions (i.e. does the just transition address the immediate needs of workers and communities adequately? does the policy provide for people harmed in the past, such as coal miners afflicted with black lung, until the end of their lives? and does it ensure that the caregivers, largely women, for those miners enjoy life chances comparable to the people they care for?), the ecological considerations tend to be less prominent; i.e., does the policy provide for long term remediation commensurate with the risks of chemicals or mined areas or decommissioned nuclear plants or radioactive waste? What are the ecological consequences of replacement technologies or industries, and how can they be mitigated? How can we minimise, for instance, the mineral mining necessary for the production of electric vehicle batteries required by the transportation transition to electric vehicles?

The scope of transition policies is also important. Sectorally, just transition is commonly associated with the energy transition from fossil fuels to renewable sources. Yet, this singular focus on energy may leave out other important sectors in transition, such as food and agriculture (Bastos Lima 2022), areas of the economy impacted by artificial intelligence (IndustriALL 2022), or caregiving, education and other public sectors that serve as pillars of support for the existing regime (Fitzgerald 2022).

The scope of just transition considers the degree to which it encompasses broader social justice implications. A just transition policy from coal may be limited to frontline coal miners or coal plant operators, in the process leaving out service workers, the families of coal miners and operators, or the teachers and students in the local education system that faces declining tax revenue. For example, one of the most important labour policies in the US, the National Labour Relations Act of 1935, excluded agricultural, household and home healthcare workers, these being largely people of colour and immigrants (Perrea 2011).

Depth. The literature on socioecological justice is vast (e.g. Coolsaet 2021; Ehresman/Stevis 2018; Low/Gleeson 1998). We know, for instance, that ecological priorities can range from those promoting green capitalism and justice as fairness to those that promote ecosocialist priorities. Hopwood et al. (2005) offer one of the most compelling analytical schemes for addressing the interface of social (in)equality and the recognition of nature's intrinsic value. Based on these, they identify three categories of policies in terms of their socioecological goals – status quo, reformist, and transformative. They are also very aware of the fact that many policies – often quite 'ambitious' socially or ecologically – are outside the broad parameters of sustainable development. We think that this is worth keeping in mind with respect to just transitions, in the sense that many transitional policies, even when effective in one way or another, may be outside the parameters of just transition. For example, a massive transition to renewable energy that does not include protections and rights for those affected, including marginalised communities and workers, would not be considered a just transition. Similarly, an approach to justice that includes the more-than-human but omits social justice or even considers it an obstacle would also fall outside the realm of just transition (Pedersen et al. 2022).

Ambition. Quite often the differentiation in terms of the ambition of a particular transition or policy is based on what we call depth. However, there is significant literature that points to the fact that the social welfare political economies of the Global North owe much to their colonial histories (e.g., Bhambra/Holmwood 2018) and what Brand and Wissen (2021) call the ‘imperial mode of living’. Currently, socialised healthcare systems in the Global North depend on skilled and unskilled immigrants from the Global South. Nativist movements often promote a social welfare state limited to categories of people within a country. More broadly, international politics and law are profoundly based on differentiating between citizens and non-citizens, regardless of the degree of connection between people and place. We need to make sure not to label as transformative a just transition policy that is exclusive and externalises costs, no matter how much it focuses on social and ecological justice for some people and natures (Vachon 2022; Cha et al. 2020; Stevis/Felli 2016).

With that in mind, a key part of our analytical framework is the differentiation of just transitions in terms of their ambition (see e.g., JTRC 2018; Stevis 2023). At one end of the spectrum we find what can be called neoliberal just transitions based on opportunity while regulating corporate power and discretion within the parameters of corporate social responsibility. Such an approach has gained more traction recently (Just Transition Center and B Team 2018). While consistent with liberal capitalism, it poses a threat to strong social welfare regimes. A second category of just transitions that the JTRC termed ‘managerial’ offers protections and a targeted and limited safety net for groups of workers or communities. This may be a strategic choice by a regime facing a crisis or it may be the product of a particularistic and exclusive alliance between state, capital, communities, and workers (Gough 2020). But it can also be the result of the balance of power that forces advocates of just transition to accept something less than what they had hoped. Just transition policies that are ends in themselves and limited to sectors or stakeholders we can call reformist, while stronger and more universal reforms that are strategic parts of a more emancipatory politics can be labelled as structural reforms (for an effort to discuss just transitions and social welfare regimes, see Krause et al. 2022). This leads us to the most transformative category – a just transition policy that is an integral part of a broad and deep ecosocial state, as envisioned by those

movements that fuse social and ecological justice for all affected, including the natural realm (Vachon 2021). The specific names of the various levels of ambition are less important than understanding that just transition policies vary from those that largely affirm what is, to those that aim to change the rules of the political economy.

3. Method: community-engaged oral history

Our research methodology is one of community-engaged oral history, based on interviews documenting the lived experiences of working people who have been through or who anticipate a transition. As a collaborative approach to research, community-based participatory research equitably includes all affected in the research process and often involves partnerships between academic and community organisations, with the goal of increasing the value of the research product for all partners (Coughlin et al. 2017). According to Ritchie (2014: 1), oral history “collects memories and personal commentaries of historical significance” through recorded interviews. Participants were asked about their early lives and development leading up to their current affiliations, and then specifically about the transitions they experienced or the transitions they organise around, using oral history techniques. In other words, the oral history process is as much a dialogue between interviewer and interviewee as it is the collection of data from a source. Importantly, the use of oral history data is not predicated on predicting behaviour, but instead on understanding what has transpired, how interviewees think about their experiences, and how those experiences may inform their views of the present or the future, which is why we have chosen this method to increase our understanding of transitions.

For this project, the Labor Network for Sustainability convened a national organising committee in 2019 to develop and pursue a Just Transition Listening Project (JTLP 2021). The goal was to capture the voices of workers and communities in transition. The committee, which was comprised of representatives from many different backgrounds, including participants from labour, environmental justice groups, Indigenous organisations, community members from varied geographical locations, and the authors of this contribution, worked together to formulate a broad set of

open-ended interview questions and to identify participants for the oral history interviews. Again, the questions were designed to maximise our understanding of what had transpired, how participants thought about their experiences, and how those experiences may inform their views of the present or the future. Many participants were invited through a snowball sample based on LNS partner recommendations, including labour, environmental justice, and Indigenous networks. In selecting our interviewees, we sought, as much as possible, to interview people familiar with transition cases, as well as just transition initiatives, and to seek out different voices and views about these cases. Through these interviews, seven cases emerged, all of which can be read about in the LNS report (JTLP 2021). We were aware of several of these cases and some of us had already conducted research on them (Cha et al. 2020). In other instances, the cases emerged as important findings during the interviews.

To assist with data collection, the committee trained eight community members from various labour unions and community groups to assist the research team in the collection of the oral histories which serve as the basis of the current study. Our analytic approach was an iterative process of conducting oral history interviews, transcribing them, and coding the data according to major themes and subthemes. All interviews were conducted via a web-based conferencing app, recorded, immediately transcribed, and then coded to inform future observations and interviews.

4. Cases and discussion

Here we examine the following cases of transition in the chronological order they occurred: the end of logging in the Redwoods forest and subsequent Expansion Plan of the late 1970s; the 2015 Plan to close the Huntley Coal Power Plant in Tonawanda, New York State; the 2016 plan to close the Diablo Canyon Nuclear Plant; the responses to the closing of the GM plant in Lordstown, Ohio in 2018; the 2018 Washington State's unsuccessful Initiative 1631; the 2019 Colorado State's Just Transition from coal electricity policy; the labour-social environmentalist coalition that led to the unionisation of the electric bus company Proterra in Los Angeles County in 2019. Some of these initiatives failed (Washington) or did not

develop a full/explicit just transition strategy (Lordstown), but they illustrate the politics of crafting transitions as well as exemplifying different visions. Two of them were at a state level (Colorado and Washington); four of them were at a local level (Diablo Canyon, Huntley, Redwoods, Lordstown). Two dealt with coal (Colorado, Huntley), one with nuclear power (Diablo Canyon), one with logging (Redwoods), two with manufacturing (Lordstown and Proterra), and one with all forms of energy and the broader economy (Washington). Combined, they provide an outline of just transition politics in the US, at least to the end of 2021, while highlighting just transitions at different stages of the policy process as well as across the economy. In addition to the interviews, we also draw from primary and secondary materials. In the original report, we utilised such material largely for accuracy, to let the voices of the people we interviewed be heard. In subsequent work, including this, we have drawn a bit more on that material in order to place the cases in historical and analytical context (e.g., Cha et al. 2022).

Table 1 provides a summary of our cases in terms of the analytical scheme we proposed. Here we provide some historical and political background for each case. More information can be found in the JTLP Report (2021). The oldest case is the Redwood Employee Protection Program of 1978, and while the ideas of ‘just transition’ had been planted, as mentioned earlier, it was before the term ‘just transition’ was explicitly used in 1995. An examination of the Act, however, shows that it was a just transition policy, highlighting the fact that just transition strategies must be understood in the context of efforts at ensuring that working people and communities do not suffer the impacts of transitions. Equally important, it underscores the fact that the connection of just transition policies to decarbonised energy and climate-friendly actions is an historical development rather than inherent in the strategy of just transition. ‘Just transition’ strategies can be found throughout history, often within collective agreements which ensured that companies offered workers certain protections during transition. In the Redwood case, the goal was to expand the Redwoods Park, thus protecting it from the logging that was intensifying in the Western US at the time. While this specific policy can be considered a success in that it addressed the concerns of displaced workers and communities, it was too narrow in scale and scope to prevent the profound

conflicts between workers and environmentalists that took place during the 1980s and 1990s and which have had profound impacts on the relations between these two movements in the US (see Loomis 2021).

The closing of the Diablo Canyon nuclear plant – originally envisioned for 2025 – was the result of environmentalist pressure, the high cost of retrofitting the plant, and the decreasing cost of renewable energy. The decision to close the plant in an orderly and equitable manner was a reaction to conjunctural dynamics rather than proactive planning. While environmentalists, and some political and community leaders, pushed for the closing of the plant on environmental grounds, that was not the case with the main union at the plant. Rather, the International Brotherhood of Electrical Workers realised that the plant would close both because its license was coming to an end and due to the fact that the utility commission declined to renew the license for cost reasons. Recent developments, including a slower uptake of renewables and concern for grid stability, has delayed plant closure for five to 10 years. While outside the scope of this paper, over-ruling the already adopted transition plan could be seen as reverting to an unjust transition.

The closing of the Huntley coal plant in Tonawanda, New York, was largely attributable to the declining competitiveness of coal power during the ongoing energy realignment at the time. The teacher's union, in partnership with a local environmental justice organisation, was one of the main organisers of the transition process because the decrease in tax revenue from closing the plant would impact the economic wellbeing of students and schools. The resulting coalition worked with the state labour federation to leverage funds to stabilise the town's economy. The role of the plant workers was secondary. While this is a local case – the plant closing was not part of a larger ramping down of coal – it demonstrates, in a very immediate way, the direct impact of energy transitions on workers along the value chain. The teacher's union was involved because the decreased revenue negatively impacted the school district. Even though teachers are not energy workers or directly engaged with the energy economy, the decline of the energy economy directly impacts them. Thus, understanding the impacts of a transition along a value chain requires attention to inter-dependent structures, something that can be gained through systematic empirical research.

When General Motors (GM) closed its plant in Lordstown in 2019, over 4,200 jobs were eliminated, with severe impacts on the community (O'Brien 2020). Some of those workers were, often reluctantly, able to relocate to work in other parts of the company, as provided by the union's collective agreement. Others could not relocate for a variety of reasons, whether these were related to age or family, or could relocate but would lose their seniority, which would severely affect their income and fringe benefits. Initiatives by workers led to the creation of a transition clearinghouse office, supported by a Department of Labor grant. Lordstown demonstrates the declining capacity of collective agreements to prevent, slow down, and cover all workers, since the rise of neoliberalism in 1970s. It also demonstrates the resilience of workers and the possibility of modest but innovative solutions, such as the transition office, against overwhelming odds.

If these three just transition responses were reactions to local transitions already set in motion, the Jobs to Move America effort to organise the Californian bus company Proterra can be considered as a proactive one. When the Jobs to Move America strategy was set up by the national labour federation, the AFL-CIO, which was historically sceptical of just transition, the goal was to mobilise local and national policies to encourage local manufacturing, beginning with public transportation procurement. The Proterra case is part of the broader strategy of U.S. Steelworkers (USW) Local 675 to prepare for fossil fuel phaseout. This is significant because USW675 was an Oil, Chemical, and Atomic Workers local (before OCAW merged with USW), one that strongly supported the strategy of just transition from its inception, and which remains one of the key members of the Just Transition Alliance. What makes this case proactive is the fact that it aims to engage cities, unions, and manufacturers in changing what is produced, and under what terms and conditions, in order to provide immediate employment opportunities for workers, community benefits agreements, and to offer a prefigurative strategy of change. While this specific case is local in scale, JMA is a national strategy, i.e., one that can take roots where the opportunity emerges. Its scope applies to workers in a particular sector – public transportation manufacturing and assembly. The social goal of the strategy is that of good employment opportunities that may have positive environmental benefits. However, in 2023 Proterra

decided to shut down its unionised assembly plant and consolidated their operations in a non-union facility in the US South, demonstrating that efforts to generate a just transition may not be enduring. As long as labour standards vary across space, and there is no penalty for a company that abandons its commitments to workers and communities, movement towards just transitions is tentative and contingent.

The next case, Initiative 1631 in Washington State, was the product of an alliance that included labour unions, environmentalists, environmental justice activists, Indigenous people, policy makers, and other civil society organisations and movements. Its central element was the establishment of a carbon fee on emissions – the first in the country – with earnings going to fund air and water quality, energy programmes, forest health, community revitalisation, and support for displaced workers. Furthermore, boards that included membership from all coalition partners would have had decision-making power in the distribution of the revenue. Initiative 1631 can be considered a comprehensive just green transition because of its proactive and economy-wide nature, rather than a just transition as a response to an unjust green transition, even though it did provide exceptions for key companies in the state, such as Boeing. The Initiative was defeated because of fossil fuel capital, the opposition from many fossil fuel and construction unions that have historically blocked progressive politics (Hyde/Vachon 2019), and inadequate financial support from environmental funders for grassroots mobilisation. Its value was in showing both how to build power among environmental justice groups, keep a progressive alliance together, and produce a comprehensive plan. It was also a lesson about deep divisions within labour and the impact of job blackmail exercised by capital. A unique aspect of the Initiative is that, although it failed at the ballot box, the inclusion of Free Prior and Informed Consent, a demand of Indigenous members of the coalition, was subsequently accepted as gubernatorial policy.

The last case is that of Colorado, where an alliance of unions and political leaders, with some participation by environmental justice and environmentalist organisations, negotiated a just transition from coal policy in response to the State's 2018 decarbonisation policy. Here, the groups came together primarily as a reaction to green legislative action rather than as a proactive just green transition policy. Its sole focus was on coal, even though the state's decarbonisation policy covers all emissions. The reason behind

this choice is the fact that the coal industry, in addition to accounting for most of the state’s electric energy production, is also much weaker than the more powerful natural gas industry (Betsill/Stevis 2016). Due to market forces, coal is already on the decline, regardless of any climate initiative, whereas gas use continues to grow. Yet, this is the first explicit and developed attempt toward a just transition from coal policy in the US, thus attracting a lot of interest as a potential model. One recognised gap is the limited attention to disproportionately affected communities (i.e., poor and marginalised communities and people of colour), while another is the need to procure sufficient funds to implement the policy after 2025, when it will be in full force. A third gap, less pronounced because the state does not produce a lot of coal, is that the policy does allow for the initiation or reactivation of coal mines to produce coal for export – there is no provision requiring that this coal be for industrial rather than thermal use. Domestically, coal is largely shifting from thermal to industrial use because most thermal coal users have transitioned to fracked gas. As such, coal is less likely to be mined for thermal uses. Therefore, limiting mining to only industrial uses would prevent coal from being used for thermal uses and thus limit its marketability.

Case	Breadth: Scale	Breadth: Scope	Depth: Social	Depth: Environmental	Ambition
Redwoods	Narrow (Local policy but logging a regional issue)	Narrow	Significant assistance to loggers in expansion but not all loggers in region; recognition of the value of Indigenous people’s forestry practices.	Explicit but local preservation of ecosystem	Managerial – not a state level or regional policy (despite pressing need for that)

Case	Breadth: Scale	Breadth: Scope	Depth: Social	Depth: Environmental	Ambition
Diablo Canyon	Narrow (plant and local community but plant provides substantial part of California's energy; temporal reach, e.g., nuclear wastes are not part of policy)	Narrow (plant workers and local community; not all affected by closing of plant)	Significant for those covered (assistance to workers and local schools; no broader just transition policy)	Implicit in closing of plant; not a nuclear energy transition	Managerial
Tonawanda	Narrow (plant and community; temporal reach limited to closing of plant and stabilization of tax base)	Narrow (plant workers and local community; not all affected by closing of plant)	Significant for setting up state funding (some assistance to public workers and community; no broader just transition policy dealing with city decarbonization)	Implicit in closing of plant	Managerial

Case	Breadth: Scale	Breadth: Scope	Depth: Social	Depth: Environmental	Ambition
Lordstown	Narrow (plant and community, but with significant translocal impacts; very limited temporal reach for unionised workers)	Narrow (public workers affected by lower tax income; community)	Minimal assistance to find opportunities for workers and spouses. Laid off workers hired in transition centre.	none	Neoliberal. Though workers are involved, the extent of their agency is constrained by the terms of their contract and the grant.
Jobs to Move America (Proterra Case)	Local but part of national strategy.	Narrow (some plant workers were covered by collective agreement and received services from transition centre)	Social justice because of good employment and community benefits, i.e., no social safety provisions	Environmental justice because of public transportation. No environmental provisions.	Neoliberal if it remains local; possibly reformist if the strategy is successful in many places
Washington Initiative 1631	Broad (state level; long term green transition)	Broad (most emissions; would affect all citizens)	Deep (significant social welfare and investment provisions)	Deep (Significant and explicit environmental provisions)	Structural reform

Case	Breadth: Scale	Breadth: Scope	Depth: Social	Depth: Environmental	Ambition
Colorado	Broad (state level; temporally limited to closing plants and some mines)	Narrow (formal workers in coal plants and mines and coal communities)	Significant but selective (transitional assistance to specific workers and communities covered but not comprehensive social protection provisions; communities must apply for funding – not easy for those with limited such capacity)	Shallow compared to decarbonisation bill. (Implicit in closing of plants. Remediation would require additional policies and funds; does not preclude mining and export of coal)	Managerial if it remains limited to coal; reformist if it expands to oil and gas (given that the state has a decarbonisation goal) and if the state finds a way to direct funds to those most in need – rather than having them apply for it.

Table 1: Cases: Breadth, Depth and Ambition

Source: own elaboration

5. Conclusions

One of the key consequences of our analytical scheme is that it compels us to explore the empirical reach of just transition efforts. For example, it requires us to point out that the Colorado policy does not preclude the externalisation of its costs through exporting coal or natural gas. The

Washington State case revealed that a policy that was deemed necessary to get labour support for Proposition 1631 – exempting Boeing and other trade exposed industries – has local and global implications. Overall, the findings highlight the necessity of exploring who is included and who is excluded or overlooked, even in socially and ecologically deeper policies. In the current global political economy social welfare policies are typically administered and enjoyed on a national level, but their costs and impacts are largely transnational (Brand/Wissen 2021). To consider a policy transformative without exploring its translocal impacts is to obscure power and history.

The specific cases that we focused on are but a part of the overall project. Taken as a whole, the views expressed by the research participants range from neoliberal to transformative in nature and, often, demonstrate a resilient and independent capacity to reflect on what is and what should be. Thus, in interpreting these policies we are not passing judgement on the people involved or even those that supported less ambitious policies. All the cases discussed involved collaboration among various advocates of a just transition policy. They did not all agree with the result but found enough they agreed on to support it or chose to support it to solve a problem or to take a step toward something more profound. In fact, it can be argued that narrow proposals are the most viable under the circumstances, and to reject them in the name of more transformative proposals both deprives some of those affected with necessary relief while precluding the possibility that narrow successes can be woven into a larger programme of action, such as a Green New Deal.

Yet, it is important for analysts, workers, and communities to reflect on the ambition of policies and proposals, because they do vary – both because of their own worldviews and, more importantly, as a result of the political economy within which they operate. At a very superficial level, all these cases – except for Lordstown – could have been considered sustainability transitions (Hess 2019). A closer look, however, demonstrates profound differences in both form and social purpose.

The final lesson of this project is that listening to workers and directly impacted people, across value chains, is a best practice that can be applied anywhere/everywhere. Listening to those affected is necessary for a variety of reasons. First, it prevents us from reifying people and communities as

undifferentiated and inherently democratic and emancipatory forces. But done critically and with empathy, listening helps expand democracy by recording the views of those not normally heard, while subordinating the views of the listener to those of the people s/he is talking with. Third, it demands that we think about the origins and function of what the listener may consider to be contradictory views expressed by the same people. Finally, learning from the views of rank-and-file workers, environmental justice, and Indigenous actors is a step toward appreciating how important their involvement is in creating just transitions; because, even if workers and communities are not uniformly democratic and emancipatory, it is unlikely that democratic and emancipatory politics can be built without the agency of these same groups.

- 1 See LNS website: www.labor4sustainability.org/about/making-a-living-on-a-living-planet/, 20.9.2023.

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ABSTRACT Seit 2015 gibt es eine Vielzahl von Maßnahmen und Initiativen für eine ‚just transition‘. Im Rahmen des „Just Transition Listening“-Projekts, das Anfang 2020 vom Labor Network for Sustainability ins Leben gerufen wurde, haben wir in den USA sieben verschiedene „just transition“-Fallbeispiele identifiziert. Die Vielfalt dieser Beispiele erfordert ein analytisches Schema, das zwischen unterschiedlichen Formen von just transitions unterscheidet und die Folgen für diverse Bevölkerungsgruppen berücksichtigt. So zeigt sich, dass eine politische Initiative, wie beispielsweise ein nationaler oder transnationaler ‚Green New Deal‘, zwar für einen Teil der Bevölkerung innerhalb eines Landes und für die politische Weltökonomie erstrebenswert sein mag, zugleich aber nur auf Kosten anderer Gruppen realisiert werden kann. Die vorliegende Untersuchung trägt zu einem besseren Verständnis der unterschiedlichen just transitions bei, die derzeit in den USA angestrebt werden, und liefert darüber hinaus nützliche und relevante analytische Erkenntnisse für die Untersuchung von just transitions, unabhängig davon, ob es sich um lokale oder transnationale Prozesse handelt.

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'Just Transition' in the Global South: Mission Impossible? The Perils of the Transition in Mexico and Ecuador

ABSTRACT Historically, 'just transition' speaks to concerns of workers of 'dirty industries' in the Global North in the light of environmental regulations and (possible) impacts on their working conditions and job positions. Increasingly, the concept is used to highlight issues of social justice in transitions to a low-carbon economy based on renewable energy sources. Focusing on the juncture triggered by the current climate change-driven stage of global capitalism, we emphasise the tension that arises between the notions of 'national development', 'global sustainability', and a 'just transition', and argue that current transition politics and pathways tend to (re)produce extractivist and rentier logics as well as socioecological conflicts in the Global South. We illustrate our argument by delving into the political economy and political ecology of contemporary Mexico and Ecuador, where we also identify the perils of following transition pathways that limit a 'just transition'.

KEYWORDS Mexico, Ecuador, climate change, rentier societies, extractivism, political economy, political ecology

Introduction¹

Governments, international organisations, civil society groups, and segments of the business sector all agree that a transition to renewables is crucial for stabilising global warming at 1.5 degrees above preindustrial levels. Social science studies on energy (transitions) contrast this technical and political-rhetorical consensus by highlighting that the ways of implementing transition policies and projects and the restructuring of labour is contested by different actors. In particular, research from a political

economy and/or political ecology perspective has pointed to the reproduction of socioecological inequalities (Sovacool 2021) and engaged with claims for a ‘just transition’ (McCauley/Heffron 2018) involving different frameworks of justice (Lehmann/Tittor 2021).

We build on a growing body of literature on the implications of transition policies in the Global South (Alarcón et al. 2022), on contested renewable energy projects (Gorayeb et al. 2018), and on the extraction of raw materials for e-technologies (Prause/Dietz 2020; Dunlap 2019); therefore, in this contribution, we first challenge the concept of ‘just transition’ by inquiring into structural realities of Global Southern countries that stem from their traditional position in the international division of nature as providers of raw material and energy resources for the world economy (Alarcón 2022). We argue that the settings for the energy transition in the Global South, and particularly in Latin America compel us to rethink the notion of ‘just transition’ from a more global perspective.

After that, we delve into the political economy and political ecology of Mexico and Ecuador at the juncture of the climate change-driven stage of global capitalism. We link current academic debates on socioecological impacts and conflicts around energy transition to research on Latin American rentier states and extractivist economies to exemplify some similar structural conditions shared with other countries of the Global South while drawing attention to the perils of the current transition. We chose Mexico and Ecuador as empirical examples since both countries’ state revenues rely heavily on the fossil sector; thereby, the hydrocarbons sector is of central importance to the state (Alarcón 2021; Tetreault 2020). Further, both countries have reserves of minerals needed for renewable energy technologies, such as copper (Ecuador and Mexico), silver (Mexico), and lithium (Mexico), and the mining of these minerals has been highly contested up to date (Jenkins 2017; Tetreault 2015). Social movements in both countries question current environmental and energy policies and provide counter-narratives to development imperatives based on natural resource extraction (Rival 2012; Kerkeling 2013; Alarcón/Rocha/Di Pietro 2018). At the same time, Ecuador and Mexico differ *vis-à-vis* the size of their national economies, their geopolitical position and integration into the world market, as well as regarding concrete renewable energy policies, such as the support and implementation of wind and solar power projects

(Lüpke/Well 2020; Arroyo/Miguel 2020). Yet, our contribution does not claim to be a comparative analysis in the strict sense but rather explores and discusses structures and dynamics that are of relevance to debates on transition and justice in differing contexts.

Since most Global Southern countries, such as Mexico and Ecuador, depend on rent generated by natural resource exports to finance development and social projects and the energy transition itself, in our discussion we emphasise the tension that arises between the notions of ‘national development’, ‘global sustainability’, and a ‘just transition’.

2. ‘Just transition’ in the Global South?

Thanks to the initial impetus of trade union organisations in the Global North during the final decades of the last century and the struggles of social movements regarding inequalities in the context of the energy transition, discussions on ‘just transition’ now have an assured place in international climate change governance negotiations. As a concept, ‘just transition’ has transcended its origins, which were strictly in the labour field, which initially focused on compensating workers in extractive industries affected by environmental and climate policies (McCauley/Heffron 2018). As a global discourse, ‘just transition’ is increasingly part and parcel of transnational debates on reconciling social equity with the need to mitigate climate change. A broader academic and political debate on ‘just transition’ has considered contributions on energy justice (Jenkins et al. 2016), environmental, and climate justice (Schlosberg/Collins 2014) to acknowledge responsibilities and inequalities across scales and along different axes of differences, such as class, gender, and race/ethnicity (see e.g. Sundberg 2008), and to highlight injustices concerning the distribution of costs and benefits, the participation of different actors in political processes, the recognition of knowledge and practices, as well as the reparation for past and present damages that go beyond selective compensatory measures (Lehmann/Tittor 2021).

Different actors in the Global South refer to this discourse in debates on energy transitions, or at least with regard to the need for benefitting from transforming e-value chains and possible hydrogen markets. However,

a growing body of literature questions the discursive-political setting of ‘just transitions’ by highlighting structural conditions found in peripheral states and the political ecology of current energy transitions.

Regarding structural conditions found in peripheral states, scholarly debates have argued along three interrelated lines of inquiry associated with contextual settings and perspectives for ‘just (energy) transitions’ in the Global South.

The first argument is concerned with the historical dependence of regions in the Global South on rent generated by extractivism. We understand extractivism as the persistence of a development model grounded in extraction of natural resource and the commodification of raw material in the world market without significant value added (Alarcón 2023; Gudynas 2015). In the Global South, rent generated by extractivism determines the course of the national economy and the reproduction of society; in countries where the economy hinges on revenues generated by natural resource exports, rent is typically distributed throughout society, following political and clientelistic criteria (Beblawi/Luciani 1987; Alarcón 2021). Another key feature of some peripheral societies is that rent allocation leads to the impossibility of diversifying their economies beyond the natural resources sector and moving towards more sustainable production patterns (Auty/Furlonge 2019; Peters 2019). Such discussions have taken place in academic literature since the early 1990s within the framework of the “resource curse thesis” (Auty 1993). The dependence on natural resource exports results in the dependence on imports of manufactured goods and technology. This argument refers to the resource base of energy transitions (the endurance of extractivism), as well as to the technological base of energy transitions (a deepening dependence on technology developed abroad).

During the climate change-driven stage of global capitalism, these features translate into what might be called “reloaded” extractivism (Alarcón et al. 2022), which refers to enhanced mineral extractivism for the sake of the ‘green’ energy transition, together with boosted fossil fuel extractivism (coal, oil, natural gas) to cope with the current energy crisis, in flat contradiction of the Paris Agreement. On the one hand, as the Global North yearns for alternative fossil fuel suppliers, natural resource-rich Global Southern countries are expanding their extractivist frontiers – such as in the case of the Congo Basin – and might seek to deplete their oil,

coal, and natural gas stocks before they become unprofitable in the long term due to the commitment of consumer countries with the Paris Agreement and efforts to switch to low-carbon energy sources. On the other hand, essential for the current stage of the energy transition is the substitution of carbon-based fuels in electricity generation and land transportation (i.e. cars, pick-ups, buses, trucks). This endeavour requires raw materials, many of which are often referred to as “critical minerals”, indispensable for scaling up transition technologies (IEA 2021): lithium, nickel, and cobalt which are essential for batteries used in solar photovoltaic systems and electric cars; rare earth metals which are used in both wind turbines and electric motors; and copper which is used in connections and connectors and power grids.

Critical minerals, or the need for them, already reproduce or renew extractivism for the sake of the energy transition. This has been framed as “green” (Voskoboynik/Andreucci 2021) or “renewable” extractivism (Soto/Newell 2022; Del Bene et al. 2018). Some of these theoretical and methodological contributions might also prove useful in approaching the next stages of the energy transition, which deal with the massive upscaling of wind and solar technologies, the takeoff of technologies and innovations aimed at using other renewable sources, and the implementation of green hydrogen production.

A second argument regarding the juncture in the Global South involves the institutional actors in charge of undertaking the energy transition. In the Global North, well-established markets with the capacity for technological innovation are being provided with (or restricted from) the necessary environment (namely mainly financial support and legal frameworks) by welfare states with skilled public sectors which have more or less room to manoeuvre (Alarcón et al. 2022; Krause et al. 2022; Swilling/Annecke 2012). In the Global South, in contrast, the role of the peripheral state in setting the regulatory and institutional framework for energy transitions is complex, contested, and context-dependent. Social forces, which bet on a strong public sector and state intervention, argue in line with the Latin American tradition of (under-)development studies, which pioneered the approach to the role of the national state in national development (Sunkel 1976: 8; CEPAL 1971), as they censured local bourgeoisie for their zero contribution to (top-down) development. Central to the critique of the

private sector of the economy is (1) the nexus between the bourgeoisie and the traditional oligarchy, i.e. the economic and sociopolitical order linked to transnational capital through agro-exporters and landowners (Alarcón 2021: 63); and (2) the rentier behaviour of local economic elites which prioritises access to natural resource rent over profits from more productive investments (such as manufacturing) or over the expansion of the domestic market (Katz 2022: 11ff). As the private initiative is deemed unable or unwilling to prompt economic development at the national level, the developmentalist expectation or the expectation to lead top-down development shifts to the realm of state bureaucracies and political elites.

For many peripheral states in the Global South, particularly in Latin America, the energy transition itself might be regarded as an avant-garde developmental endeavour in a context where social development projects, such as access to public health and education, social security, and even access to electricity, remain unfinished. For instance, the Economic Commission for Latin America and the Caribbean contends that 17 million people have no access to electricity and 75 million have no access to clean energy for everyday cooking in Latin America (CEPAL 2022). With this in mind, how to finance the energy transition during the climate change-driven stage of global capitalism is an open question. A recent study by the Inter-American Development Bank (Solano-Rodríguez et al. 2019) estimates that up to 80 percent of the oil reserves of Latin American countries could be left in the ground since it would no longer be profitable to exploit them by around the year 2030; if the world is committed to achieving the goals of the Paris Agreement, oil export revenues in Latin American countries could be reduced by half. To compensate for empty pockets left by natural resource booms and busts, recent economic history shows that peripheral states tend to seek foreign capital investment and international cooperation for developmental projects. This might cause external debt to swell further.

A third argument concerns the reproduction of socioecological inequalities in regions where mines and/or renewable energy projects are located. The term 'socioecological inequalities' draws on a broader understanding of inequalities beyond that of simply looking at income. It is concerned with the unequal power resources for coping with changing environmental conditions (e.g. environmental degradation, floods, land-

slides), for benefitting from or having to bear the costs of appropriating nature (e.g. a mine; or a solar park, for which land is appropriated), for defining what counts as knowledge about ‘environment’, ‘natural resource’, the associated environmental problems and possible solutions (e.g. does the solution to the problems caused by intensive monocultures lie in digital agriculture or agroecology), and for negotiating political measures, as well as the access to and use of resources (e.g. land, water) (Dietz 2017). Academic literature provides many instances of studies in which renewable energy projects reproduce socioecological inequalities in the Global South (e.g. Del Bene et al. 2018). In cases where actors politicise these inequalities (Dietz/Engels 2020), “reloaded extractivism” (might) mean ‘reloaded conflicts’ in the extractivist frontier. In the next stages of the energy transition as mentioned above (massive upscaling of wind and solar technologies, takeoff of technologies and innovations aimed at using other renewable sources, as well as the implementation of green hydrogen production), conflicts and inequalities related to access to, and tenure of, land will play a significant role. Studies already point to the role of land in conflicts around renewable energies and for the reproduction of related socioecological inequalities (Backhouse/Lehmann 2019). For instance, whereas green hydrogen plants in themselves take up little space, wind farms and solar power plants that generate the green electricity necessary for hydrogen electrolysis require significant land area. Moreover, access to a continuous supply of water for the electrolysis of green hydrogen has to be assured.

3. The Perils of the Transition: Insights from Mexico and Ecuador

We support our argument that the current transition tends to reproduce dynamics of dependency and rentierism, as well as socioecological conflicts, by exploring the continuities and change of the political economy and the political ecology of contemporary Mexico and Ecuador. Albeit with varieties in the concrete forms of social reproduction, as well as dynamics involving the appropriation of resources, we show that specific countries such as Mexico and Ecuador have to deal with the structural conditions mentioned above and with new dynamics, by shedding light on the structural dependencies related to the export of natural resources

and the import of technology, the centrality of rent generated by fossil fuel extractivism to state revenues and labour relations, and the dependencies on (subsidised) energy carriers for domestic consumption. Further, we describe the reproduction of socioecological inequalities related to ‘reloaded’ extractivism.

3.1 The reproduction of structural dependencies and the centrality of oil rent

Capital accumulation in Ecuador hinges on the primary sector of the economy in general and on oil extractivism in particular. Natural resource exports as a share of the country’s total exports reached the astronomical figure of nearly 94 percent, and those of crude oil amounted to 42 percent (UNCTAD 2021: 99) (See Table 1). Although no nationalisations took place during the first oil boom (1972-1981), the Ecuadorian state engaged in a struggle with multinational oil companies over the capture of a larger portion of oil rent. The creation of a state-owned oil company, the renegotiation of concessional schemes, and the integration of the Organization of Petroleum Exporting Countries (OPEC), not only assured the national state a predominant place in the economy and in the control of the oil sector in the long term, but also shaped the social perception of sovereignty and development that remains up to today (Alarcón 2021). On average, oil rent contributed about 10 percent to GDP during the last 25 years, while it finances one-third of the government’s expenditure (World Bank 2023a; MEM 2021).

During the juncture triggered by the global energy transition, reloaded’ extractivism in Ecuador is showing up twofold. On the one hand, President Guillermo Lasso announced the intention of the government to double the current oil extraction of approximately 500,000 barrels a day during his administration (Decreto Ejecutivo No. 95, 7 July 2021). The exit from OPEC in early 2021 arguably paves the way for attracting foreign investment to the oil sector to attain the government’s goals. On the other hand, for the last two decades, Ecuadorian governments have supported the takeoff of mining through a generous legal framework that opens the door for fiscal incentives. *El Mirador* open pit mine, the first large-scale copper mine in Ecuador, granted a concession for 30 years to a Chinese company and began operations in 2019. Revenue from *El Mirador* is

showing up in the accounts of the Central Bank of Ecuador (BCE 2021: 14), and it is expected that another two copper mines, *Warintza* and *El Domo*, both concessioned to Canadian companies, will begin operations in 2023. Contrary to the oil sector, mining activities are dominated by (foreign) private initiatives; hence, the mechanisms for the state's rent appropriation vary. In the absence of a state company, the Ecuadorian state collects royalties for the mining concessions and imposes taxes on private companies' revenues. Mining extractivism contributes nowadays less than one percent of GDP. However, the bet on a mining boom is set.

Despite enabling capital accumulation, natural resource extractivism traditionally inhibited economic development thus, Ecuador did not accomplish the adoption of more effective production processes to leave behind dependence on natural resource rent and move towards reliance on more advanced sectors of the economy. The medium and high-tech manufacturing value-added, an indicator of the proportion of technological value added to total value added of manufacturing, and therefore of the degree of industrialisation of a country, hardly reaches 10 percent on average over the last 25 years (World Bank 2023b). In comparison, the medium and high-tech manufacturing value added in industrialised countries easily reaches 50 percent. It goes without saying that during the energy transition, Ecuador will have to purchase photovoltaic panels, batteries, wind turbines, electric cars, and other necessary technology from the international market.

The world's biggest oil exporter in the 1920s, Mexico saw its importance slightly decrease in light of the Venezuelan oil boom in the 1930s. In 1938, President Lázaro Cárdenas nationalised the Mexican oil industry and oil became a symbol of national sovereignty from the US and US-based/foreign companies (Daniels 2002). With the discovery of new oil fields across the country up to the 1970s, oil extraction as well as the state-owned company grew significantly (Maihold 2010). Despite the sovereignty discourse originating in oil nationalisations, political elites in favor of a comprehensive liberalisation of the energy sector were able to prevail with constitutional reform that allowed the liberalisation of the energy sector in 2013/14 (Alpizar-Castro/Rodríguez-Monroy 2016). Despite a decrease in oil extraction, from nearly 1.5 million barrels per day in 2010 to 1.1 million barrels per day in 2021 (SENER 2021), Mexican dependency on fossil fuel

extractivism is still high: oil revenues (including taxes and direct payments from the state-owned company) account for over one-third of government income; thereby, oil rent contributed on average three percent to GDP (World Bank 2023a). About four-fifths of Mexico's oil is exported to the United States, which depends heavily on Mexico as one of its principal sources of oil.

Mexico leads the world in the extraction of silver and is among the 10th-largest producer of gold and copper.² From 2019 to 2020, the export of precious metals (gold, silver, platinum, and palladium) extracted in Mexico increased by around 1.3 percent. Practically non-existent taxes and other pro-mining policies, particularly under the presidents Fox and Calderón from the right-wing Partido Acción Nacional (PAN, 2000-2012), contributed to the image of mining bonanzas in Mexico. More recently, debates revolve around the discovery of large deposits of lithium in clay in the northern state of Sonora. In light of conflicts surrounding extractivism and the lack of generated welfare, both for the people affected and for the national state, President López Obrador (AMLO) nationalised lithium activities in 2022, leaving contracts with the Chinese lithium giant Ganfeng International for the commissioning of the Bacanora Lithium mine in the Northern state of Sonora untouched. In the case of lithium, AMLO envisions national extraction of the mineral and the production of batteries, rhetorically referring to Bolivia as the role model for their intent to keep large parts of the lithium value chain in the country. Contrary to Ecuador, Mexico's integration into the world market is thus that of a semi-peripheral country. Natural resource exports as a share of the country's total exports amount to nearly 16 percent (UNCTAD 2021: 158) (See Table 1). The secondary and tertiary sectors of the economy contribute together more than 90 percent of GDP. Thereby, the medium and high-tech manufacturing value added has amounted to 41 percent on average during the last 25 years (World Bank 2023b). This means that Mexico is nowadays able to export major manufactured products such as machinery, transport and electrical equipment, chemicals, and petroleum products.³ During the juncture triggered by the energy transition, the growing intent to boost turbine manufacturing in Mexico itself can be attributed to the history of cooperation between Mexican and foreign companies in the machinery and manufacturing sector (e.g., with Germany).

	Fossil fuels	Agricultural products	Minerals, metals, and ores	Total Natural Resources
Ecuador	41.7 (mainly crude oil)	49.7 (mainly banana, and cocoa beans)	2.5	93.9
Mexico	5.8 (mainly crude oil)	7.4 (mainly vegetables)	2.7 (includes precious stones and non-monetary gold)	15.9

Table 1: Exports of Natural Resources as Share of Total Exports 2018-2019, Ecuador – Mexico (percentage)

Source: UNCTAD (United Nations Conference on Trade and Development) (2021): State of Commodity Dependence 2021. Geneva: UNCTAD.

3.2 Dependency on ‘cheap oil’ for domestic consumption

The latest energy balance of Ecuador shows that oil accounts for more than three-quarters of the energy needs of the population. The country generates one-fifth of its electricity supply by burning crude oil, oil products, and, to a lesser extent, natural gas. In addition, the land transport sector relies almost exclusively on oil products (diesel and gasoline). Furthermore, liquefied petroleum gas covers more than half of the needs of the residential sector, i.e., households (see Table 2). In contrast, the contributions of wind and solar power to the energy mix are still negligible (MEM 2021). To remedy this situation, Guillermo Lasso’s government intended to concede land areas with wind and solar potential to private enterprises (Decreto Ejecutivo No. 238, Quito, 26 October 2021).

Subsidies on oil products for domestic consumption, or ‘cheap oil’, reinforce their high penetration in the national energy mix. These were granted during the first Ecuadorian oil boom (1972-1981). Fifty years later, citizens regard subsidies on oil products as a natural consequence of living in a petro-state, a “quasi-naturalized right” derived from living in a natural resource-rich country (Alarcón/Peters 2020, 257). Historically, govern-

ments' attempts to cut such subventions frequently resulted in social unrest and political turmoil. During the latest episode in 2022, the maintenance of subsidies on transportation fuels (diesel and gasoline) was among the key social and economic demands of protesters. In 2019, protests triggered by the former president's plan to scrap subsidies on diesel and gasoline converged on a wave of protests related to energy prices, not only in countries of the Global South (McCulloch et al. 2022). Subsidies on oil products cost the Ecuadorian state an average of \$2.3 billion per year, the same amount that the country invests every year in public health (Schaffitzel et al. 2019; CEPALSTAT 2022).

Mexico's energy needs also rely heavily on fossil fuels. Oil and natural gas account for nearly 87 percent of the national energy demand. Almost two-thirds of the country's electricity generation depends on natural gas. As in Ecuador, the land transportation sector hinges on oil products. Liquefied petroleum gas, in turn, covers approximately one-third of the energy demand of households (SENER 2021) (see Table 2). We observe similar dynamics as in Ecuador, particularly protests tied to rising energy prices. Interestingly, in the late 2000s, former union members and workers of the dissolved state-owned electricity company *Luz y Fuerza del Centro* and its rebellious union of the SME (Sindicato Mexicano de Electricidad) joined forces with a movement against the high prices (*altas tarifas*) of the CFE (Comisión Federal de Electricidad), and, after being cut off from the grid, installed connections again (Kerkeling 2013). In the Isthmus of Tehuantepec, protesters against large-scale wind farms demanded cheap or free electricity for the people affected by various inequalities associated with the implementation of mega wind farms (Lehmann 2018). AMLO partly takes up this critique as an argument against legal changes to support renewables. In general, the energy policies of his government target the renewed strengthening of the state-owned oil company (Hernández Ibarzábal/Bonilla 2020).

In this context, two facts make the slope towards the energy transition far more slippery in Mexico and Ecuador: the strong penetration of fossil fuels and oil products in the domestic economy and the energy mix, on the one hand, and, on the other hand, the imperative of keeping energy prices low for end users, which might be understood as a natural demand of citizens living in natural resource-rich countries. Yet, the protest against

	Ecuador	Mexico
Fossil fuels participation in the domestic energy supply	81.6 (oil and natural gas)	86.9 (coal, oil, and natural gas)
Land transport sector	99.0 (diesel and gasoline)	99.0 (mainly diesel and gasoline)
Residential sector	51.8 (LPG)	34.5 (mainly LPG)
Electricity generation	20.1 (mainly oil products)	66.3 (mainly natural gas)

Table 2: Fossil Fuels Penetration in the Domestic Energy Demand 2020, Ecuador – Mexico (percentage)

Source: MEM (Ministerio de Energía y Minas) (2021). *Balance Energético Nacional 2020*. Quito: MEM; SENER (Secretaría de Energía) (2021). *Balance Nacional de Energía 2020*. Mexico, D.F.: SENER.

cuts in subsidies and high energy prices also reflects the inability of many low-income households to pay these prices and, therefore, their dependence on subsidies.

3.3 Socioecological inequalities and new sacrifice zones

Recent studies (see e.g., Voskoboynik/Andreucci 2022) highlight that the extraction of minerals and fossil fuels is bound to socioecological inequalities and the production of sacrifice zones, that is, spaces where environmental degradation, pollution, and the social impacts of energy infrastructures and mines are deemed to be necessary for the sake of ‘development’ or, more recently, ‘sustainability’. In some cases, these inequalities tend to be reproduced in renewable energy projects.⁴ Many of these inequalities have been politicised and fueled by conflicts concerning the relative distribution of costs and benefits. In the case of mining, negative impacts on local environments, or the lack of financial benefits for affected communities, recurrently aggravate socioecological conflicts between companies, states, communities, and protest movements, as well as within communities. It is important to note that while some communities demand

a share of the benefits from mining, others reject mining projects altogether (for Mexico see Torres Wong 2019). The creation of benefits via jobs and income is further bound to the materiality of the raw materials or the technology needed to extract, harvest, or harness them. In Mexico, large-scale wind farms, for instance, need a lot less workforce after the construction phase is completed, thus limiting job opportunities. Compensation for or donations to the community from the corporations or the state is often perceived as disproportionate to the demands of those affected and can even fuel social conflict, often exacerbating (historical) social conflicts in communities that are divided between supporters and opponents (e.g. Cruz Rueda 2011; Lehmann 2018). So far, the bulk of renewable electricity in the Mexican grid is generated in large hydropower dams in the poorer southern states, such as Chiapas. In general, studies highlight that the concrete sites of extraction and/or implementation of projects are situated to a large extent in the semi-/periphery, and are part and parcel of past, present, and future socioecological or eco-territorial conflicts (Svampa 2012), both in Ecuador and Mexico. Studies on extractivism agree on the core role of land relations in these conflicts (Dietz/Engels 2020; Jerez et al. 2021; Tittor 2020). Social science studies on energy stress renewable energy's need for land (McCarthy 2015), and in many parts of the world, land conflicts are central to contestation around renewables (e.g. Gorayeb et al. 2018). In Mexico, (unresolved) conflicts around land tenure and the political authority to decide on land use and land use change are at the core of conflict dynamics around renewable energies (Avila 2018), mining (Azamar Alonso/Téllez Ramírez 2022) and fossil fuel extractions (see the contributions in Tetreault 2020). This is strongly related to a (lack of) acknowledgment of Indigenous land titles and customary land tenure. The case of oil extraction in the Ecuadorian Amazon has received prominent attention via the political initiative to leave oil underground – the Yasuní ITT – which aligned not only with environmental and climate concerns but also with Indigenous rights (Alarcón/Rocha/Di Pietro 2018). The oil frontier of the Ecuadorian Amazon continues to be contested by Indigenous peoples. In Mexico, reloaded extractivism of fossil fuels seems to drive conflict in Zoque communities in Chiapas⁵, a state with both large oil deposits and the continuing presence of autonomous *Zapatista* communities taking a strong stance against extractive activities (Barreda 2007).

Conflicts involve further procedural issues and possible participation in decision-making. In general, energy, and mining policies in Mexico and Ecuador are under the authority of the central government. Yet, (Indigenous) social movements' struggles for participation rights, such as the right to be consulted on so-called development projects, resulted in some instruments which could, theoretically, increase the inclusion of affected communities in decision-making. While studies show that instruments such as Declaration 169 by the International Labour Organization (ILO) on the Free, Prior, and Informed Consultation or national legislation can support a mobilisation process and broaden the scope of political action (Llanes Salazar 2019; Dietz 2017), others highlight the (possible) reproduction of conflict dynamics, the impossibility of addressing structural inequalities (Rodríguez Garavito 2011), and the obstacles to realising consultations (Flemmer/Schilling-Vacaflor 2015). For Mexico, studies support this complex picture (Zarembeg et al. 2018). Yet, the implementation of consultation or other participatory mechanisms mostly happens after the first decisions on investment and siting are taken, thus shaping the conditions for a possible refusal – although, for instance in Ecuador, there have been cases when extractive projects have been stopped (see Vela-Almeida/Torres 2021). Additionally, a discourse on the necessity for the exploitation of raw materials and construction of infrastructure for the energy transition tends to focus debates on the 'how-to' and not the 'if', thus silencing critique (Backhouse/Lehmann 2019).

The possibility of voicing critique and participating in decision-making concerning extractive and energy projects tends to be exclusive and linked to repression. Studies on mining projects in Mexico tell us that company staff, together with municipal police and local elites in favor of mining activities, intimidate critics and different positions vis-à-vis mines, and that their possible impacts divide communities (Tetreault 2020). Extractive industrial activities as well as so-called developmental projects have a history of violent and deadly conflicts, with blurred lines between the power of local leaders, the so-called *caciques*, and violent actors of organised criminal groups as well as state officials (Jenss 2016). The same applies to renewable energy projects. Large hydropower dams in Mexico have a history of being linked to a 'development' strategy for electrification and irrigation, as well as a record of conflict, contestation concerning the

impacts for communities in and around the area-to-be-flooded (Sabás Vargas 2012), and violence, thus recalling what studies term a zone sacrificed in the name of ‘development’ (Del Bene et al. 2018).

4. ‘Just transition’ in Mexico and Ecuador? Discussion and outlook

Contextualising and scrutinising the ongoing energy transition is a necessary step in the direction of understanding how a transition can be termed ‘just’ in the sense of frameworks of energy, climate, and environmental justice. In the short term, truncated, incomplete, and controversial transition policies in the Global North as well as the current energy crisis in Europe might push Global Southern countries such as Mexico and Ecuador to deplete fossil fuel deposits, e.g. in the Ecuadorian Amazon region or the highlands of Southern Mexico. Furthermore, the development of e-technologies requires increasing amounts of metals and minerals; the geographical concentration of mineral deposits as well as volatile and currently rising prices remind us of the infamous case of fossil fuel extractivism. In the long term, green hydrogen production facilities will necessitate (currently inhabited) land for large-scale wind and solar farms, and unique conditions such as proximity to water sources and natural conditions (wind speed, solar radiation). Hence, green hydrogen, possibly destined for export to the Global North exclusively, might foster existing rentier dynamics or generate other types of rentierism, such as land and water rentierism.

We are tempted to see the reproduction of structural dependencies in the Global South as triggered by the current climate change-driven stage of capitalism, since rent generated by boosted mineral extractivism and possible green hydrogen exports does not escape the traditional logic of exporting raw material and energy resources to the world economy. Hence, the region’s historical position in the international division of nature remains untouched. In the process, vast territories of the Global South (might) turn into rentier societies or new sacrifice zones for the sake of the energy transition. Thereby, the region’s dependence on transition technologies and e-technologies will increase – despite attempts of Mexico to

develop renewable technologies in the country itself. Further, socioecological conflicts will be reconfigured, as protest movements both against reloaded extractivism and large-scale renewable energy projects reveal the reproduction of socioecological inequalities related to the distribution of costs and benefits. Protest in the context of socioecological conflicts reminds us of a broader critique of the natural resource-driven development model.

Whereas we emphasise that subsidies on ‘cheap oil’ products and protest movements against (green) extractivism are crucial to visualise the conditions and contradictions of the ongoing energy transition, we also highlight the role of the peripheral state during the current juncture. Albeit with differences, the national state is an arena where policies are and could be negotiated, in which the discourse on national development condensates. Nevertheless, the state-led natural resource-driven development model encounters progressively more opposition rooted in the increasing awareness of the negative socioecological consequences of (reloaded) extractivism. Yet, a ‘just transition’ would be contrary to rising energy prizes for the people in Mexico and Ecuador. Subsidised oil products for the satisfaction of basic needs such as transportation and cooking have cemented the idea that access to cheap energy services is a quasi-naturalised right in natural resource-rich countries – and a contradiction to the need to decarbonise; hence, it is central to rationalizing an emerging contradiction between the pursuit of ‘national development’ in peripheral societies and the quest for ‘globalized sustainability’ – and to develop policies that address energy poverty and support low-income households while preventing the use of fossil energy resources.

The question of how the transition can be financed in Mexico and Ecuador remains open. Well aware that the primary sector of the economy is essential to economic development, governments in both Ecuador and Mexico seem to be trying to manage the balancing act of attracting foreign capital while retaining the state’s grip on the energy sector. On the one hand, powerful hydrocarbon sectors are traditionally state-controlled and the strengthening of state-owned oil companies is often accompanied by a nationalist discourse touting them as motors of modernisation. Mining activities are regarded as the realm of the private sector; here, national states understand their roles as facilitators of legal frameworks, and state’s

support of mining companies often ends up relaxing environmental and labour regulations to attract foreign investment. On the other hand, despite Mexico possibly having an advantage in attracting foreign direct investment because of its large manufacturing sector, the corruption perceptions index of 31 (Transparency International, 2023) might become a hindrance⁶. Most natural resource-rich Global Southern countries face high borrowing costs that hinge on the country risk, which, in turn, depends mainly on internal conditions such as political stability. Since renewable energy infrastructure is often more capital-intensive than conventional power plants, snowballing external debt might be among the consequences of the pursuit of the energy transition in Mexico and Ecuador. Another open issue is the state's participation in the e-technology value chain. Whereas in the question of the state's natural resource rent appropriation, state-owned companies (in the oil sector) and taxation and royalties (in the mining sector) are essential, neither Mexico nor Ecuador has developed a consistent strategy regarding processing critical minerals before exportation. The same applies to the role of the state in international partnerships on the development of green hydrogen facilities. Yet, it would be misleading to bet only on the state's role. Whether the transition is going to be 'just' depends on social forces that contest current socioecological inequalities and the possible reproduction of conflicts and rentier dynamics related to attempts at energy transitions. Here, social mobilisation against lithium, copper or silver mining is equally as important as mobilisation for implementing laws on value chains or agreements such as the Escazú-Agreement, which emphasises the rights of affected neighbouring communities to participate in decision-making on extractive and energy projects.

1 The authors thank three anonymous reviewers for their helpful comments, as well as Mark Rebeck for the support in editing the text.

2 See www.camimex.org.mx, 6.10.2023.

3 See www.britannica.com/place/Mexico/Trade, 6.10.2023.

4 For an overview see EJAtlas: <https://blogs.ciencia.unam.mx/cienciamundo/2017/05/16/un-atlas-mundial-de-conflictos-socio-ambientales/>, 6.10.2023.

5 See <https://globalpressjournal.com/americas/mexico/hydrocarbon-exploration-threatens-indigenous-land-protectors-respond-art/>, 6.10.2023.

6 According to Transparency International (2022: 4), the corruption perceptions index scores 180 countries and territories by their perceived levels of public sector corruption, according to experts and business people. The world's average score is 43 (where 100 is very clean and 0 is highly corrupt).

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ABSTRACT Der Begriff ‚just transition‘ hat historisch gesehen seinen Ausgangspunkt in den Sorgen und Forderungen von Arbeiter:innen ‚schmutziger Industrien‘ des Globalen Nordens im Hinblick auf Umweltvorschriften und (mögliche) Auswirkungen auf ihre Arbeitsbedingungen und Arbeitsplätze. Zunehmend wird das Konzept verwendet, um auf soziale Gerechtigkeit beim Übergang zu einer kohlenstoffarmen Wirtschaft auf der Grundlage erneuerbarer Energiequellen hinzuweisen. Vor dem Hintergrund eines durch Klimawandel und Klimawandelpolitiken gekennzeichneten globalen Kapitalismus zeigen wir die Spannungen auf, die zwischen den Begriffen ‚nationale Entwicklung‘, ‚globale Nachhaltigkeit‘ und ‚just transition‘ entsteht, und argumentieren, dass die derzeitigen Transitionspolitiken und -pfade dazu tendieren, extraktivistische und rentieristische Logiken sowie sozialökologische Konflikte im Globalen Süden zu (re-)produzieren. Empirisch fokussieren wir auf die politische Ökonomie und politische Ökologie des heutigen Mexiko und Ecuador und zeigen Gefahren von Transitionspfaden auf, die eine ‚gerechte‘ Transition begrenzen.

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Gerechte Verkehrswende global – ein Analyseansatz

ABSTRACT Um bis 2050 klimaneutral zu werden, setzt die EU auf den Ausbau der E-Mobilität. Hierfür werden große Mengen Rohstoffe wie Kupfer, Kobalt oder Lithium benötigt, die vorwiegend aus dem globalen Süden importiert werden. Wie kann die Verkehrswende unter Berücksichtigung dieser globalen Dimension gerecht ausgestaltet werden? Anschließend an die „just transition“-Debatte entwickeln wir in diesem Beitrag einen theoretischen Rahmen zur Analyse der globalen Gerechtigkeitsdimensionen der Verkehrswende. Wir schlagen eine doppelte Erweiterung des „just transition“-Ansatzes vor: erstens, durch ein mehrdimensionales Konzept von Gerechtigkeit und zweitens durch eine räumliche, multiskalare Perspektive mittels des Ansatzes der globalen Produktionsnetzwerke. Unser Ziel ist so die transnationalen Risiken und potenziellen (Un-)Gerechtigkeiten der E-Verkehrswende sichtbar zu machen. Wir illustrieren unseren Ansatz anhand von drei Beispielen von Gerechtigkeitsforderungen im Zusammenhang mit dem Abbau von Kobalt, Kupfer und Lithium im Globalen Süden.

KEYWORDS just transition, Verkehrswende, globale Gerechtigkeit, grüner Extraktivismus, globale Produktionsnetzwerke

1. Einleitung

Ein Viertel aller CO₂-Emissionen in der Europäischen Union stammen aus dem Verkehrssektor, Tendenz steigend. Um die angestrebte Klimaneutralität bis 2050 zu erreichen, sollen laut EU-Kommission die Emissionen in diesem Sektor um 90 Prozent gesenkt werden (EU-Kommission 2019: 10). Hierzu setzt sie gemeinsam mit den Mitgliedsstaaten auf technolo-

gische Innovationen. Im Mittelpunkt der Maßnahmen steht der Ausbau nichtfossiler Antriebstechnologien, wie Elektro- und Wasserstoffverbrennungsmotoren. Ein grundlegender Wandel des auf individuelle Automobilität fokussierten Mobilitätsregimes in Europa ist nicht in Sicht (Manderscheid 2020; Haas 2021; Haas/Jürgens 2021). Bis zum Jahr 2030 sollen bis zu 30 Millionen emissionsarme Fahrzeuge in Europa zugelassen sein. Das entspräche einem Anteil von 16 Prozent der gesamten Fahrzeugflotte¹. Um diesen Anteil mittelfristig zu erhöhen, dürfen nach 2035 nur noch emissionsfreie Autos in der EU zugelassen werden, eingeschlossen Autos, die mit strombasierten synthetischen Kraftstoffen (*electrofuels*/E-Fuels) angetrieben werden². Der Großteil der emissionsarmen Fahrzeuge wird nach aktuellen Prognosen mit Elektromotoren, d.h. mit Lithium-Ionen-Batterien betrieben werden.

Der Beitrag von E-Autos zur Dekarbonisierung des Verkehrs ist offensichtlich: Sie emittieren während des Betriebs keine CO₂-Emissionen und können somit direkt zur Umsetzung einer klimaneutralen Verkehrswende beitragen. Inwiefern die E-Automobilitätswende allerdings einen Beitrag zu einer gerechten Verkehrswende aus einer mehrdimensionalen und globalen Gerechtigkeitsperspektive leistet, wird bisher erst in Ansätzen diskutiert. Dieser Frage widmen wir uns in diesem Beitrag. Wir argumentieren auf der konzeptionellen Ebene, dass die Analyse von globalen Gerechtigkeitsimplikationen der E-Mobilitätswende eine doppelte Erweiterung des „*just transition*“-Ansatzes erfordert. Mit einer doppelten Erweiterung sprechen wir uns zum einen für ein mehrdimensionales Konzept von Gerechtigkeit aus. Zum anderen erweitern wir Gerechtigkeit räumlich, d.h. multiskalar, mit dem Ziel, die transnationalen Risiken und potenziellen (Un-)Gerechtigkeiten der E-Verkehrswende sichtbar zu machen.

Wir betrachten in unserer Analyse ausschließlich die Rohstoffseite der E-Mobilitätswende.

Eine elektrifizierte Automobilität ist rohstoffintensiv (Chaydare et al. 2022). Damit die Ausbauziele in diesem Bereich erreicht werden, ist die EU auf Importe von Rohstoffen wie Kupfer, Nickel, Kobalt und Lithium angewiesen. Die Internationale Energieagentur (IEA) schätzt, dass die Nachfrage nach Lithium bis zum Jahr 2040 im Vergleich zu 2020 weltweit um das 43-Fache, nach Kupfer um das 28-Fache und nach Kobalt um das 21-Fache steigen wird (IEA 2021: 97). Die weltweit größten Vorkommen

dieser Rohstoffe befinden sich in Lateinamerika, Afrika und Asien. Europa verfügt zwar auch über eigene Lithiumvorkommen, etwa in Spanien und Portugal, die in den nächsten Jahren gefördert werden sollen (Dorn 2021; USGS 2022; Dunlap/Riquito 2023). Der Großteil des in der EU benötigten Lithiums und weiterer Metalle wird jedoch in den kommenden Jahren aus Ländern des Globalen Südens importiert werden. Der Ausbau der Elektroautoflotte in Europa hängt damit vom Zugang zu, der Aneignung von und Kontrolle über Rohstoffe in anderen Weltregionen und der europäischen Peripherie ab.

Der Fokus auf Rohstoffe verdeutlicht die grenzüberschreitenden, transnationalen Interdependenzen und Verflechtungen der E-Mobilitätswende. Zunehmend widmen sich Studien aus den Feldern der kritischen, postkolonialen Entwicklungsforschung, Politischen Ökologie und der Umweltgerechtigkeitsforschung diesen Zusammenhängen. Mit Konzepten wie „grüner Extraktivismus“, „grüner Kolonialismus“ und „grüne Opferzonen“ fragen sie nach den Ungleichheits- und Gerechtigkeitsimplikationen der Energie- und Verkehrswende im Globalen Norden für davon betroffene Regionen und Akteure im Globalen Süden (vgl. Voskoboynik/Andreucci 2022; Claar 2022; Zografos/Robbins 2020; Zografos 2022; Müller et al. 2022; Allan et al. 2022). An diese Diskussionen und an Arbeiten zu *just transition*, Umwelt-, Energie- und Klimagerechtigkeit knüpfen wir in diesem Beitrag an und erweitern sie um eine Akteursperspektive. Wir argumentieren in Anlehnung an die bestehende kritische Forschung, dass die Ausbeutung von Rohstoffen und Aneignung von Natur(-eigenschaften) (Land, Wasser, Wind, Sonne) im Globalen Süden zur Umsetzung von E-Mobilitätswenden in den Zentren des Globalen Nordens zu einer Verfestigung bestehender Ungleichheiten, internationaler Arbeitsteilungen und Machtverhältnissen zwischen dem Globalen Norden und Süden beiträgt (vgl. Lachapelle et al. 2017). Inwiefern diese Veränderungen kontextspezifische Ungerechtigkeiten reproduzieren oder verstärken hängt jedoch auch davon ab, wie betroffene Akteure die mit dem grünen Rohstoffboom verbundenen Veränderungen interpretieren und bewerten. Ausgangspunkt für unsere Überlegungen ist die Beobachtung, dass in der Forschung zu den globalen Gerechtigkeitsimplikationen von Transformationsprozessen zu E-Mobilität die Sichtweise von jenen Akteuren bislang fehlt, die für die Erreichung des EU-Ziels der Klimaneutralität bis

2050 von Rohstoffausbeutung und Naturaneignung im Globalen Süden betroffen sind.

Wir gehen wie folgt vor: Im ersten Abschnitt fassen wir die Debatten zu Gerechtigkeit in der globalen Nachhaltigkeitstransformation zusammen. Hierauf aufbauend schlagen wir einen dreidimensionalen Analyserahmen von Gerechtigkeit vor, den wir mit dem Konzept der Globalen Produktionsnetzwerke verbinden. Anhand von beispielhaften Konflikten um den Abbau von Rohstoffen für die E-Mobilitätswende – Kobalt, Lithium und Kupfer – in Lateinamerika und Afrika illustrieren wir, welche Ungerechtigkeiten von Betroffenen politisiert werden. Diese Beispiele zeigen, dass eine Ausweitung von Bergbau für „grüne Zwecke“ nicht von allen betroffenen Akteuren per se als ungerecht interpretiert wird. Unterschiedliche Klassen- und Geschlechterpositionen, soziale Verhältnisse, politisch-institutionelle Kontextbedingungen und historische Erfahrungen der Missachtung kultureller und politischer Rechte marginalisierter Gruppen provozieren unterschiedliche Gerechtigkeitsforderungen. Im Fazit diskutieren wir den analytischen Mehrwert unseres Ansatzes und formulieren ausgehend von unseren Beobachtungen Anforderungen an eine *global just transition* im Verkehrssektor.

2. Gerechtigkeit in der E-Verkehrswende – aktuelle Debatten

Mit dem Umbau zum E-Antrieb verändern sich die Rohstoffbedarfe der europäischen Automobilindustrie sowie die auf Verbrennungsmotoren spezialisierte Automobilindustrie selbst. Erwartet wird eine Reduzierung der Wertschöpfung um bis zu 30 Prozent und damit einhergehend ein Verlust an Arbeitsplätzen (Eder 2021: 25; Daum 2022). Arbeitnehmer*innen und Gewerkschaften fordern seit Jahren einen gerechten Übergang, eine *just transition* (vgl. Just Transition Research Collaborative 2018). Sie verbinden damit das Ziel eines sozial gerechten Umbaus der Automobilindustrie. Das beinhaltet, Arbeitsplätze zu erhalten, neue menschenwürdige Arbeit zu schaffen, mit sozialpolitischen Maßnahmen den Umbau zu flankieren und Lebens- und Einkommensgrundlagen der von den Veränderungen betroffenen Arbeiter*innen zu sichern. Im Kern geht es darum, den vermeintlichen Widerspruch zwischen Ökologie und Arbeit zu über-

winden und die Industrieproduktion zu dekarbonisieren ohne Arbeitsplätze zu opfern (Galgóczy 2019: 25; IG Metall 2017).

Diese auf den Nationalstaat oder einen Industriezweig gerichteten sozialen Gerechtigkeitsforderungen erweitern McCauley und Heffron (2018) in ihrem Vorschlag von *just transition* um weitere Gerechtigkeitsaspekte aus der Umwelt-, Energie- und Klimagerechtigkeitsforschung. Umweltgerechtigkeit bedeutet die Überwindung einer ungleichen Verteilung von Umweltrisiken, eines ungleichen Zugangs zu ökologischen Gütern (Wasser, Land, saubere Luft etc.) und der ungleichen Teilhabe an politischen Entscheidungen, die die Nutzung und Aneignung solcher Güter betreffen (Newell 2005; Pellow 2018). Die Umweltgerechtigkeitsforschung unterstreicht die wechselseitige Verwobenheit von sozialen Ungleichheiten basierend auf Klasse, Geschlecht, Herkunft und *race* und der Betroffenheit von Umweltrisiken (Pulido 1996; Martínez-Alier 1991). David Harvey (1996) betont, dass ökologische Entscheidungen niemals sozial neutral sind, ebenso wenig wie soziale und politische Entscheidungen ökologisch neutral sind (vgl. Sundberg 2008). Aus dieser Sichtweise sind die Natur selbst, die Formen ihrer Aneignung und die Art und Weise ihrer gesellschaftlichen Regulierung und Nutzung nicht sozial neutral, sondern immer schon vergeschlechtlicht, rassialisiert und durch Klassenverhältnisse geprägt.

Mit dem Konzept der Energiegerechtigkeit werden Fragen der Verteilungs-, Anerkennungs- und Verfahrensgerechtigkeit in Bezug auf die Produktion, Nutzung und Zugänglichkeit von Energie diskutiert (McCauley/Heffron 2018). Verteilungsgerechtigkeit bezieht sich auf den Zugang zu Energie, ihre Bezahlbarkeit und die Verteilung der Kosten und Gewinne der Energieproduktion. Anerkennungsgerechtigkeit bezieht sich auf die Beseitigung von Energiearmut, das heißt, die Anerkennung besonderer energiebezogener Bedürfnisse marginalisierter Gruppen. Verfahrensgerechtigkeit meint eine gleichberechtigte politische Teilhabe aller an energiepolitischen Entscheidungen (vgl. Jenkins et al. 2016). Klimagerechtigkeit beschreibt ergänzend die faire Verteilung der Kosten und Folgen der Klimakrise, die Überwindung der gesellschaftlich und global ungleichen Verteilung von Vulnerabilität und Möglichkeiten der Anpassung, die Anerkennung der historischen Klimaschuld des Globalen Nordens, die Reduzierung von Machtasymmetrien in der globalen Klimapolitik sowie

die Anerkennung kontextspezifischer, indigener und kultureller Wissensformen, Anforderungen und Praktiken im Umgang mit der Klimakrise (Bond 2012; Jenkins et al. 2016; Bulkeley et al. 2014).

Anknüpfend an diese Erweiterungen der „*just transition*“-Debatte haben Forscher*innen in den vergangenen Jahren die globalen Interdependenzen der grünen Energie- und Verkehrswende mit Begriffen wie „grüner Extraktivismus“ (Voskoboynik/Andreucci 2022), „grüner Kolonialismus“ (Claar 2022) oder „grüne Opferzonen“ (Zografos/Robbins 2020; Zografos 2022) konzeptualisiert. Grüner Extraktivismus meint eine Strategie der wachstums- und exportorientierten Rohstoffausbeutung zu grünen Zwecken, z.B. mittels Lithiumförderung. Ausbeutung und Inwertsetzung von Natur werden in dieser Strategie als mit Nachhaltigkeitszielen vereinbar und für diese notwendig dargestellt. Grünem Extraktivismus liegt ein Entwicklungs- und Modernisierungsdiskurs zugrunde, in dem die Ausbeutung von Rohstoffen als unausweichlich für nachhaltige Entwicklung und Klimaschutz konstruiert wird (Voskoboynik/Andreucci 2022). Aus der Sicht globaler Interdependenzen und Verflechtungen lässt sich grüner Extraktivismus als die „andere Seite“ der Nachhaltigkeitswende fassen. Mit dem Konzept der „grünen Opferzonen“ beschreiben Zografos und Robbins (2020) jene Orte, Naturen und Bevölkerungsgruppen, die von der Förderung von Rohstoffen oder der Installation von Infrastrukturen für die erneuerbare Energiegewinnung negativ betroffen sind. Ihre Lebensgrundlagen und -welten werden für grüne Ziele „geopfert“. Grüne Opferzonen entstehen in der globalen Peripherie und den peripheren Rändern der Zentren durch die Externalisierung sozialer und ökologischer Kosten der Verkehrswende. Ein Beispiel für grüne Opferzonen wären die Abbaugebiete von Kobalt in der Demokratischen Republik Kongo oder die andinen Salzseen in Chile. Mit dem Konzept knüpfen die Autoren an die Umweltgerechtigkeitsforschung und post- und dekoloniale Entwicklungskritik an. Sie argumentieren, dass der Herausbildung „grüner Opferzonen“ koloniale Denkfiguren und Logiken zugrunde liegen. Dies sei dann der Fall, wenn betroffene Bevölkerungsgruppen als „arm“ oder „rückständig“ konstruiert würden und die verfolgten Maßnahmen „Entwicklung“ im westlichen Sinne bedeuteten, z.B. durch Jobs und neue Einkommensmöglichkeiten (ebd.: 545). Koloniale Kontinuitäten und die Reproduktion kolonialer Ausbeutungs- und Machtverhältnisse durch die

Aneignung von Natur und Arbeit im Globalen Süden für die grüne Wende unterstreicht auch das Konzept des „grünen Kolonialismus“ (Claar 2022; Hamouchene 2022). Der Begriff beschreibt die Fortsetzung kolonialer Verhältnisse von Ausbeutung, Enteignung und Vertreibung von Bevölkerungen und Naturen im Globalen Süden im Kontext einer ungleichen erneuerbaren Energiewende. Darüber hinaus verweist der Begriff auf die Verfestigung einer hierarchischen Wissensordnung, in der die Lösungen für die globale Krise in westlichen, technologiebasierten Wissensformen und deren Universalisierung gesehen wird.

Die Diskussionen und Ansätze zu den globalen Interdependenzen der grünen Verkehrs- und Energiewende zeigen, dass diese in bestehende asymmetrische Machtverhältnisse zwischen dem Globalen Norden und Süden sowie in koloniale Logiken und Denkmuster eingebettet ist. So lässt sich die grüne Verkehrs- und Energiewende durchaus als eine fortgesetzte Geschichte kolonialer Ausbeutung und Wissensasymmetrien, eine Verfestigung der bestehenden internationalen Arbeitsteilungen und eine Vertiefung und Ausweitung der imperialen Lebensweise (Brand/Wissen 2017) verstehen. Letztere basiert auf der Aneignung und Ausbeutung von Rohstoffen und Arbeit im Globalen Süden sowie der Externalisierung sozialer und ökologischer Kosten einer rohstoffintensiven Lebensweise im Globalen Norden. Was den Ansätzen allerdings meist fehlt, ist die Einbeziehung betroffener und beteiligter Akteure, die Bedeutung innergesellschaftlicher Konflikte, Aushandlungen und Kontingenzen, die Rolle der Staaten sowie eine Offenheit gegenüber den rasanten geopolitischen Dynamiken der grünen Verkehrs- und Energiewende. Noch ist unklar, wie die zukünftige geopolitische Ökonomie des Verkehrs aussehen wird. Hier setzt unsere analytische Erweiterung an.

Hinsichtlich der Analyse von Gerechtigkeitsimplikationen zeigen die aktuellen Diskussionen, dass diese einem multi- und intersektorialen Ansatz (Arbeit, Umwelt, Energie, Klima etc.) unterliegen muss. Gleichzeitig bedarf es eines multidimensionalen Verständnisses von Gerechtigkeit. Denn es geht nicht nur um Verteilungsgerechtigkeit, sondern auch um Anerkennungs- und Verfahrensgerechtigkeit. Damit schließen die hier zusammengefassten Diskussionen an liberale Gerechtigkeitstheorien an, insbesondere an Arbeiten von Nancy Fraser (2003). Fraser definiert Gerechtigkeit als Umverteilung und Anerkennung, wobei beide Dimensionen untrennbar miteinander verbunden sind und nicht auf die jeweils andere

reduziert werden können. Anerkennungsgerechtigkeit bedeutet für sie, dass soziale Gruppen als vollwertige Partner anerkannt werden, während die Nichtanerkennung zu Marginalisierung, Diskriminierung und Ausgrenzung führt (ebd.: 44f.). Umverteilung bedeutet hingegen, dass verfügbare Ressourcen gleichmäßig an alle Mitglieder der Gesellschaft verteilt werden sollen, während die ungerechte Verteilung von Ressourcen zu klassenbezogener Benachteiligung führt. Unter Bedingungen der Verteilungsungerechtigkeit werden Mitgliedern einer Gesellschaft Ressourcen aufgrund von strukturellen Ungleichheiten, Eigentums- und Machtverhältnissen entzogen, die jedoch für eine volle gesellschaftliche Teilhabe erforderlich sind (ebd.: 28f.). Das normative Ziel von Frasers Gerechtigkeitskonzept ist die partizipatorische Parität, also die demokratische Teilhabe aller (Verfahrensgerechtigkeit) unter Gleichen, die sowohl Verteilungs- als auch Anerkennungsgerechtigkeit erfordert (ebd.: 54-56.).

3. Gerechtigkeit in der Verkehrswende aus globaler Perspektive – ein Analyserahmen

Wir beziehen uns in unserem Analysevorschlag in Anlehnung an Fraser (2003) und McCauley/Heffron (2018) auf drei Dimensionen der Gerechtigkeit: Verteilungs-, Anerkennungs- und Verfahrensgerechtigkeit.

Folgende Fragen orientieren die Analyse für jede Dimension:

1. Verteilungsgerechtigkeit: Wie werden die Kosten und Gewinne aus der Rohstoffgewinnung für die E-Mobilitätswende verteilt? Wie verändert sich der Zugang zu Arbeit und existenziellen Gütern (Land, Wasser, Luft) im Kontext des grünen Extraktivismus?

2. Verfahrensgerechtigkeit: Wie wird über die Nutzung von Rohstoffen für die E-Mobilitätswende entschieden und auf welcher Ebene? Wer partizipiert in diesen Entscheidungsprozessen, wer nicht? Wessen Stimme zählt, wessen Interessen sind vertreten?

3. Anerkennungsgerechtigkeit: Wessen echte und wessen Wissen wird im Rahmen der Ausbeutung von Rohstoffen für die E-Mobilitätswende anerkannt?

Das dreidimensionale Verständnis von Gerechtigkeit kombinieren wir mit dem Konzept der globalen Produktionsnetzwerke. Diese Erwei-

terung ist nötig, um ein multidimensionales Verständnis von Gerechtigkeit im Kontext der globalen Verflechtungen der Energiewende für die empirische Forschung operationalisierbar zu machen und politische Ansatzpunkte für transnationale Solidarität zu schaffen. Die bisherigen Beiträge zu grünem Kolonialismus, Opferzonen und grünem Extraktivismus, ebenso wie die globalen Gerechtigkeitsüberlegungen von Heffron/McCauley (2018), formulieren zwar eine pointierte Kritik an der Verkehrswende und nationalstaatlichen „*just transition*“-Konzepten. Es fehlt jedoch ein theoretischer Rahmen, der die Analyse von Gerechtigkeitsforderungen jenseits nationaler Grenzen anleitet. Globale Produktionsnetzwerke sind vernetzte Funktionen und Aktivitäten von Unternehmen und staatlichen Institutionen, über die Güter und Dienstleistungen produziert und verteilt werden. Sie sind nicht frei von Hierarchien und Machtasymmetrien (Coe et al. 2004). Globale Produktionsnetzwerke sind dynamisch, sie verbinden unterschiedliche Orte der Rohstoff- oder Energiegewinnung (z.B. Kupfer, Lithium und Kobalt) mit Orten der Weiterverarbeitung (z.B. Kupferschmelzen, Batteriewerken, Kobaltraffinerien), der Endfertigung (in Zulieferbetrieben und Automobilwerken) und Orten der Infrastruktur, Verteilung und Nutzung.

Wenn wir die räumlichen Dynamiken der Verkehrswende entlang globaler Produktionsnetzwerke berücksichtigen, können wir ihre Widersprüche und Zielkonflikte jenseits nationaler Grenzen erkennen. Dies ermöglicht es uns erst, die relevanten Akteure und Gruppen zu identifizieren, die von der Verkehrswende in Ländern des Globalen Südens betroffen sind und dort Gerechtigkeitsforderungen formulieren. Gleichzeitig können wir durch eine Analyse globaler Produktionsnetzwerke die Verantwortlichen für die Ungerechtigkeiten benennen. Indem wir globale Produktionsnetzwerke aufdecken, können wir zeigen, wie und auf welche Weise und von wem Rohstoffe gefördert, gehandelt und gekauft werden sowie außerdem die Akteure identifizieren, die die Macht haben, die Bedingungen der Rohstoffextraktion zu verändern.

Die Bedeutung globaler Produktionsnetzwerke für die unterschiedlichen Dimensionen von Gerechtigkeit an den jeweiligen Orten des Netzwerkes lässt sich nur unter Berücksichtigung der Wahrnehmung und „Perspektive der beteiligten Akteure heraus ableiten“ (Mayer 2008: 416). Daher

müssen wir für eine Analyse der Gerechtigkeitsimplikationen der E-Mobilitätswende aus einer globalen Perspektive und für politische Forderungen nach einer global gerechten Transition an die Forderungen der Akteure anknüpfen, die an verschiedenen Orten in den globalen Produktionsnetzwerken tätig sind (ebd.). Im Folgenden beginnen wir diese Analyse exemplarisch an den Orten der Rohstoffentnahme, am vorgelagerten Ende globaler Produktionsnetzwerke.

4. *Just Transition* am vorgelagerten Ende globaler Produktionsnetzwerke

Der Fokus unserer Beispiele liegt auf den Gerechtigkeitsforderungen von Protestakteuren in Konflikten um den Abbau von Rohstoffen, die für die E-Antriebswende kritisch sind: Kobalt, Kupfer und Lithium. Wir konzentrieren uns auf Konfliktfälle in Ländern, die über bedeutende Lagerstätten dieser Rohstoffe verfügen (US Geological Survey 2021) und bereits Teil etablierter Produktionsnetzwerke für die E-Mobilitätswende sind. Zudem konzentrieren wir uns auf Beispiele, deren Zusammenhang mit etablierten Produktionsnetzwerken für die E-Mobilitätswende bereits in der Literatur belegt wurde. Wir untersuchen die Fälle explorativ und exemplarisch, um Gerechtigkeitsforderungen zu identifizieren, die in unterschiedlichen Kontexten in Konflikten um die Ressourcengewinnung für E-Fahrzeuge artikuliert werden. Die identifizierten Forderungen sind nicht abschließend. Ihre Identifizierung dient vielmehr der Illustration von Gerechtigkeitsimplikationen am unteren Ende des Netzwerkes. Für die Darstellungen nutzen wir Sekundärliteratur, Regierungsdokumente, Berichte von NGOs, Unternehmen, Protestgruppen, internationalen und lokalen Medien sowie Datenbanken zu Bergbaukonflikten.

Gerechte Verteilung von Gewinnen und Arbeit: Konflikte um Kobalt. Die Demokratische Republik Kongo (DRC) hat die weltweit größten Kobaltvorkommen. Der industrielle, von internationalen Unternehmen betriebene Kobaltabbau in der DRC hat sich stark ausgeweitet, seit die Kongokriege Anfang der 2000er Jahre endeten und die globale Nachfrage nach Kobalt gestiegen ist. Dabei hat der handwerkliche Bergbau gelitten. Dies

wird im aktuellen Konflikt um die Tenke Fungurume Mine (TFM) deutlich, die seit 2019 mehrheitlich im Besitz des chinesischen Unternehmens China Molybdenum Co. ist. In diesem Konflikt stehen sich kongolesische handwerkliche Bergarbeiter*innen, der Minenbetreiber und der Staat gegenüber. Der handwerkliche Bergbau stellt für viele Haushalte in der DRC eine wichtige Einkommensquelle dar (Sovacool 2021). Er ist im Vergleich zum industriellen Bergbau arbeitsintensiv und erfordert einen geringen Einsatz von Kapital und Technologie. Oft schürften handwerkliche Bergarbeiter*innen in den heutigen Konzessionsgebieten von transnationalen Unternehmen nach Kobalt, was nicht immer geduldet wird. Im Jahr 2005 begann TFM, handwerkliche Kobaltschürfer*innen gewaltsam aus seinen Konzessionsgebieten zu vertreiben, was bis heute zu Konflikten führt (Rubbers 2020). Protestakteure, insbesondere organisierte handwerkliche Kobaltschürfer*innen und ihre Unterstützer*innen, fordern eine gerechte Verteilung der Gewinne, den Zugang zum Rohstoff und zu Arbeit in den Minen (International Crisis Group 2020; Niarchos 2021; Radio Okapi 2019).

Ökologische Verteilung und die Anerkennung indigener Rechte, Konflikte um Lithium. Lithium ist ein Metall, das für die Herstellung von Lithium-Ionen-Batterien benötigt wird. Wichtige Vorkommen liegen in den andinen Salzseen der Grenzregion von Chile, Argentinien und Bolivien, dem sogenannten Lithiumdreieck. In den letzten 15 Jahren ist die Lithiumproduktion in allen drei Ländern gestiegen, und in allen Ländern protestieren vor allem indigene Bevölkerungsgruppen gegen den Lithiumabbau (Dorn 2021). Ein Konflikt um den Lithiumabbau, den wir hier exemplarisch betrachten, ist der Konflikt um den Salar de Atacama in der Region Antofagasta im Norden Chiles. Seit 2010 ist die Produktion hier stark gestiegen. Die indigenen Gruppen der Region, die Atacameños, fürchten den Verlust territorialer Kontrolle und die Degradierung von Wasser und Umwelt (Riofrancos 2021).

Die Lithiumförderung ist wasserintensiv; eine Übernutzung der Wasserressourcen beeinträchtigt den Grundwasserspiegel und hat Konsequenzen für die Sicherung der Lebensgrundlagen der ansässigen indigenen Bevölkerung, die in den ariden Gebieten von Landwirtschaft lebt (Gundermann/Göbel 2018). Unterstützt von einer plurinationalen Allianz

der Anden-Salzseen (Observatorio Plurinacional de Salares Andinos, OPSAL) und der regionalen NGO Fundación Tanti protestieren die Atacameños seit Jahren gegen die intensive Wassernutzung durch den Lithiumabbau (Observatorio Plurinacional de Salares Andinos 2021). Sie fordern Verteilungsgerechtigkeit in Bezug auf die Nutzung von und den Zugang zu Wasser (OCMAL 2020) sowie hinsichtlich der Gewinne aus dem Lithiumabbau, von denen sie bisher wenig profitieren (Boddenberg 2018). Darüber hinaus fordern die Atacameños auch die Anerkennung indigener Rechte auf Konsultation und territoriale Selbstbestimmung, die sie mit der Ausweitung des Lithiumbergbaus missachtet sehen (Gundermann/Göbel 2018). Auf diese Weise verknüpfen indigene Bevölkerungsgruppen in Konflikten um Lithiumabbau Forderungen nach Anerkennungs- und Verteilungsgerechtigkeit mit dem Ziel, als Gleiche über den Lithiumbergbau in ihren Territorien mitzubestimmen.

Verteilungs-, Anerkennungs- und Verfahrensgerechtigkeit, Konflikte um Kupfer. Kupfer ist ein weiterer kritischer Rohstoff für die Umstellung auf nachhaltige Antriebe. Ein Land mit hohem Vorkommen ist Peru. In den letzten 20 Jahren hat Peru seine Kupferproduktion stark ausgeweitet und ist nach Chile der zweitgrößte Kupferproduzent weltweit. Kupfer wird im Tagebau von transnationalen Unternehmen abgebaut. Ein umstrittenes Projekt ist die Kupfermine Las Bambas, die von dem chinesischen Unternehmen Minerals and Metals Group (MMG) betrieben wird. Protestierende gegen die Las-Bambas-Mine, meist indigene Kleinbauern und -bäuerinnen, fordern die gerechte Verteilung der Gewinne aus dem Kupferbergbau, die Anerkennung ihrer Rechte sowie Verfahrensgerechtigkeit. Dies beinhaltet eine demokratische Mitbestimmung in rohstoffpolitischen Entscheidungen, die Schaffung von Arbeitsplätzen für die lokale Bevölkerung, Entschädigungszahlungen für begangenes Unrecht in der Vergangenheit und eine Gewinnbeteiligung (Reuters 2016). Darüber hinaus fordern sie die Verantwortungsübernahme des Unternehmens für Umweltschäden und die Anerkennung des Rechts auf Mit- und Selbstbestimmung. Verfahrensgerechtigkeit ist jedoch nicht nur eine Forderung der indigenen Bevölkerung, sondern auch der lokalen Regierung, die sich von den Entscheidungsprozessen im Rohstoffsektor ausgeschlossen fühlt.

5. Anforderungen an eine *global just transition* im Verkehrssektor

Forderungen nach einer *just transition* werden nicht nur von Fabrikarbeiter*innen, Gewerkschaften und Konsument*innen im Globalen Norden formuliert, sondern auch von Arbeiter*innen und lokalen Bevölkerungsgruppen am vorgelagerten Ende der E-Verkehrswende, nämlich an den Orten der Ausbeutung der hierfür notwendigen Rohstoffe. Gerechtigkeitsforderungen, die hier formuliert werden, sind unterschiedlich, kontextabhängig und erscheinen teilweise widersprüchlich. In den skizzierten Konflikten um Bergbau fordern einige Protestakteure Umweltgerechtigkeit, andere Verteilungsgerechtigkeit in Form eines gerechten Zugangs zu gut bezahlten Arbeitsplätzen und einer gerechten Verteilung der Gewinne. Dritte fordern die Anerkennung ihrer kulturellen und politischen Rechte.

Welche Gerechtigkeitsforderungen in Konflikten um die Ausbeutung von Rohstoffen für die E-Verkehrswende politisiert werden, ist von vielfältigen Faktoren abhängig: etwa dem Standort der Mine, ihren ökologischen und sozialen Auswirkungen, lokalen und nationalen Gesetzgebungen, dem Handeln lokaler, staatlicher und privatwirtschaftlicher Akteure, vergangenen politischen Kämpfen und Ungerechtigkeiten, oder der Vernachlässigung und Nichtanerkennung von Rechten (Dietz/Engels 2020; Conde/Le Billon 2017). Die Frage, welche Anforderungen sich an eine *just transition* entlang globaler Produktionsnetzwerke stellen, ist mithin bis zu einem gewissen Grad kontextabhängig und lässt sich damit nur empirisch beantworten. Unabhängig von den kontextbezogenen Unterschieden belegen die zusammengefassten Gerechtigkeitsforderungen jedoch, dass betroffene Akteure um Arbeit, den Erhalt ihrer Lebensgrundlagen, die Vermeidung von Umweltschäden, die Teilhabe an Gewinnen, die Anerkennung kultureller Rechte und die demokratische Mitbestimmung kämpfen (siehe auch Prause/Le Billon 2020; Conde/Le Billon 2017). Es geht in den Kämpfen um Verteilung und Anerkennung und in der Kombination aus beidem um demokratische Teilhabe.

Die Berücksichtigung von Gerechtigkeitsanforderungen am vorgelagerten Ende der E-Verkehrswende hat analytische und politische Konsequenzen. Analytisch reicht es nicht aus, Fragen von Gerechtigkeit an die Verkehrswende auf nationaler Ebene oder bezogen auf einen einzelnen

Gerechtigkeitsaspekt zu analysieren. Auch ist es nicht hinreichend, globale Verflechtungen in der E-Verkehrswende anzuerkennen und daraus universelle Gerechtigkeitsanforderungen abzuleiten, ohne empirisch die Gerechtigkeitsforderungen von Akteuren am vorgelagerten Ende globaler Warenketten zu berücksichtigen. Hierzu müssen jedoch die Flüsse der Rohstoffe durch globale Produktionsnetzwerke erst nachgezeichnet werden, um die relevanten Akteure im Globalen Süden zu identifizieren, die von der E-Mobilitätswende betroffen sind, und ihre Verknüpfung zu spezifischen Automobilkonzernen herzustellen. Häufig weisen bestehende Analysen auf neue Umweltzerstörung als zentrales Gerechtigkeitsproblem beim Abbau von Kobalt, Lithium oder Kupfer hin (siehe z.B. Bainton et al. 2021). Wie das Beispiel des Kobaltabbaus aus der DRC gezeigt hat, ist dies jedoch nicht unbedingt eine zentrale Gerechtigkeitsforderung der betroffenen Gruppen vor Ort. Dies birgt die Gefahr, Stimmen aus dem Globalen Süden auszuschließen, und verpasst die Chance, eine weniger eurozentrische und vielfältigere Vision einer kohlenstoffarmen Mobilität zu entwickeln.

Politisch müssen Gerechtigkeitsforderungen, die jenseits von europäischen Standorten und Konzernen formuliert werden, überhaupt erst zur Kenntnis genommen werden, damit sich eine transnationale Vorstellung von gerechter Transition und in Folge eine transnationale Solidarität zwischen denjenigen, die für sie kämpfen, herausbilden kann. Die mehrdimensionalen Forderungen nach einer gerechten Rohstoffförderung in der DRC, Chile und Peru kommen in den europäischen gewerkschaftlichen „*just transition*“-Forderungen nicht vor (vgl. Sheller 2018). Dieser Ausschluss von Gerechtigkeitsforderungen aus dem Globalen Süden birgt die Gefahr, mit den auf den nationalen Kontext bezogenen Kämpfen um eine *just transition* in Europa globale Ungerechtigkeiten zu verschärfen, statt sie zu reduzieren (Castán Broto et al. 2018). Transnationale Solidarität wird so nahezu unmöglich, denn diese ist auf ein Klassenbewusstsein angewiesen, das sich nur in gemeinsamen Kämpfen entwickeln kann und nicht mit einer nationalstaatlichen und konzernorientierten Standortpolitik vereinbar ist (Eder 2021; Eder/Schneider 2018). Der Ansatz der globalen Produktionsnetzwerke ermöglicht es hierbei, direkte Zusammenhänge zwischen Automobilkonzernen im Globalen Norden und den Gruppen im Globalen Süden herzustellen, deren Lebensgrundlagen durch die

Rohstoffextraktion bedroht ist und die dagegen protestieren. Eine Analyse globaler Produktionsnetzwerke ermöglicht eine klare Zuschreibung von Verantwortung und bietet Ansatzpunkte für transnationale Solidarität. Wenn klare Verknüpfungen nachgewiesen werden können, könnten zum Beispiel die Gewerkschaften und Arbeiter*innen aus der deutschen Automobilbranche über die Betriebsräte eine betriebliche Öffentlichkeit für die Forderungen von betroffenen Gruppen wie Arbeiter*innen, Bauern und Bäuerinnen und handwerkliche Kobaltschürfer*innen im Globalen Süden herstellen.³ Andreas Bieler (2014: 122) argumentiert, dass die Entstehung transnationaler Solidarität in Arbeitskämpfen nicht primär durch die strukturellen Bedingungen kapitalistischer Produktion bestimmt wird, sondern von den Kämpfen selbst. Dies gilt auch für die Kämpfe um einer *just transition* im Verkehrssektor.

6. Fazit

Im vorliegenden Beitrag haben wir uns auf Nancy Frasers Forderung nach partizipativer Parität sowie auf bestehende Diskussionen und Ansätze zur Analyse globaler Gerechtigkeitsimplikationen der Nachhaltigkeitswende berufen, um zu argumentieren, dass Konzepte für eine *just transition* hin zu einer kohlenstoffarmen, inklusiven Mobilität den nationalen Rahmen verlassen und eindimensionale Vorstellungen von Gerechtigkeit überwinden müssen. Stattdessen erfordert eine gerechte Zukunft der Mobilität aus globaler Perspektive innovative und offene demokratische Räume, um neu zu definieren und auszuhandeln, wie diese Zukunft aussehen kann. Diese Aushandlung muss alle Akteure entlang der globalen Produktionsnetzwerke einbeziehen. Basierend auf den von uns identifizierten Gerechtigkeitsforderungen erfordert eine globale *just transition* von Mobilität Maßnahmen, die allen Akteuren im Produktionsnetzwerk eine gleichberechtigte Beteiligung an der Gestaltung dieser Transition ermöglichen. Dazu gehört die gerechte Verteilung von Gewinnen im Produktionsnetzwerk, um die Lebensgrundlagen der Arbeiter*innen zu sichern und eine gesellschaftliche Teilhabe und Repräsentation zu gewährleisten. Außerdem müssen Umweltungerechtigkeiten bekämpft und politische, kulturelle und soziale Rechte auf Selbstbestimmung und politische Teil-

haben anerkannt werden. Wo die Förderung von Rohstoffen für eine Mobilitätswende bestehende Lebensgrundlagen zerstört, territoriale Rechte auf Selbstbestimmung missachtet, Arbeit vernichtet oder massiv ausbeutet und Umweltfolgen ungleich verteilt werden, kann es keine *just transition* geben. Angesichts des hohen Rohstoffbedarfs für die E-Mobilität bedeutet dies, dass nicht jedes Fahrzeug mit Verbrennungsmotor durch ein E-Fahrzeug ersetzt werden kann. Ein ressourcenintensiver Übergang zur E-Mobilität, der auf individueller Automobilität basiert und von privatwirtschaftlichen Unternehmen kontrolliert wird, ist aus einer globalen Perspektive ungerecht.

- 1 Siehe www.consilium.europa.eu/de/infographics/fit-for-55-afir-alternative-fuels-infrastructure-regulation/, 30.5.2023.
- 2 Siehe www.bmuv.de/pressemitteilung/eu-mitgliedstaaten-machen-weg-frei-fuer-emissionsfreie-pkw-ab-2035, 30.5.2023.
- 3 Für ein Beispiel transnationaler Organisation entlang von Lieferketten in der Bekleidungsindustrie siehe www.exchains.org/exchains_newsletters/2015/ExChains_Strategie_2015_screen.pdf, 30.5.2023.

Danksagung

Wir danken Alina Meike Heuser, Adriana Cancar und Sophie Gleitsmann für ihre großartige Unterstützung bei der Datenerhebung, Literaturrecherche und redaktionellen Bearbeitung. Timo Daum und Michael Reckordt danken wir für wertvolle Hinweise und Gedanken.

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ABSTRACT The EU aims to be carbon neutral by 2050. A key aspect of its decarbonisation strategy is the electrification of the transport sector. To increase the share of electric vehicles, the EU relies heavily on imports of raw materials such as copper, cobalt or lithium from the Global South. How can the e-mobility transition become a just transition that takes this global dimension into account? Drawing on current debates around the 'just transition', we develop a theoretical framework to analyse the global justice implications of the e-mobility transition. We propose a twofold extension of the 'just transition' approach through, first, a multi-dimensional concept of justice and, second, a spatial, multi-scalar perspective using the global production networks approach.

We aim to make visible the transnational risks and potential injustices associated with the e-mobility transition. Three examples of justice claims related to the extraction of cobalt, copper and lithium in the Global South are used to illustrate our approach.

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MIKULÁŠ ČERNÍK, MARTIN ČERNÝ, PATRIK GAŽO, EVA FRAŇKOVÁ
Beyond a Czech-The-Box Exercise: Proposals for Meaningful
Stakeholder Participation in the Just Transition

ABSTRACT *The post-carbon transition presents an opportunity to address the inequalities in economic and political power faced by (semi-)peripheral regions. One such opportunity is the European Union's (EU's) just transition policies. However, the EU's policies fall short in terms of questioning existing socio-economic and power inequalities. Their implementation often relies on technocratic measures and selective expert advice. Particularly in the semi-peripheral regions of Central and Eastern Europe, meaningful – as opposed to 'pro forma' – participation of all stakeholders in formulating just transition policies is lacking. Using the Czech Republic – a major brown coal producer in the EU – as an illustrative case, we examine the existing obstacles to such meaningful participation and propose how to achieve it. We suggest that meaningful participation requires the direct involvement of diverse, especially underrepresented groups, such as workers in the industries at risk of job losses, and the shifting of the role of experts from a position of privilege to an equal position with non-expert stakeholders. We conclude that involving all affected stakeholders through deliberative methods opens a space to diverse just transition policies. Such policies would create an opportunity to challenge the dominant development narrative proposed by core countries and institutions.*

KEYWORDS *just transition, meaningful stakeholder participation, coal phase-out, semi-periphery, post-normal science*

1. Introduction

We live in a world of rising temperatures and inequalities (IPCC 2023; Chancel et al. 2022). These two challenges are interlinked (Diffenbaugh/

Burke 2019; Gore 2021) and should be addressed simultaneously (Rockström et al. 2023). Just transition is one of the concepts that embodies these insights, by trying to reconcile ambitious decarbonisation goals with social well-being (European Commission 2021; Morena et al. 2020).

Just transition mirrors the whole range of approaches to sustainability and justice, from techno-optimist fixes to deep social-ecological transformations (Brand 2016; Christoff 1996). While potentially offering opportunities for balancing existing structural inequalities within and among countries or regions (Garvey et al. 2022; McCauley/Heffron 2018), its actual impacts can materialise in quite the opposite way and further deepen current vulnerabilities, injustices and inequalities (Sovacool et al. 2021). These dynamics can often be (re)produced between the core and (semi-)peripheral regions (Cairó-i-Céspedes/Palacios Cívico 2022; Gagyí 2021; Golubchikov/O'Sullivan 2020).

Even the countries of the core – often considered pioneers of climate change mitigation (Torney 2019) and just transition – often struggle to fulfil the expectations of achieving climate, energy and environmental justice at the same time (McCauley/Heffron 2018; Sovacool et al. 2021; Zografos/Robbins 2020). The task is even more challenging for regions of the (semi-)periphery, which are more reticent to adopt climate mitigation policies, such as the post-communist countries of Central and Eastern Europe (CEE) (Četković/Buzogány 2019; Gündüzyeli/Moore 2020).

The Czech Republic serves as a vivid example of such a country, combining remarkable socio-economic dependence on coal extraction and car manufacturing (Gažo et al. 2022; Sivek et al. 2020), often concentrated in long-term structurally disadvantaged regions (Frantál et al. 2022), with weaker trust in public institutions and policies (Horáková 2020). Just transition in this context is thus urgent (European Commission 2023), sometimes hotly debated (Galgoczi 2019), yet not successfully implemented.

Public participation is often seen as a tool that can improve the legitimacy and acceptance of implemented policies (Birnbaum 2016). Many authors agree that meaningful participation (Roche 2020) – as opposed to a merely formal involvement of stakeholders – is a crucial tool which can not only minimise the negative social impacts of decarbonisation, but also provides an opportunity to transform the current socio-economic and power imbalances in order to avoid their (re)production (Morena et al. 2020; Stevis/Felli 2015). Nevertheless, specifically in the context of the EU

Just Transition Mechanism, there is a lack of genuine stakeholder participation (Moesker/Pesch 2022).

The goal of this paper is therefore to explore the potential for meaningful participation that aims at significant structural changes towards sustainability and justice in the context of an EU semi-periphery. By analysing the barriers to meaningful participation, we suggest principles and methods to overcome them. The EU semi-peripheral context is instructive since it is not primarily advantageous to the spirit of just transition. Participation that goes beyond a ‘check-the-box-exercise’, i.e. beyond its ‘pro-forma’ version (Roche 2020) that only formally follows the EU (or any other) guidelines often prevails, thereby running the risk of reproducing or deepening existing socio-economic and power inequalities.

In Section 2, we discuss the role and use of participation in different notions of just transition, and argue that it is crucial to engage large, hard-to-reach and heterogeneous groups such as workers and local residents. In Section 3, we scrutinise existing attempts at participation and identify the main barriers to meaningful participation as based on the Czech experience (but relevant also to other countries and regions in a position of economic dependency). In Section 4, we outline several principles and methods to address these shortcomings. We argue that the roles of expert and non-expert stakeholders need to be redefined in order to open up a space for diverse just transition policies. We underpin our arguments with reference to post-normal science (PNS), which proposes the incorporation of non-expert knowledge into decision-making processes. Finally, we synthesise implications for the development trajectories of the regions that are subject to just transition policies. Section 5 draws together our conclusions.

2. Just transition(s) and the role of participation

2.1 Approaches to just transition and their resonance in the EU context

The concept of just transition originated in the 1980s at the intersection of the trade union and environmental movements, and demanded that environmental interventions be coupled with social policies securing workers’ rights and livelihoods (ITUC 2015; Morena et al. 2020). In the

context of climate change, its ambition is to represent “a set of principles, processes and practices that aim to ensure that no people, workers, places, sectors, countries or regions are left behind in the transition from a high-carbon to a low carbon economy” (IPCC 2022). Stakeholder participation is seen as a crucial demand of just transition (Wang/Lo 2021).

Despite the ambitious aspiration of ‘no one left behind’, most just transition institutions and policies (such as the EU’s Just Transition Mechanism) are not based on a profound critique of the socio-economic and power relations associated with existing social and climate inequalities among and within regions (Akgüç et al. 2022; Brand 2016). Instead, they align more closely with a so-called ecological modernisation approach, where policies are frequently designed from the top-down by bureaucrats, politicians, experts and businesses, all aiming for green growth (Pichler et al. 2021).

The EU’s just transition policies and mechanisms often blend ‘strong’ and ‘weak’ conceptions of ecological modernisation (Dias et al. 2020), where participation levels differ. While there is an attempt to involve diverse actors in a participatory manner and reform certain economic and institutional structures (‘strong’ ecological modernisation), the practical implementation tends to be ‘weak’, rigid, and technocratic, with a focus on expert and technological solutions to complex challenges (Rösch/Epifanio 2022).

This contrasts with a social-ecological approach to just transition, which challenges the very idea that the growth-based economy and the capitalist mode of production can be transformed into a socially and environmentally sustainable system (Brand et al. 2021). The social-ecological approach strives for more equitable socio-economic arrangements and power relations, democratisation of the economy and socialisation of production. It is also characterised by a stronger emphasis on the intensive participation of transition-affected groups (Barca 2014, 2012; Kreinin 2020; Räthzel/Uzzell 2011; Stevis/Felli 2015).

In the countries and regions of CEE, and notably in the Czech Republic, both weak and strong ecomodernist conceptions have some standing (Patočka 2020). However, even the weak notion of ecological modernisation in the CEE region meets with substantial criticism (Gürtler/Herberg 2023; Skoczkowski et al. 2020). On the other hand, even

some social-ecological initiatives are present (Re-set 2022), but with rather a minor bearing on the public sphere (Lehotský/Černík 2019). As we argue in Section 3, this situation brings a specific set of challenges for meaningful participation.

2.2 How to define meaningful participation

In the “Governance of Transitions” toolkit (Roche 2020), the European Commission promotes ‘meaningful’ participation in contrast to ‘pro forma’ participation, where the latter only formally addresses the task. Still, the term is used there rather loosely, referring in general terms to ‘awareness raising’, ‘stakeholder empowerment’ and ‘effective participation’. Thus, for more nuanced insights, we make use of typologies of civic participation from other areas of governance.

According to Yeh (2020), participation is meaningful when (1) the purpose and the process are clearly understood by the participants, and (2) when the participants have appropriate opportunities to shape the outcomes of the process. Therefore, the desired process is transparent and continuous, based on mutual exchange of information between the stakeholders and the administrators (Yeh 2020).

To gain a more nuanced understanding of the levels of stakeholder participation, Pretty (1995: 1252) developed a useful typology (original descriptions were shortened):

1. Manipulative participation: fake participation with no real power.
2. Passive participation: stakeholders are informed about what is or was already being decided, and what the outcome is.
3. Participation by consultation: stakeholders provide information about their opinions or preferences, but do not have any decision-making power.
4. Participation for material incentives: stakeholders provide resources (e.g. knowledge, time, labour etc.) in exchange for a reward (financial or other).
5. Functional participation: the process might be interactive and might involve joint decision-making, but the main steps are taken outside the participatory process.
6. Interactive participation: stakeholders participate in the preparation of the decision-making and its rules. Participation is seen as a right.

7. Self-mobilisation: the initiative comes from the stakeholders, who fully control the process. Institutions and experts provide technical and facilitation support.

Pretty's typology is close to others such as the "ladder of citizen participation" of Arnstein (1969) that groups levels of participation into three main blocks: non-participation, tokenism (superficial or symbolic efforts at inclusion, especially of underrepresented groups), and citizen power (Arnstein 1969). Similarly, White (1996) defines four main types of participation: nominal, instrumental, representative and transformative. All these approaches share the view that at one end there is a 'fake' participation (the 'pro-forma' participation). Then there is a 'middle' level (tokenism, instrumental and representative levels) that gives stakeholders some decision-making power, but the framing and control is still external. This corresponds to the ecological modernisation approach. The 'highest' level of the participation ladder then corresponds to the ideas of the social-ecological approach, where participation is seen as an end in itself, and as a (potentially) transformative tool (White 1996).

While we use the term 'meaningful participation' mainly in the sense of Yeh (2020) and referring to the 'highest' level of the participation described above, the key aspect is an appropriate combination of the participation levels (with the exception of manipulative and fake participation) in a comprehensive participation plan (see e.g. OECD (2022)). Only after deciding (1) whether and (2) with what objectives participation should be carried out at all, and (3) basing this on a thorough stakeholder mapping, can a combination of methods be chosen and appropriate communication, implementation and evaluation planned. In particular, identifying relevant stakeholders is crucial, as reaching out to them – and including the hard-to-reach and most affected, though not necessarily the most influential stakeholders – is essential for meaningful participation (OECD 2017).

2.3 Who is the (relevant) stakeholder?

Although there is a vast amount of literature on identifying stakeholders (e.g. Bendtsen et al. 2021; Colvin et al. 2016; Leventon et al. 2016; Luyet et al. 2012; Reed 2008; Reed et al. 2009; Sharpe et al. 2021), the oper-

ationalisation of how to delimit large, loosely defined and vaguely represented groups remains challenging. In a thematically and geographically related case study mapping stakeholder perspectives on climate change in the Polish coal region of Silesia, Skoczkowski et al. (2020: 468) list the following stakeholder groups:

- Public administration: ministries; regional councils; local municipalities; public institutions, such as job centres;
- Private sector: industrial companies in declining sectors; companies in emerging sectors; the unions of employers; chamber of commerce;
- Experts/academia (representing different opinions on the future of coal in the region);
- (E)NGOs; civil society organisations;
- Banking sector.

Interestingly enough, the two biggest groups of stakeholders by size, i.e. local residents and workers employed in the sectors concerned, are not on the list. In societies with representative democracy, it is generally expected that the opinions and interests of these large groups are advocated by their respective representatives: namely local residents by (local) politicians and workers by trade unions. However, as we demonstrate in Section 3.2, in the case of Czech workers affected by transition, this assumption is not necessarily realised in practice – in reality, the choice of stakeholders is often rather selective and arbitrary.

According to Jessop (1999), the exclusion of certain actors from policy-making is a reflection of the power that specific economic classes hold within state institutions. This selectivity is ingrained in the structure of the system and is also evident in the actions of the actors involved. These actors make, in Jessop's words, 'strategic calculations' – decisions on whom to factor in and whom not – based on the prevailing structural conditions, which further perpetuate the exclusion of certain groups from participating in the policy-making process (Jessop 1999). Such 'meta-power', influencing who has the ability to influence policy debates, processes and outcomes, constitutes the conditions for participation in a way that omits certain important groups from the decision-making processes and thus predetermines the results so as to reinforce current inequalities (Malin et al. 2019).

To avoid reproducing such inequalities, just transition needs to address power imbalances. As the ecological modernisation approaches generally lack these considerations (Gibbs 2009), meaningful participation within just transition goes more effectively along with the social-ecological approach that emphasises the unequal distribution of power and wealth in the capitalist system (Stavis/Felli 2015). Practically, this implies that once having striven for meaningful participation, it is necessary to actively work for the integration of underrepresented stakeholders in order to open up the space to a plurality of perspectives on what needs to be achieved and by what means.

3. Barriers to meaningful participation from the Czech experience

3.1 Czech semi-peripheral context

Given its geographical location in Central Europe and annual GDP per capita, the Czech Republic could be described as a high-income country that belongs to the global economic core. However, considering the disparities in political and economic power relations between the countries within the EU and between the extraction-dependent regions within the country, it is more accurate to speak of a semi-periphery. The Czech Republic's per capita carbon emissions were the fourth highest in the EU in 2017 (McKinsey & Company 2020), which implies the need for fundamental industrial restructuring in the light of the post-carbon transition.

Economic dependency is typically based on relatively cheap and unorganised labour, and energy and material extractivism (Pucheta/Sánchez 2022). These trends are amplified in the internal peripheries of north-west Bohemia and northeast Moravia (Silesia), both coal mining regions. These regions suffer from structural inequalities as expressed in socioeconomic indicators and, broadly speaking, in lower quality of life (Frantál/Nováková 2014). The concentration of the coal industry in particular regions further intensifies vulnerability to the coal phase-out and exposure to the exploitation of resources, where affected regions become “energy peripheries” (Garvey et al. 2022; Golubchikov/O’Sullivan 2020).

Therefore, the country holds a position of dependency characteristic of the semi-periphery, particularly concerning the coal mining regions. The

key characteristics of such dependency are the lack of economic and political power, along with a symptomatic lack of trust in public institutions (Horáková 2020), which can undermine people's confidence in both the processes and outcomes of just transition. The workforce in the affected industries directly bears the costs in terms of potential job losses and the economic decline of the whole region. For this reason, the meaningful participation of workers in the formulation and implementation of just transition policies is essential. However, as we explore in the next section, this has not happened so far in the context of existing participatory bodies in the Czech Republic.

3.2 Attempts at stakeholder participation in the Czech Republic

To demonstrate the barriers to meaningful participation with a concrete example, we analysed the functioning of national and regional stakeholder platforms and related participation options that were established in the context of just transition and that focused on structural changes in the energy system in the Czech Republic, most notably coal phase-out. On the national level, this included three bodies: the Independent Energy Committee, the Coal Commission, and the Transformation Platform, which were all established by the government to gather various stakeholder perspectives. We reviewed publicly available documents to map the objectives of these bodies and the criteria of their members' selection, with particular attention to the involvement of workers as one of the stakeholder groups critical for the legitimacy and meaningfulness of the just transition.

The background of these three bodies is as follows: (1) The Independent Energy Committee was set up in 2007 as a government consultation body. It is problematic to call it a stakeholder body, because the members were experts nominated by political parties, sometimes without any specifically relevant expertise. The interests represented by the experts are not made clear in the founding documents and status. (2) The Coal Commission was established in 2019 from members selected by the Ministry of Industry and Trade and the Ministry of Environment. The majority of these members represented public administration institutions and industrial umbrella organisations, with the minor involvement of environmental non-governmental organisations (NGOs), academic institutions, and unions. (3) The Transformation Platform was organised by the Ministry

of Regional Development as a participatory body for the preparation of the Territorial Just Transition Plan, again involving public administration institutions, including representatives of regional councils. It followed up on the Re:start programme, established in 2015 for the restructuring of the economy of the coal regions.

The Re:start programme – in a way a predecessor of the Transformation Platform – focused on the economic restructuring of the Czech coal mining regions, and is still presented as a successful example of a participatory approach. However, it had been oriented towards a mere monitoring of the absorption capacity of financial instruments in the regions, instead of identifying needs of the stakeholders (including underrepresented groups). Predominantly, it was focused on private companies and regional institutions and on enhancing their capability to develop investment projects. Although the programme organised several meetings and seminars for the public, in total there were very few participatory opportunities and it had not provided any coherent vision or goal of the transformation that would be based on monitoring the needs of local residents and workers.

A more favourable situation occurred at the regional level, within Regional Transformation Platforms. In northeast Moravia, the regional council managed to include the issue of just transition as part of public strategic planning, and thus many activities took place with the public, at schools, and with businesses and experts. However, in the other two regions the variety of participation options were more limited – usually reduced to a combination of public seminars focused on financing from the Just Transition Fund and a chance to provide comments and opinions via an online form (Černík et al. forthcoming).

If we focus specifically on the representation of workers' voices within the platforms, only the Coal Commission and the Transformation Platform featured one representative who advocated for the affected workers (Czech-Moravian Confederation of Trade Unions, ČMKOS). To understand this situation better, we decided to reach out to the stakeholders who either represented or could potentially represent workers within the established participatory structures. We focused on the extent to which the participation attempts, as perceived from the perspective of these stakeholders were (in)consistent with meaningful participation described in Section 2.3. Specifically, we investigated their (i) assessment of the current

governance of just transition (understanding of the purpose and functioning of the respective participatory bodies), and (2) collaboration with other stakeholders and the perceived role of the respective stakeholders in the transformation process (e.g. the availability of adequate opportunities to shape the outcomes).

In addition to ČMKOS, which was represented in the two platforms (see above), we selected stakeholder groups which have direct contact with workers, regardless of whether they participated in the existing stakeholder platforms or not. Based on these criteria and further use of snowball sampling, we focused on stakeholders from the following groups: coal mining companies, ČMKOS and other trade unions, educational and research institutions (e.g. secondary schools that provide programmes related to coal mining, often in collaboration with mining companies), and regional employment offices. From this pool, we identified 41 individual stakeholders to whom we sent interview requests. Over the course of winter 2021 and spring 2022, we conducted a total of 17 interviews with representatives from all these groups.

Based on the review of the existing participatory bodies and supplemented by the interviews, we identified six key challenges for the meaningful participation of stakeholders whose work is affected by changes in the energy system within just transition.

3.3 Key challenges to meaningful participation

Lack of an accountable plan for stakeholder participation: All three national participatory bodies were supposed to prepare a transparent plan for stakeholder participation. However, it was difficult to identify when opportunities were opened for stakeholders to get involved, e.g. during the preparation of the final outcomes of the respective bodies (such as the official recommendations of the Coal Commission for the coal phase-out), or in the following steps (assessment and evaluation). Moreover, the political nomination of the Independent Energy Committee and the Coal Commission creates difficulties for the continuation of their work beyond the timespan of one election period.

Limited variety of participation opportunities: The prevalent idea of stakeholder participation was based on membership of representative bodies, such as the Regional Transformation Platform, accompanied by

some general option for the public to provide comments and ideas, usually via an online form. Whereas the Platform can serve as a good coordinator and guarantor of the whole participation process, the attendance of meetings and commenting on documents of a few selected individuals cannot fulfil the potential of meaningful participation. For this, a much broader scope and variety of participative methods is needed, including those from the 'higher' levels of the "ladder of citizen participation", such as workshops, public consultations, citizen assemblies etc.

Lack of transparency in the selection of participants in existing participatory bodies: As described by Hronová (2021), the nomination of the members of the Coal Commission was not systematic, and without clearly defined rules. Due to the lack of transparency regarding the nomination process, a "Shadow Coal Commission" (Stínová uhelná komise 2022), has been established as a grassroots initiative. It addresses the concerns raised by stakeholders who were not nominated to the Coal Commission, including local residents and experts in the labour market, and provides them with a platform to voice their perspectives.

None of the three participatory bodies effectively addressed practical conditions of meaningful participation, including potential financial reimbursement for the time which the participants dedicated to the process. Whereas some members participated within their main working time, others were supposed to manage the same tasks beyond their regular occupations. This imbalance translates to uneven possibilities to shape the outcomes of the participation body.

Lack of representation of workers: The directly affected workers are represented solely via the unions in two out of three existing participatory bodies. However, in the Coal Commission it is only one member out of 19, while in the Transformation Platform, it is one out of 32 members. Although the unions perceive their role as being the key representative of the workers, they are often not in close contact with the majority of them; instead, they collaborate with the employers, notably in the particular workplaces directly at risk of closure.

Ignorance regarding the worker's perspective in the debates is described by one trade unionist: "The only ones willing to discuss the worker's perspective with us now are the employers, the companies." (Trade Unionist 1, 1.2.2022) Despite the common assumption that the unions act

as a counterpoint to the management of the companies, they often work hand in hand, as acknowledged even by the other side. As one of the managers said: “The unions are in fact our partners and it’s actually ‘our’ people who only sometimes wear the union vest.” (Manager 1, 7.2.2022) This notion supports our insight that the representation of the transition-affected workers is significantly limited.

No clarity regarding how to influence the outcomes of the process: In the case of the Coal Commission and the Transformation Platform, some participants expressed doubts about the impact of their involvement in the respective platform in contrast to other participants. This perceived varying ability to shape the process and the outcome eventually led to their loss of trust. As commented by a trade unionist: “The Coal Commission ran for over a year but failed to produce a single thing of importance to the people. (...) I can tell you that it was a mere discussion group, nothing else. Huge disappointment on my part.” (Trade Unionist 2, 10.2.2022)

Lack of a common understanding of overarching goals and objectives of just transition: None of the analysed platforms set the goal of completely phasing out fossil fuels and replacing them with renewable energy resources. The Independent Energy Committee (Nezávislá odborná komise 2008: 6) has the objectives of: (1) reducing energy intensity; (2) satisfying society’s energy demand; (3) motivating innovation and emissions reductions; and (4) limiting the risks of fluctuations in energy supply. The Coal Commission “analyses the options for future coal phase-out” (MPO 2019: 1), rather than having a shared objective of the earliest possible, and simultaneously socially just, end of coal use. The primary concern in this context is the emphasis on energy security rather than prioritising the development of a new energy system that addresses climate risks and simultaneously aims to improve socio-economic conditions in the coal regions.

The decarbonisation goals are perceived as imposed by the EU, without giving stakeholders (including the workers) the right to decide or get involved in the decision. This is illustrated by a certain bitterness, as expressed by one trade unionist: “I am not going to hide here that the trend is set by politics. Let us be frank, it is very difficult to influence the policies of the European Commission or the European Parliament in any way. You can only make some comments, but again these are decided then by the big players.” (Trade Unionist 3, 25.3.2022)

The technocratic focus of the Coal Commission on a mere replacement of coal within the current energy mix, without broader socio-economic considerations, restricts possible scenarios and excludes other actors with relevant expertise in the social aspects of the transition. Among other things, because of this limited focus and unwillingness to consider non-technical aspects of the transition, the final recommendations for coal phase-out by the Coal Commission were accompanied by the resignation of its two members representing environmental NGOs.

Based on this experience, we propose four guiding principles for the design of meaningful participation, including some suggestions for concrete methods. Subsequently, we argue in favour of a broader change in the role of expert and non-expert stakeholders to ensure that a plurality of perspectives is truly represented in the participatory process and we discuss its implications for semi-peripheral regions.

4. How to achieve meaningful participation within just transition

4.1 Principles and methods for meaningful participation

Accountable stakeholder mapping: Stakeholder mapping is based on creating a structured overview of all affected groups, their possible representatives, their relationships and other relevant characteristics (Reed et al. 2009). Creation of a comprehensive stakeholder map does not mean that all groups need to be actively engaged, at least not with the same intensity. However, only by creating this complete overview can one make informed choices about the further participatory process, based on the specific objectives of the participation guarantor (OECD 2022). Moreover, different methods could be tailored to particular groups of stakeholders according to their needs (OECD 2017). The accountability of the mapping process then stems from the transparent justification of the choices made based on the mapping, in contrast e.g. to rather erratic political nomination (as was the case of the Czech participatory bodies).

Considering the uneven power relations among the stakeholders, as discussed in Sections 1 and 2.3, the stakeholder mapping in the context of just transition should be made with a special focus on large and hard-to-reach groups, such as workers and local residents.

Including underrepresented groups: the case of transition-affected workers: We use the example of workers whose jobs might be at risk from the coal phase-out to illustrate what can be done to engage the large and hard-to-reach groups. First, such groups need to be properly defined. They comprise all whose jobs are associated with products to be phased out – the so-called ‘supply chain perspective’ (Fritz et al. 2018). Workers in all jobs in at least the sectors directly at risk (e.g. coal mining), and indirectly in their supply chains, should be considered. Analysing the total number of jobs should be supplemented by analysing their sectoral and spatial distribution, skill level, and other socio-demographic characteristics of the workers relevant to their involvement in the participatory process.

Traditionally, input-output (IO) models have been used to estimate the number of jobs at risk (e.g. Alves Dias et al. (2018); Miller/Blair (2009); Oei et al. (2020); Vogt-Schilb/Feng (2019)). Yet the IO approach does not provide accurate information on the number of jobs actually at risk, nor on their spatial distribution and the socio-demographic characteristics of the workers in sufficient detail (see further limitations in Frankowski et al. (2023)). In a study on coal mining in Poland, Frankowski et al. (2023) therefore propose using data on the contracts of companies in the coal mining sector to assess the quantity, sectoral, and geographic location of the jobs at risk. However, this approach may run up against a reluctance of companies to provide this data (if they are not required by law to do so).

We therefore propose to complement IO modelling with national statistics on enterprises and the workforce. After identifying the most affected indirectly vulnerable sectors by the IO model (defined, for example, as the largest suppliers of the coal mining sector relative to their total production), it is possible to identify enterprises operating in these sectors using the system of national accounts. National statistics also usually describe at least an approximate number of jobs in the enterprises concerned, and their geographical location.

In order to determine the specific companies whose main economic activity is really at risk in the event of coal phase-out, it is, however, necessary to gather additional information from the companies’ websites or web search engines. Finally, at the level of specific jobs, sectoral classifications can be matched to skill classifications, such as proposed in Černý/Luckeneder (2023).

Long-term multi-method interaction, rather than one-off consultations:

Once the stakeholders are defined in a balanced way and without a serious risk of underrepresentation of some of the most affected groups, various participatory methods can be considered. Although some information can be revealed during a one-off exercise, most important in-depth aspects relevant to decision-making usually appear as a result of repeated interaction (Nygrén 2019) with a clear set of referential milestones to assess and possibly adjust the progress, as mentioned in Section 2.2 in the context of the need for a participation plan. This should increase transparency, clarity, and establish mutual trust.

Methods covering the full range of levels of participation described in Section 2.2 – except for the bad practice of manipulative or fake participation – should be considered. Information collection methods such as surveys can help to collect basic quantitative data generalisable to the respective group. This can concern, for example, education, professional experience, preferred requalification strategy and so on. Surveys can be supplemented with interviews to get qualitative, in-depth information, for instance to identify the most pressing issues or to map political power.

For meaningful participation, however, it is essential to include so-called deliberative methods – interactive and inclusive processes contributing to the (trans)formation of actors' preferences (Zografos/Howarth 2010). Examples include transformative scenario workshops (Kahane 2012; Nygrén 2019), public meetings, participatory rural appraisal, or citizen juries (De Marchi/Ravetz 2001; OECD 2020). Deliberative methods open up space for social learning processes when changes in understanding, knowledge, skills and possibly changes in attitudes or behaviour occur through social interaction (Collins/Ison 2009; Reed et al. 2010), as well as promoting the development of trust and relationships. This may in turn form the basis for a common understanding of the system or problem at hand, and lead to subsequent agreement and collective actions (Muro/Jeffrey 2008: 339). This is illustrated, for example, by Garmendia/Stagl (2010) in the case of energy and natural resource management workshops.

Clearly articulated objectives throughout: On the one hand, meaningful participation, by definition, opens space for a plurality of perspectives and allows a balancing of stakeholder power. On the other hand, it is important to distinguish general 'non-negotiable objectives' that frame

the participatory process and are not within the participatory body's power to change (e.g. decarbonisation of the energy sector). This does not imply that concerns cannot be raised regarding these general objectives. Ideally, the participatory process should bring these concerns to light. However, it is essential to transparently acknowledge that such an agenda exists and serves as the initial foundation of the process.

The open acknowledgement and discussion of assumptions and visions behind the participatory process is also essential for further work with its outcomes, such as the creation of transition scenarios and the subsequent formulation of (just) transition policies. For example, the concept of "Vision-driven Policy Cycle" (Sgouridis et al. 2022: 9) mentions the importance of stakeholder engagement in formulating desirable visions for energy transition ('storylines') as the first step for quantitative scenario modelling. Such an approach is intended to ensure that any important segment of the plurality of existing perspectives is not missed.

Thus, participants can bring in more progressive perspectives; for example, instead of ecological modernisation based on renewable energy transition, the preferred strategy could be energy democracy together with lowering energy consumption, which is currently challenging even for pioneering initiatives, e.g. in Greece and Spain (Tsagkari et al. 2021). The capabilities, experience, and skills of the workers could be used to support such a turn.

However, there may also be efforts to preserve the status quo as much as possible until stakeholders are assured that they will not experience any detrimental effects throughout the process. Similarly, as members of communities directly affected by mining, workers should have a 'right to say no' in the process of meaningful participation (Friends of the Earth Europe 2021). However, granting this right should not be misused to block the achievement of the overarching 'non-negotiable objectives' of decarbonisation.

4.2 Transforming the roles of expert and non-expert stakeholders to diversify development trajectories

Developing just transition policies in a transparent way that avoids underrepresentation of certain stakeholders, engages them in deliberation, and acknowledges 'non-negotiable objectives' implies a fundamental

change in the roles that various stakeholders hold. The traditional participatory setup corresponding to the ecological modernisation approach (see Section 2.1), where experts bring in evidence and non-experts provide preferences (at best), is de facto systemic disadvantage to non-expert perspectives. Experts (typically scientists or researchers) traditionally hold significant power in setting the “languages of valuation” (Zografos 2023), selecting information for decision-making and influencing the related processes.

When describing his participation typology (see Section 2.2.), Pretty (1995:1252) criticises researchers for aspiring to participation, but still actually holding control over the participation processes and rarely supporting local stakeholders to fully develop their citizen power. A similar criticism applies to policymakers who, on the one hand, seek public agreement, but on the other hand fear people’s involvement because it makes things less controllable (Pretty 1995: 1252).

To change this logic, we need a different approach to the role of experts on the one hand and non-experts (local residents, workers, ...) on the other. This shift in roles is advocated by post-normal science (PNS). PNS argues that ‘normal’ scientific discourse has been unable to provide satisfactory answers to many environmental issues, and proposes that scientific insights should be considered equivalent alongside others (e.g. lay ones) (Zografos/Howarth, 2010). Instead of providing evidence and formulating scenarios, experts within PNS provide room for the co-creation of these scenarios to those affected by their potential implementation.

According to its proponents, PNS is relevant where “facts are uncertain, values in dispute, stakes are high, and decisions urgent” (Funtowicz/Ravetz 1993: 744). This is very much the case for just transition due to the competing values and interests, challenges in assessing the impacts of the transition, and the pressing need to transform the energy system for climate change mitigation. Yet, explicit linking of energy transformation or just transition to PNS has been infrequent (Floyd et al. 2020; Ravetz 2006; Tainter et al. 2006).

We see the relevance of PNS to just transition, and especially to meaningful participation within just transition, in at least three important points. First, both meaningful participation and PNS place a strong emphasis on deliberation (Tognetti 1999; Zografos/Howarth 2010). This means highlighting the importance of direct, longer-term and interactive involvement of the affected stakeholder groups. Only under such condi-

tions can deliberation occur and transform the views and experiences of participants through the process of social learning – which can occur both on the side of non-expert and expert stakeholders.

This implies that to achieve meaningful participation within just transition, it is not enough to involve a few representatives of large, hard-to-reach and non-expert groups (as trade unionists might do for workers). Conversely, it is essential to involve members of these groups directly, in a role where they are on an equal footing with experts and policymakers. Meaningful participation is therefore not as much about conveying the (supposed) views and attitudes of the affected groups via representatives, but more about enabling the direct exchange and possible transformation of their views and attitudes, which cannot happen without long-term, direct, and above all ‘mass’ direct involvement of the respective groups. PNS thus implies a far-reaching shift in the scope and aspirations of meaningful participation processes, from principally small representative bodies with a specific agenda (e.g. managing the spending of resources from transition funds) towards broad, society-wide long-term processes with transformative potential.

Second, this aspiration corresponds more closely to the social-ecological approach than to ecological modernisation (see Section 2.1). However, it does not automatically mean that just transition according to the social-ecological approach would take place. According to Floyd et al. (2020), this process might open avenues for less techno-optimistic trajectories, which admit reduced energy consumption in the economy. However, the aspiration of both PNS and meaningful participation is to open the way for all development trajectories that the affected stakeholders might prefer, shaping just transition policies according to the needs, perspectives and experiences, based on the locally specific context of the affected regions.

Third, this approach marks the beginning of a discussion of different just transition conceptions and policies in an atmosphere of mutual listening and seeking to understand the perspectives of other stakeholders. This is particularly relevant for semi-peripheral regions, where one of the key characteristics is the aforementioned distrust in institutions (see Section 3.1) and the feeling that policies (and thus, more broadly speaking, the development narrative) are dictated from above, that is, from the core – in the case examined here, mostly from the EU (see Section 3.3).

Meaningful participation should not contribute to the legitimisation and adoption of a just transition agenda designed from the core, but rather to start a two-way communication about why, where and how the transition of the affected semi-peripheral regions concerned is heading. At best, this should begin to eliminate some of the negative characteristics of a region in a position of dependency (see Section 3.1). Namely, it should incentivise workers to organise (as deliberation leads to an exchange of perspectives, familiarisation and thus improved conditions for, for example, workers' organisation) and improve trust in public institutions (as deliberation leads to increased mutual trust between stakeholders). Consequently, this could increase the political power of the semi-peripheral regions, challenge the dominance of the core, and increase the emancipatory potential of the just transition.

5. Conclusions

Participation in a just transition should not reproduce or reinforce existing socio-economic inequalities, but represent the views and interests of all stakeholder groups affected by the transition equally. However, this is rarely the case in its practical implementation. The context of semi-peripheral EU countries is instructive, as these countries are subject to the EU's just transition policies, but at the same time suffer from weaker trust in institutions, which amplifies many of the obstacles to the successful implementation of the just transition.

To achieve meaningful participation where all relevant stakeholders have real decision-making power and are equally represented, just transition is a matter of broad deliberation within various longer-term participative formats, rather than discussion in small expert and policymaking circles over the implementation of expert-prepared input. In particular, the direct participation of affected stakeholders, notably the hard-to-reach groups, such as workers, is crucial to enable the exchange and transformation of perspectives between different stakeholders. The principles and methods for meaningful participation proposed in this article go in this direction and provide an alternative to mere technocratic implementation of just transition policies.

We argue that meaningful participation implies balancing the roles of experts and non-experts as suggested by post-normal science (PNS). However, according to Ravetz (1999: 653), PNS “should not be interpreted as an attack on accredited experts, but rather as assistance” in terms of defining their role in a deliberative process to reveal diverse trajectories that may not always be on the radar of experts and policymakers.

In the context of a semi-peripheral country, the opposite of such diverse trajectories would typically be the dominant development narrative manifested in policies in line with ecological modernisation. Breaking out of this dominance could help design just transition strategies and practices while maintaining cultural and regional differences and specificities, rather than adopting or opposing the adoption of just transition policies transferred from the economic core. Engaging hitherto underrepresented stakeholder groups and balancing their position with the experts and policymakers within the participatory processes could thus balance the relationship between the core and (semi-)peripheries.

Acknowledgements

This article ‘Beyond a Czech-The-Box Exercise: Proposals for Meaningful Stakeholder Participation in the Just Transition’ was written with the support of the Technology Agency of the Czech Republic within the framework of the ÉTA Programme and project No. TLo5000289. The authors thank Thomas Smith and Julia Kreimel for their help with proof-reading.

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*ABSTRACT Der Übergang in eine postfossile Zukunft bietet die Chance, die Ungleichheiten hinsichtlich wirtschaftlicher und politischer Macht anzusprechen, mit denen (semi-)periphere Regionen konfrontiert sind. Eine dieser Möglichkeiten stellt die Politik für einen gerechten Übergang der Europäischen Union dar. Wenn es darum geht, bestehende sozioökonomische Ungleichheiten und Machtverhältnisse in Frage zu stellen, greift die EU-Politik allerdings zu kurz. Sie stützt sich oft auf technokratische Maßnahmen und selektiven Expertenrat. Insbesondere in den semi-peripheren Regionen Zentral- und Osteuropas fehlt es an einer sinnvollen Einbindung – im Gegensatz zu einer Pro-forma-Beteiligung – aller Interessengruppen bei der Formulierung von Politiken für einen gerechten Übergang. Am Beispiel der Tschechischen Republik, einem der größten Braunkohleproduzenten der EU, untersuchen wir die bestehenden Hindernisse für eine sinnvolle Beteiligung und erläutern, wie eine solche erreicht werden kann. Wir schlagen vor, dass eine sinnvolle Beteiligung die direkte Einbeziehung verschiedener – vor allem unterrepräsentierter – Gruppen erfordert, wie zum Beispiel Arbeitnehmer*innen in von Arbeitsplatz-*

*verlust bedrohten Branchen, und dass sich die Rolle der Expert*innen von einer privilegierten hin zu einer mit nicht fachkundigen Interessengruppen gleichgestellten verändern muss. Wir kommen zu dem Schluss, dass die Einbindung aller betroffenen Interessengruppen durch deliberative Methoden verschiedene Politiken für einen gerechten Übergang ermöglicht. Solche Politiken bieten die Chance, das vorherrschende und von Ländern des Zentrums und deren Institutionen repräsentierte Entwicklungsnarrativ zu hinterfragen.*

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Undermined Efforts? The Ambiguous Role of Mining Jobs in a Just Transition

ABSTRACT *In finding alternatives for workers currently employed in the fossil fuel industry, just transition policies can ultimately undermine environmental concerns and efforts to redress inequalities. For example, it is suggested to create jobs in other extractive industries to meet the material requirements of renewable energy technologies. We focus on this ambiguous role of job preservation as a key demand of just transition and review selected national transformation strategies from the Global North and the Global South. Comparing qualification requirements of coal mining jobs with other alternatives, we propose to complement current strategies with jobs outside the extractive sector value chains. Fostering these can work towards realising social and environmental goals in synergy, rather than pitting one against the other. We conclude that finding work opportunities that minimise extraction requirements and benefit local communities can help level global and regional inequalities by allowing mining regions to escape from their current positions in global value chains.*

KEYWORDS *just transition, mining, jobs, green services, global value chains*

1. Introduction

The required deep reduction in global carbon emissions can only be achieved through phasing out fossil fuels. However, if renewable energy technologies are to replace fossil fuels in the energy sector, the extraction of other materials, so-called energy transition metals and minerals (ETMs),

must rapidly increase. To stay within a two-degree climate change scenario, the total material requirement associated with mineral production is estimated to increase by up to 500% by 2050 in the electricity and transport sectors, mostly for solar photovoltaics and electric vehicles (Watari et al. 2019). Like fossil fuels, metals and minerals are exhaustible resources. Their extraction puts enormous pressure on the environment and affected societies, raising concerns about the actual sustainability of such an energy transition (Bainton et al. 2021).

The transition also raises questions about fair solutions for workers affected by the closure of entire industries. The coal mining sector, which alone accounts for 4.7 million jobs globally (Ruppert Bulmer et al. 2021), is paramount in this regard. Shifting employment from coal mining to the extraction of metals and minerals required for renewable energy technologies appears to be a handy option because it requires a similarly skilled workforce, thus reducing pressure on workers in terms of retraining (e.g. Alves Dias et al. 2018: 104). Various studies have concluded that the similarity of qualifications in sectors such as construction, manufacturing, energy, logistics and the automotive sector have made them strong candidates to compensate for job losses in the fossil fuel extraction sector (e.g. Baran et al. 2020; Oei et al. 2020; Sokołowski et al. 2022). The search for employment alternatives in other extractive sectors or their value chains as part of a just transition nonetheless creates a dilemma between sustaining jobs and moving towards a genuinely sustainable economy.

However, such a dilemma arises primarily (or perhaps only) if one considers the low-carbon transformation as simply switching from one energy source to another. According to a growing number of scholars, such a notion is arguably not enough to make a real turn towards sustainability. Empirical studies suggest, for example, that a green growth strategy (meaning continued focus on economic growth with clean fuels) has no chance to succeed in practice, in terms of greenhouse gas emissions and resource use reduction, which is why authors advocate considering alternative strategies that limit further extraction of exhaustible natural resources (e.g. Hickel/Kallis 2020; Parrique et al. 2019).

As a result, there is a need to look for employment alternatives that minimise retraining but also minimise the involvement in the value chains of the extractive sectors. Such alternatives could be found in the so-called

green services sector. The green services sector, a concept introduced by Jackson/Victor (2011), is useful in the context of just transition from an employment perspective. It proposes job creation focused on activities such as public services or labour-intensive craft manufacturing to sustain employment as we restructure to an economy without growth. The question of whether there are indeed suitable employment alternatives in these sectors that would minimise retraining requirements is addressed in this paper.

Strategies for utilising the qualifications of fossil fuel extraction workers in different sectors have implications for Global North-South relations and the international division of labour. Substituting fossil fuel extraction with other extractive activities may reinforce or exacerbate existing inequalities, as mining regions would remain resource providers in global value chains (Vikström 2020). In contrast, strategies aimed at strengthening the local economy through the green services sector may be consistent with post-development thought, i.e. the vision of economies liberated from the discourse of ‘development’ and its market-oriented principles (see e.g. Kothari et al. 2019; Escobar 1995). Particularly (but not exclusively) in the Global South, such economies organised beyond market principles – “diverse economies” (Gibson-Graham 2007: 12) or anticapitalist “pluriversal practices” seeking to delink from global commodity chains (Kaul et al. 2022: 1151) – are common. To denote a broader understanding, including various alternatives to ‘development’, we use the term in quotation marks, since as such it often refers to economic growth, the idea of a linear progress of countries through similar stages, and frequently ignores colonial heritage and global power imbalances (see e.g. Escobar 2014). In the context of this study, it is moreover useful to understand post-development as concrete utopias or already existing nowtopias rather than as an overarching criticism of the Western hegemonic ‘development’ model (Ziai 2017), since we are interested in exploring concrete employment alternatives.

How the qualification requirements of employment options beyond the value chains of extractive sectors compare to those in the coal mining sector is the primary subject of interest in this study. We are further interested in examining existing national transition policy positions and strategies with regard to their consideration of the labour market, the material

base of renewable energy technologies, and their understanding of ‘development’. Narrowing our empirical analysis to rather technical aspects, i.e. job qualifications and the resource endowments of countries and how these may influence their energy transition agendas, our contribution to studying a socio-ecologically just transition is limited in other regards. From a political economy perspective, these include, most importantly, the questions of power, energy and climate justice, and (class) interests and conflict, which are discussed and investigated in detail by others such as Newell/Mulvaney (2013) and Chancel (2020).

We provide three main contributions:

1. We present an overview of how the just transition literature considers alternatives to jobs in fossil fuel extraction, with an emphasis on the role of other extractive industries.
2. We illustrate feasible alternatives to coal mining jobs by comparing the skills, abilities, knowledge and work activities (referred to as qualification requirements) with a focus on options close to the green services sector.
3. We examine current just transition practices and suggest alternatives that can steer the economy away from the modernist ‘development’ paradigm.

In the next section, we recall the main arguments of just transition with an emphasis on employment strategies and the ambiguous role of the mining sector in them (contribution 1). In Section 3, we set the stage for contributions 2 and 3. We first classify just transition agendas based on observations from different countries and then proceed with an analysis of the proximity of the qualification requirements for coal mining jobs to those for other, particularly green, jobs. On this basis we present identified employment alternatives and our takeaways from classifying national transition agendas in Section 4. We suggest how just transition strategies could be emphasised in a way that does not place excessive demands on the retraining of workers and at the same time enables a turn towards a genuinely sustainable economy that helps to reduce both regional and global inequalities.

2. Just transition and the risks of job creation in the extractive sectors

Just transition originated in the 1970s as a demand by unions to preserve jobs in response to (and in agreement with) the downsizing of hazardous industries (see e.g. Thomas 2021). From a trade union perspective, the concept of just transition has brought a more proactive stance on the well-known “jobs versus environment dilemma” (Stevis/Felli 2015). The common denominator of the current understanding is taking advantage of the low-carbon transformation momentum in order to reduce existing inequalities (Heffron/McCauley 2018). According to Eisenberg (2018), there are essentially two conceptions of just transition at present: one that generally seeks to tackle inequalities as part of the low-carbon transformation efforts, and a “labour-driven” one that focuses on preserving employment opportunities.

However, current proposals contain only little discussion of specific employment alternatives for the jobs that are at risk due to the low-carbon transformation. General claims such as creating jobs in ‘green’ sectors (Healy/Barry 2017) or considering “the full menu [...] – not just the renewables industries” (Blankenship et al. 2022: 9) are typically made. Storm (2020: 11, 14) points towards the example of the European Union (EU) Green Deal, where new jobs shall be created in “renewable energy generation, housing stock renovation, public transportation, building and maintaining low-carbon energy infrastructures and in services”. In particular, there is a common implicit view that renewables are a substitute for fossil fuels, not only in terms of energy generation but also in terms of job creation (e.g. Cha 2017). Increased deployment of renewables is then assumed to imply “highly technical and [...] practical hands-on training and problem-solving skills”, and “[t]he current focus in [renewable energy] education globally [...] appears to be on higher education” (Lucas et al. 2018: 453).

Depending on the shape the just transition eventually takes, different jobs and qualifications will be emphasised. On the one hand, the transition can follow the path of ecological modernisation – that is, technological innovation consisting of decarbonised industrial production without

profound changes to the current economic system. On the other hand, it can imply fundamental structural changes, for example to make space for less energy- and more labour-intensive activities in line with the green services sector concept. While this concept still configures the economy around employment protection without questioning the concept of wage labour, it seeks to pursue a mode of production that fits a no-growth economy, prioritising social and environmental goals over productivity growth. Even though Jackson/Victor (2011) do not claim whether the green services concept is post-capitalist, it is hard to imagine that a system explicitly abandoning the pursuit of growth would fit into a capitalist logic, since growth is one of the structural features of capitalism (e.g. Kallis 2011). The preference for labour-intensive activities also supports the post-development perspective as a utopian (or nowtopian) proposal for alternatives to ‘development’ because of the critical stance on productivity and growth.

Although there are different conceptions of just transition in union policies (see Felli 2014; Stevis/Felli 2015), the prevailing view is in line with ecological modernisation and ‘green growth’, which supposedly involves the creation of jobs (Felli 2014; Gerrard/Westoby 2021). Such a view, however, implies that efforts to transition from fossil to low-carbon energies will drive the demand for ETMs. Watari et al. (2019) estimate that the most drastic increases in the demand of the transport and electricity sectors are to be expected for copper, silver, nickel, lithium and cobalt, as well as minerals for steel production. Ecological modernisation based on ETMs however undermines efforts to redress global inequalities in the context of a just transition. It would imply a continuation of ‘development’ paths based on a strong spatial divergence between the production and consumption of natural resources and unequal exchange (Hickel et al. 2022)

While renewables may benefit cleaner production in the Global North, the ecological cost and social damage are displaced to the Global South (Sovacool 2021). Several empirical studies show that mining development affects regions unevenly and that there are more environmental and social risks and impacts in the Global South (see, e.g., Luckeneder et al. 2021; Lèbre et al. 2020). In this context, Bainton et al. (2021) call for an expanded concept of fairness in transition debates and policies, taking into consideration the displaced burdens of renewable energy technologies in the Global

South and the global inequalities founded on the legacies of colonialism and indigenous dispossession. They warn about the great risk that distributional inequalities and impacts associated with material extraction will intensify in the name of a grand (global) green narrative. However, peripheral regions within the Global North are also disproportionately exposed to hazardous impacts. The coal mining sector offers particularly obvious examples, such as in Poland, the Czech Republic, and former East Germany.

Despite the known destructive nature of coal mining, the industry frequently receives strong social and cultural acceptance from those who directly (workers) or indirectly (families, downstream and upstream businesses) depend on income from coal mines or power plants, especially if these are the only major employers in structurally disadvantaged regions. A decline in the sector thus often results in a fundamental clash of labour and environmental interests. Trade unions, key actors in a just transition, typically tend to side with the protection of existing jobs over environmental concerns in fossil fuel-dependent industries, although the positions of specific associations vary (Thomas/Doerflinger 2020). In the case of coal mining, offsetting pressure on the industry by fostering the exploration and mining of ETMs seems to be a convenient solution for employees and mining corporations alike. The mining industry has noticed this opportunity and uses it to polish its image (Vikström 2020) by, for example, utilising just transition narratives to display corporate social responsibility (Bainton et al. 2021: 626).

Both the environmental risks and the social considerations associated with extractive industries call for alternative strategies that redress regional and global inequalities while reducing material consumption. The so-called social ecological approach to just transition offers an alternative that promotes democratisation and socialisation of the means of production in order to address the inequalities on both a regional and global scale, challenging the very role of the profit-oriented capitalist logic in the low-carbon transition. The approach assumes that the capitalist system is inherently built on an unequal distribution of wealth and power both regionally and globally (Stevis/Felli 2015). The social ecological approach is thus close to the logic of the alternatives described in the green services sector concept. The shift away from a profit and productivity orientation, together with the associated socialisation and democratisation, opens up

space for an alternative conception of ‘development’, understood in the sense of ensuring well-being. Finding appropriate employment alternatives as a matter of social justice from the perspective of workers in the sectors at risk nevertheless remains a challenge. The following section first discusses existing national transformation strategies and then compares coal mining jobs with possible alternatives in terms of the proximity of their qualification requirements.

3. Evaluating the alternatives to coal jobs in a just transition

3.1 Transformation strategies in different country contexts

Coal mining and transition policies occur in different national contexts, which depend on nations’ positions in the global economy, the domestic availability of ETM resources, and the political ability and will to make a just transition happen. To compare how different national contexts influence coal phase-out strategies and labour markets, and to illustrate that the ultimate goal of reducing global greenhouse gas emissions while keeping (and improving) social standards requires international alignment of nation- and region-specific actions, we highlight three types of coal mining countries. We look at the three biggest coal producers in the EU and the second and third biggest producers in the Global South (China was left out, as it would have marked a rather specific case in itself). We classified the Czech Republic and Poland as Global North countries with reserves of ETMs, where production is currently planned or underway, and Indonesia and India as countries in the Global South that are significant coal producers and are already mining ETMs. Moreover, we identified Germany as a high-income country that produces coal and has alternative strategies based on strengthening non-mining sectors. Taking the countries as examples, we asked whether their transformation strategies contained links to 1) extraction of other ETMs, 2) activities in line with the concepts of green growth and ecological modernisation (as a modernist ‘development’ paradigm), and 3) activities close to the green services sector, possibly displaying elements of post-development utopias or nowtopias.

The Czech Republic and Poland rank among the main EU coal producers. Coal has long been the backbone of their energy industries and other downstream sectors (e.g. steel in the Czech Republic). The Czech

Republic has committed to phase out coal mining by 2033 and Poland declares to do so by 2049. Regarding ETM mining, the Czech Republic has reserves of lithium (mining is being considered), gold, tin and tungsten, but no mining has been recently underway (Sivek et al. 2019). Poland is home to deposits of a number of minerals, with copper, zinc, lead and silver being extracted recently (Uliasz-Misiak/Przybycin 2016). The mineral policy of the Czech Republic outlines the use of reserves according to the EU critical raw materials list (Sivek et al. 2019). However, it is unclear whether at least some of them are to be mined domestically. The Polish mineral policy is more explicit in this regard and also considers a wider range of extraction. It outlines the extraction of zinc and lead, tin, copper, silver, molybdenum-wolfram-copper ore, nickel ore and iron-tin-vanadium ores (Ministry of Climate and Environment 2022). However, support for extracting ETMs does not explicitly appear in the just transition plans. Thus, ETM mining is unlikely to be a core strategy for domestic job creation in the just transition. Rather, mining activities run somewhat in parallel with the efforts for just transition. Moreover, it is unlikely that ETM mining would absorb all coal mining workers, given both their numbers (13,676 in the Czech Republic and 84,324 in Poland by 2019 (Eurostat 2022)) and the geographic locations of ETM deposits, where the mismatch between coal regions and potential ETM deposits is likely to be too large. Both countries are subject to the implementation of the EU Just Transition Fund. The fund can be used for clean energy transition and energy savings, regeneration and use of disused sites, digitalisation, the circular economy, and research and innovation. In addition, the regional strategies suggest activities to stimulate regional economies such as tourism, organic farming, social services and cultural activities. Such an emphasis is to some extent consistent with the concept of green services. Yet, as a whole, the strategies still envisage the narrative of ecological modernism (electromobility, development of low-carbon technologies, etc.).

Indonesia and India are major coal producers, currently expanding their extractive industries while at the same time pledging to promote renewable energy transition policies. Besides coal sectors being central to their economies, they have substantial ETM mining already in operation and further expansion considered (see, e.g., MNRE 2020; IEA 2021; IEA 2022). These include large-scale industrial mining projects that have already operated for long time spans, such as the Grasberg copper and

gold mine in Indonesia and substantial iron ore, bauxite and zinc mining operations in India. In addition to industrial mining, informal operations are numerous and have strong environmental impacts, such as nickel mining in Sulawesi, Indonesia. Given their wealth in the natural resources required for a transition to renewable energies, these countries theoretically do have substitutes for at-risk coal jobs within the extractive sectors. Such a trajectory would, however, require an extreme expansion in order to provide employment for 416,000 workers in the Indian and nearly 240,000 workers currently employed in the Indonesian coal sector (Ruppert Bulmer et al. 2021: 86-87, 120-121). Jobs in ETM extraction furthermore do not guarantee improved labour conditions as demanded by trade unions. In India, for example, ETM mega-projects dominated by the private sector create an environment “openly hostile to worker’s rights and unionization” (Roy et al. 2019: 291) and are thus currently incompatible with the demands of just transition. Overall, India and Indonesia are currently not likely to replace coal mining with the extraction of other materials, but an expansion in the non-coal mining sector is likely to occur in addition to continued coal extraction (Dubash et al. 2018). In both cases, current policies thus prioritise managing increasing energy (and therefore also raw material) demand over designing a just transition towards renewable energies (see, e.g., MNRE 2020; IEA 2021; IEA 2022). Without specifically emphasising ‘green growth’, they remain within modernist ‘development’ paradigms, with a focus on growth and industrialisation based on expanded extractivism. This signifies a reinforcement of prevailing patterns in the international division of labour, without perspectives for a substantial energy transition.

Germany’s coal production has shrunk by approximately three quarters since 1980, and therefore employment in the sector has declined. In 2017, the country’s coal mining sector counted 13,011 employees (Eurostat 2022). In their final report, the German “Commission on Growth, Structural Change and Employment” recommended ending coal-fired power generation by 2038 at the latest, which was eventually implemented in the country’s Coal-Phase-Out Act in 2020. The commission further stresses the need for a “socially acceptable design” (BMWi 2022: 70) and gives priority to “prospects for existing, new and future-proof jobs” (ibid.: 77ff). Besides suggesting a close dialogue with and financial compensation for

those affected most, concrete alternatives include the fostering of the development of renewable energy technologies and infrastructure, resettlement of manufacturing and industry, and strengthening health services and tourism, as well as building up associated digital and transport infrastructure. According to Abraham (2017), Germany's deal for workers intends to provide compensation and early pension for older workers, and special retraining – including to another energy or mining job – for the younger ones. The German strategy emphasises the need for managing the consequences of the phase-out with regard to market effects and economic growth. Maintaining competitiveness, especially of energy-intensive companies, is a major goal, in addition to achieving a just transition for those employed in jobs at risk (BMW I 2022: 66). Security of supply is also an important topic for Germany. Unlike other fossil fuel extracting high-income economies such as Australia or Canada, Germany has no significant ETM deposits. Improved recycling of ETMs, which is frequently mentioned as an important pillar to address the material requirements of a renewable energy transition, will not meet this massive demand (Lèbre et al. 2020). The German strategy very clearly promotes a narrative of growth and climate action, and that these can go together. Its approach also illustrates that a country with a powerful position in global value chains can outsource the extraction of materials needed for environmental modernisation (Hickel et al. 2022).

To conclude, we propose the following clustering of the strategies. If the strategies emphasise investments into high-tech, clean energy solutions (ecological modernisation) and at the same time plan for ETM extraction, we can speak of 'mining-burdened green growth'. If they refer to ecological modernisation while not planning further extraction of ETMs, they pursue 'mining-outsourcing green growth'. If the strategies suggest simultaneous coal and ETM mining, we label them as 'mining-based mixed growth' strategies. Conversely, if the strengthening of green services sector activities prevails over the ecological modernisation approach, we can label it as 'green services-oriented post-growth'. Unlike all previous ones, this strategy might already share characteristics with post-development utopias and open up a space to change the regions' positions in global value chains by focusing on a different type of 'development' than that dependent on extractive activities. However, none of the reviewed cases was close to the

last option. In the following section, we therefore looked at possible alternatives where countries can generate jobs as part of the just transition without having to support extractive sectors in an excessive way.

3.2 Complementing the national strategies: job proximity analysis

One of our main goals was to investigate whether any of the most similar job alternatives to coal mining (in terms of qualification requirements) could potentially be labelled as ‘green’. We hence looked at jobs in the coal mining sector and compared the proximity of their qualification requirements to other jobs in order to assess which could serve as alternative employment opportunities for the workers at risk.

We focused on 12 blue collar jobs in the mining industry¹ from the O*NET 27.0 database (National Center for O*NET Development 2022). The database describes workforce and job requirements in terms of different categories. It is based on the Standard Occupational Classification (SOC) of the United States Bureau of Labor Statistics (2020) and currently includes 923 occupations. O*NET data are developed for the US labour market, which poses a certain limitation as the qualifications might be slightly different in other economies. We evaluated the proximity of the coal mining jobs to all other jobs on the basis of data on skills, abilities, knowledge, and work activities. Each job has a specific combination of scores for the categories considered, which consist of Level (0-7) and Importance (1-5). We calculated the root-mean-square deviation (RMSD) from those of the 12 extraction workers’ jobs concerned. RMSD measures the differences between values using the quadratic mean of these differences. We then added the values up to get one composite coefficient for each job (distance). Lower distances indicate closer qualification requirements, which in turn suggest lower costs for retraining.

The classification of the compared jobs was based on an adapted taxonomy of three job categories by Bohnenberger (2022: 6): green, brown, and mixed. Since we were interested in whether the jobs would be classified as (or suitable to become) green or at least mixed in a hypothetically decarbonised economy, we added two additional categories: potentially green and potentially mixed. We defined decarbonised economy as energy and resource efficient, with a high share of renewables in the energy sector

and elsewhere, electrified generation where possible, or, where not possible, based on green hydrogen and e-fuels, supplemented by carbon capture and storage (see e.g. Bataille et al. 2018; Åhman et al. 2017). We further considered the potential energy descent manifested in, for example, low-tech or ‘convivial’ technologies (i.e. autonomous and creative solutions as opposed to industrial production, see e.g. Alexander/Yacoumis 2018; Vetter 2018; Illich 1973). The epithet ‘potentially’ next to the green and mixed jobs therefore stands for a situation where the economy would already be decarbonised.

Job classification	Produces sustainable work outputs	Tasks and activities make it a sustainable occupation	Does not inhibit sustainable work-lifestyles	Entails a sustainable outcome efficiency	Prospects in decarbonised economy
Brown	✗	✗	✗	✗	None or extremely limited
Potentially mixed	✗ or (✓)	✗ or (✓)	✗ or (✓)	✗ or (✓)	Limited
Mixed	✗ or (✓) or ✓	✗ or (✓) or ✓	✗ or (✓) or ✓	✗ or (✓) or ✓	Limited
Potentially green	(✓) or ✓	(✓) or ✓	(✓) or ✓	(✓) or ✓	Promising
Green	✓	✓	✓	✓	Promising

Table 1: Job classifications used in the analysis (✓ indicates yes, ✗ indicates no, (✓) indicates potentially yes).

Source: Own elaboration based on Bohnenberger (2022)

The resulting classification works with Bohnenberger’s (2022: 6) four dimensions of sustainable employment (sustainable work outputs, sustainable occupation, sustainable work-lifestyle of the worker and their house-

hold, sustainable outcome efficiency), but places the jobs in the aftermath of the energy transition by adding a fifth dimension (prospects in decarbonised economy). The absence of the latter means that the job directly mobilises fossil resources in one of the four categories above with zero or very limited prospects for substitution. While the brown jobs are unlikely to find a place in a truly decarbonised economy because of their inextricable links to fossil fuel value chains, mixed and potentially mixed jobs could be those linked to ETM extraction and related value chains. The classification of individual jobs into categories (brown, potentially mixed, mixed, potentially green, green) corresponds to the SOC 2018 job description (see United States Bureau of Labor Statistics 2020) and the authors' judgement. Table 1 summarises the modified job classifications.

4. Synthesis and discussion

4.1 Opportunities for just transition beyond the extractive sector: green and potentially green jobs

Comparing the qualification requirements reveals that feasible substitutes for coal mining jobs are not necessarily brown. Figure 1 shows the closest alternatives for each of the analysed jobs in the coal mining sector. While there are only four in the green jobs category, together with potential green jobs they already make up a third of all the most feasible coal mining alternatives. With the prospect of a decarbonised economy, there are therefore multiple more feasible job alternatives minimising involvement in extractive value chains than at present.

The green and potentially green jobs (note that some coal mining jobs share common closest alternatives) are listed in Table 2. The closest potentially green jobs were typically anchored in the current industrial metabolism, but can also work well in its decarbonised version. In fact, many of these jobs are key to a successful low-carbon transformation. This includes jobs that support and promote public transport (rail track laying, rail car repairing, etc.), energy production from renewables and their deployment, agriculture and environmental restoration. Potentially green jobs in the renewable energy sector, such as geothermal, hydroelectric, or biomass plant technician positions, may be interesting candidates that fit into countries' just transition strategies targeting the expansion of renewables.

Other jobs, such as those of electrical installers or electric motor repairers linked to electrification, enable electrification of renewables-based energy end-use. Insulation jobs, in turn, are consistent with energy-saving efforts. The reclamation of mining sites (which the just transition strategies also work with) is consistent with the proposed potentially green jobs aimed at removing hazardous materials. Similarly, green jobs in recycling and reclamation also correspond to the recultivation efforts.

Category	O*NET job name
Green	Forest and conservation technicians
Green	Recycling and reclamation workers
Green	Tree trimmers and pruners
Potentially green	Rail track laying and maintenance equipment operators
Potentially green	Rail car repairers
Potentially green	Electrical power-line installers and repairers
Potentially green	Biomass plant technicians
Potentially green	Electric motor, power tool, and related repairers
Potentially green	Rail yard engineers, dinkey operators, and hostlers
Potentially green	Millwrights
Potentially green	Hydroelectric plant technicians
Potentially green	Weatherisation installers and technicians
Potentially green	Geothermal technicians
Potentially green	Control and valve installers and repairers, except mechanical door
Potentially green	First-line supervisors of landscaping, lawn service, and groundskeeping workers
Potentially green	First-line supervisors of farming, fishing, and forestry workers
Potentially green	Hazardous materials removal workers

Category	O*NET job name
Potentially green	Agricultural equipment operators
Potentially green	Sawing machine setters, operators, and tenders
Potentially green	Fishing and hunting workers
Potentially green	Textile cutting machine setters, operators, and tenders
Potentially green	Moulders, shapers, and casters, except metal and plastic
Potentially green	Helpers - production workers
Potentially green	Insulation workers, floor, ceiling, and wall
Potentially green	Landscaping and groundskeeping workers
Potentially green	Textile winding, twisting, and drawing out machine setters, operators, and tenders

Table 2: Green and potentially green jobs closest to coal mining jobs.

*Source: National Center for O*NET Development (2022)*

Interestingly, we did not identify jobs in the services sector, particularly those that would fall into the care sector. The care sector is crucial to fostering the green services sector and frequently appears in countries' strategies for a just transition. Craft production, often linked to the green services sector but equally suitable for strengthening local economies in the national transition strategies, was also not found. This does not negate the need to strengthen the care and craft production sectors, especially as they possibly offer overlaps with the proposed national strategies (at least in the EU context) and the concept of a green services sector. Rather, it implies that more retraining effort is needed for them, since the match between skills for coal mining jobs and care and craft production sectors is not particularly strong.

To summarise, the job proximity analysis suggests that it is not necessary to look primarily at other extractive sectors or their value chains (approximated as brown, potentially mixed or mixed jobs) to find employment alternatives to coal mining jobs. Green and potentially green jobs with similar qualification requirements exist and can foster the transi-

tion to a low-carbon economy. The green and potentially green jobs can also work within some of the envisaged activities listed in the reviewed transition strategies. They are also quite universal regarding geography and demand for their outputs. For example, landscape and green space management, public transport infrastructure projects and maintenance of such infrastructure are relatively versatile jobs.

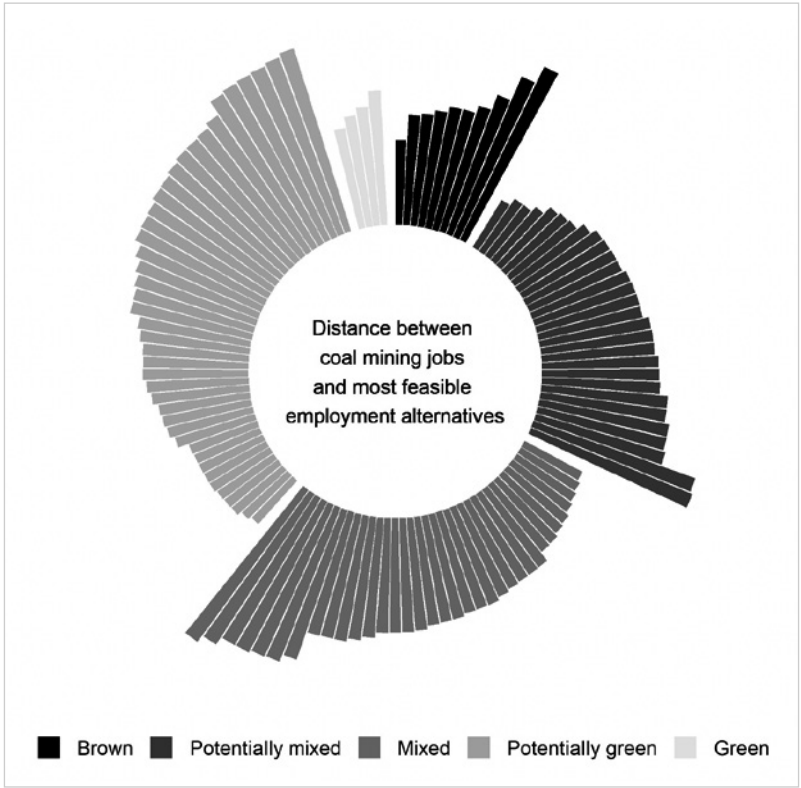


Figure 1: Schematic illustration of the 10 closest jobs for each of the 12 coal mining jobs grouped and ordered by each of the five job categories (120 observations). Higher bars indicate larger distances from the qualification profiles of the jobs in the coal mining sector. Distance is measured in terms of root-mean-square deviation (RMSD). List of jobs depicted in the figure and underlying data are available upon request from the authors.

Source: Own elaboration

4.2 Labour-intensive just transition: steering away from the modernist ‘development’ paradigm

Although there is space for employment alternatives beyond the value chains of extractive sectors, green and potentially green job creation strategies can be mobilised towards both ecological modernisation and the expansion of the green services sector. In this subsection, we propose how just transition can live up to its two meanings according to Eisenberg (2018), that is, as labour-driven and seeking to redress inequalities in general. We suggest how the sectoral allocation of labour can influence the ‘development’ paths of the coal mining regions and what implications this may have for their positions in global value chains.

Current national strategies follow the growth path – whether in the form of ‘mining-burdened green growth’, ‘mining-outsourcing green growth’, or ‘mining-based mixed growth’. They are clearly more oriented towards ecological modernisation, although they also contain elements of support for the green services sector. However, the growth-based approach to just transition implies the need for further extraction of ETMs and is therefore environmentally and socially questionable. Gerrard/Westoby (2021: 30) argue that it is even paradoxical, since the growth-based, capitalist system is at the root of the current inequalities, which the just transition seeks to tackle. This would suggest that if the just transition is to really address inequalities, both in a regional and global sense, while pursuing a turn towards a really sustainable economy, it should look for ways beyond green growth and ecological modernisation.

However, even the proposals for expanding the green services sector usually acknowledge the necessity of a certain – less material-intensive – level of energy production (see Jackson/Victor 2011). A minimum level of material extraction will thus also be required for ‘development’ alternatives beyond green growth to maintain industrial societies (or at least elements of them) and to achieve decent living standards for all, where renewable energy technologies are preferred over fossil energy sources. Therefore, while appreciating that technological solutions based on renewable energy sources contribute to decarbonisation, serious change is also required towards the goal of global energy descent and socially equitably implemented redistribution (Kikstra et al. 2021).

The social ecological approach to just transition (rejecting the profit-seeking capitalist logic, democratisation and socialisation of the means of production) offers a perspective for addressing socially equitable energy descent. According to this approach, perpetual growth does not necessarily lead to the levelling of inequalities. It therefore builds ground for a reduction of production and its relocalisation (Stevis/Felli 2015: 39). Limiting growth is no longer a problem for maintaining decent living standards if accompanied by a more equitable production distribution. Relocalisation and reduction of overall production also suit the creation of jobs in labour-intensive (but less energy and material-intensive) green services. For example, several occupations listed in Table 2 may work well in an economy based on labour-intensive craft production instead of mass industrial production: farming, textile production, forestry professions, and millwright. Hence, labour-intensive production emphasises the efficient use of resources and respect for planetary boundaries rather than cost efficiency, as would be the case in mainstream (neoclassical) economics. This view is close to the ecological economics perspective.

Shifting away from the focus on labour productivity and mass industrial production could facilitate labour contributing to local welfare rather than the demand of the extractive industries and global value chains. The social ecological approach thus moves just transition towards post-development by rejecting the central elements of the modernist ‘development’ paradigm. This could open the space to community and subsistence work (activities necessary for the functioning of society, but often unpaid), which is central to post-development utopias and nowtopias. The ‘development’ implications of alternative job preservation strategies thus lie not only in changing the positions of regions in global value chains (from resource exporters to more localised economies), but also in terms of shifting the role of human labour that can be mobilised for specific post-development utopias.

5. Conclusion

Reviewing the selected national transition strategies of coal mining countries and analysing the closest green and potentially green jobs, we

explored the feasible and sustainable employment trajectories in a just transition and whether the green services sector and post-development elements resonate. All country strategies inspected for this study follow growth pathways. However, just transition in the form of green growth does not adequately address global and regional inequalities and is based on an increased extraction of ETMs. It is therefore necessary to look for ‘development’ alternatives that build the well-being of societies (covering social, economic and environmental conditions) on principles other than growth or productivity gains. Proposals close to post-development, such as the concept of a green services sector (labour-intensive production in the care or craft sector) or community economies, offer inspiration. In the job proximity analysis, we identified some of the jobs that can potentially pull the economy in this direction without escalating workforce retraining requirements. The most promising alternatives are linked to recycling, renewable energy and public transport infrastructure. While it is not realistic to replace all mining, it is therefore possible to build upon numerous employment alternatives that do not exacerbate the problem and keep employment outside the value chains of extractive activities.

Technological solutions based on renewable energy sources are necessary to counter global climate change, but we also need to consider the issue of scale (energy descent) and distribution. While locally targeted, just transition strategies need to consider their impacts along global value chains so as not to miss out on the global inequalities associated with extractive activities and the dynamics of global capitalism. This particularly applies to countries currently pursuing ‘mining-outsourcing green growth’ transition agendas. Opening up opportunities for work close to the green services sector and democratising and socialising the means of production in line with the social ecological approach offers a ‘development’ alternative allowing for energy descent without compromising global and local social equity. In this way, just transition can bring the economy closer to post-development by focusing on work activities relevant to local communities, while reducing dependence on resource extractivism.

- 1 Continuous mining machine operators; derrick operators, oil and gas; earth drillers, except oil and gas; excavating and loading machine and dragline operators, surface mining; explosives workers, ordnance handling experts, and blasters; helpers – extraction workers; loading and moving machine operators, underground mining; rock splitters, quarry; roof bolters, mining; rotary drill operators, oil and gas; roustabouts, oil and gas; service unit operators, oil and gas.

Acknowledgements

Martin Černý has been supported by the project “The challenges of a sustainable society through the lens of the humanities and social sciences” (MUNI/A/1460/2021) by the Grant Agency of Masaryk University, Czech Republic.

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ABSTRACT Ein gerechter Übergang zu erneuerbaren Energien heißt Alternativen für jene zu finden, die derzeit in fossilen Industrien beschäftigt sind. Dies kann gegenläufig auf Umwelt- und Verteilungsaspekte wirken, beispielsweise, wenn Betroffene der Kohle- lediglich in andere Bergbauindustrien wechseln. Wir analysieren diese zweideutige Rolle des Arbeitsplatzzerhalts als zentrale Forderung eines gerechten Übergangs anhand nationaler Transformationsstrategien aus dem Globalen Norden und Süden. Wir vergleichen Qualifikationsanforderungen von Arbeitsplätzen im Kohlebergbau mit Alternativen und schlagen vor, die Aufmerksamkeit auf Bereiche außerhalb der Wertschöpfungsketten des Rohstoffsektors zu lenken. Dies würde helfen, globale und regionale Ungleichheiten auszugleichen, indem es Bergebauregionen ermöglicht, ihren Positionen in globalen Wertschöpfungsketten zu entkommen. Beschäftigungen im Primärextraktionsektor zu minimieren und an den Bedürfnissen lokaler Gemeinschaften auszurichten bietet Chancen, soziale und ökologische Aspekte in Synergie zu berücksichtigen, anstatt sie gegeneinander auszuspielen.

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Research Project

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ADJUST: Potential Pathways of a Just Energy Transition in Europe

Successfully addressing the challenges posed by climate change requires a comprehensive approach that places significant emphasis on justice and fairness. Climate change will affect countries, regions, generations, and individuals in unequal ways. Additionally, it is increasingly clear that vulnerable households and communities not only endure an undue share of the effects of climate change but also potentially bear a disproportionate burden of the costs of transition policies towards a carbon-free society. This imbalanced allocation of costs has the potential to worsen current disparities and give rise to additional social inequalities.

The costs associated with climate change mitigation policies are often more visible and immediately felt by the public, compared to the longer-term costs (and benefits) imposed by climate change itself. Hence, success of climate action heavily relies on the public's perception of these policies as fair and just. In an era of declining trust in governments and public institutions, designing climate policies that garner widespread social acceptance is crucial (Maestre-Andrés et al. 2019; Douenne/Fabre 2020).

The EU Horizon Europe project AdJUST addresses those challenges and aims to provide policy advice for achieving a fair energy transition in Europe. As the project is still in its first phase, here we provide an overview of its objectives, research components and methods. The authors are responsible for facilitating the stakeholder engagement process, conducted

in both Spain and Romania. The first phase of the engagement process has been completed in Spain, allowing us to present a synopsis of the outcomes below. For continuous updates, please visit the project's website (<https://adjust-project.eu>) or follow its developments on Twitter and in LinkedIn.

I. What is AdJUST?

AdJUST is a transdisciplinary European research project spanning a period of four years (2022-2026). It brings together a consortium that is committed to advancing the societal understanding of the distributive consequences of the transition towards climate neutrality. It combines research approaches from diverse disciplines such as economics, political science, business management, public administration, philosophy, as well as stakeholder involvement.

The project will explore a broad range of challenges associated with a just energy transition, by addressing technical, economic, and social dimensions for firms, workers, households, and public bodies. It ultimately aims to understand the various factors that promote or hinder support for climate transition strategies and hence to identify and suggest effective and actively supported policy interventions for climate action, emphasising feasibility, fairness, efficiency, and inclusivity.

While addressing the European economy as a whole, AdJUST will also conduct in-depth analyses of specific sectors in decline or transition. For instance, current activities related to stakeholder engagement are concentrating on topics of energy poverty in Spain and decent working conditions in coal mining regions in Romania. AdJUST's research spans the entire European continent while delving more deeply into three representative countries: Spain, Romania and Germany. They represent key locations for these sectors and exhibit varying degrees of vulnerability to climate change, distinct economic diversification levels and political and economic institutions.

Dimensions of Just Transition

The concept of Just Transition encompasses various aspects of the transition towards environmentally friendly societies, such as a fair distribution of benefits and costs, equitable decision-making processes, and the restoration of justice for those adversely affected. The project will primarily focus on two dimensions: procedural and distributional justice.

Distributional Justice: Focuses on ensuring a fair and equitable sharing of costs and benefits during the transition. It addresses issues such as income and wealth inequality, aiming to promote a more balanced distribution of social and economic benefits, particularly for disadvantaged or marginalised groups and individuals. A fair distribution should particularly consider aspects such as income, education, healthcare, energy access, infrastructure, and subjective well-being.

Procedural Justice involves meaningful and continuous consultation with affected parties. Engaging marginalised communities and those most impacted by policy decisions is essential for effective decarbonisation. The process must be just in the sense that it grants the right to participate in decision-making and policy formulation to groups disproportionately affected by the Just Transition.

A **Just Energy Transition** should aim to ensure sufficient and equitable access to renewable and sustainable energy for all. This shall improve living conditions for those in society who require it, including reducing existing inequalities.

Box 1: Definitions used in AdJUST

Source: Definitions based on Abram et al. 2022, Heyen et al. 2020, Sovacool et al. 2023, Wang et al. 2021.

2. Key research components

(1) *Modelling and Surveys – Quantifying and understanding impacts of decarbonisation policies on workers, firms, and households*: AdJUST seeks to assess the distributional and competitiveness impacts of climate mitigation policies and transitional assistance measures on workers, firms, and households. To achieve this, it employs modelling and econometric methods, as well as surveys. The project assesses the impacts of climate mitigation policies on workers with different skill and occupation types. Consequently, it identifies vulnerable segments of the workforce, and evaluates effective transition support mechanisms. To gain deeper insights into the responses of businesses to decarbonisation policies, the project will conduct cross-country comparative surveys at the firm level. AdJUST also employs modelling to understand the influence of climate policies on distinct household segments, with particular emphasis on vulnerable low-income groups. Additionally, the project investigates the possible distributional outcomes of EU climate policies on trade partners.

(2) *JTCAT – a novel Just Transition Analytical Tool*: One of the key components of AdJUST is the development of an innovative tool called the Just Transition Conceptual Analysis Tool (JTCAT). This tool will map and analyse various conceptions of just transition found in academic research, EU policies, and stakeholder groups across Europe, and offer an understanding of normative commitments related to the just transition. JTCAT will take into account distributive justice and procedural justice, offering a comprehensive understanding of normative commitments related to just transition.

(3) *Stakeholder engagement – creating a shared and actionable vision of Just Transition for Europe*: AdJUST aims to increase societal support for climate transition strategies by engaging stakeholders, e.g., labour unions, industry representatives, public bodies, civil society organisations, and researchers. These stakeholders will contribute to the development of a shared and actionable vision of the EU Just Transition. The vision shall inspire collective action towards achieving climate neutrality, coupled with co-designing transitional assistance measures that not only compensate potential losers but also empower vulnerable groups to embrace change and reduce pre-existing inequalities.

This approach ensures that stakeholders co-create and shape the research, thus making it more relevant and feasible, in particular by offering a vision that is not only valid for the two casestudy countries, but can be upscaled to the European level. It will contain elements of a carbon neutral Europe and also frame conditions which are necessary to make such a vision viable.

Two countries, Romania and Spain, which face significant distributional challenges in their decarbonisation efforts, will be the focus of participatory stakeholder workshops. These workshops will provide insights into the challenges and opportunities faced by various groups and inform the development of context-specific policy measures. For Germany, the third focus country of the project, AdJUST will cooperate with Ariadne, another research project, and build on the results of this project.

This stakeholder engagement process consists of the following steps:

(a) Participatory stakeholder workshops in Romania and Spain to develop a vision for their countries, focussing on energy poverty in Spain and on decent work and living in coal-mining regions in Romania. In addition, the active involvement of stakeholders enhances the dissemination of research results and facilitates their effective utilisation across different user communities through accessible and policy-relevant outputs.

(b) Feasibility and reality checks of the visions with other stakeholders, such as citizens, scientists, regional planners, companies or NGOs experts help to revise and concretise the visions.

(c) By consolidating elements from different visions present in the sample countries, AdJUST aims to create a shared vision for the EU Just Transition, together with selected stakeholders. By identifying areas of agreement and disagreement or contradictions, dialogue and cooperation among stakeholders to shape a coherent and effective strategy for the just transition will be fostered.

(d) Presenting the pre-final vision to the stakeholders, as well as the modelling results, and discussing them to make them more legitimate and feasible.

Steps (a) and (b) have already been conducted in Spain (workshop June 2023, focus group with citizens July 2023). The agenda, methods

and results (vision, policy packages) can be found on the project's website (<https://adjust-project.eu>).

(4) *Identifying capacity, motivation and credibility gaps within public bodies*: An essential component of the AdJUST project relates to public bodies responsible for driving a just transition. The project will employ a combination of methods, including quantitative text analysis, survey experiments and interviews to evaluate the capacity, motivation and credibility of public institutions within the focal countries (Germany, Romania and Spain). The objective is to determine these institutions' preparedness to effectively carry out their transformative roles and suggest measures for enhancing their effectiveness.

3. Dissemination of results

To ensure widespread impact, AdJUST places a strong emphasis on dissemination and active involvement with diverse user communities. Research results and insights gleaned from stakeholders will be widely shared, guaranteeing that research outcomes remain pertinent and accessible to policymakers, industries, and society as a whole. The participatory methodology embraced by ÖFSE ensures that the concept of a just transition is not solely theoretical but firmly rooted in the real-world challenges and aspirations of stakeholders.

Acknowledgement

This work has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101069880 – AdJUST, Advancing the understanding of challenges, policy options and measures to achieve a JUST EU energy transition.

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Jens Kastner: Dekolonialistische Theorie aus Lateinamerika. Einführung und Kritik. Berlin: Unrast 2021, 208 Seiten, 16,50 Euro.

Während der 27. UN-Klimakonferenz forderten Aktivist*innen für Klimagerechtigkeit Reparationszahlungen vom Globalen Norden, der die ökologische Krise hauptsächlich verursacht hat (vgl. Harvey et al. 2022). Das Resultat der Verhandlungen: Ein *Loss and Damages*-Fonds, der Staaten des Globalen Südens bei akuten Klimakatastrophen unterstützen soll, aber der historischen Dimension der ökologischen Krise nicht gerecht wird. Das Buch *Dekolonialistische Theorie aus Lateinamerika* (2022) bietet auf 208 Seiten einen Ausgangspunkt für die kritische Analyse dieser Klimapolitik. Schließlich fokussiert diese Theorie laut Jens Kastner (2022: 22) auf die Untersuchung kolonialer Kontinuitäten in sozialen Phänomenen, wie sie etwa in der verstärkten Verhandlungsmacht des Globalen Nordens in der internationalen Klimapolitik zum Tragen kommt (vgl. Roberts/Parks 2007: 15). Zudem zielt dekolonialistische Theorie auf die Transformation dieser Kolonialität ab, weshalb Kastner (2022: 11, FN 6) den Begriff „dekolo-

nialistisch“ und nicht „dekolonial“ verwendet. Lediglich diesen transformativen Anspruch und die Analyse von Kolonialität teilen alle dekolonialistischen Ansätze miteinander. Denn die zahlreichen Fragestellungen, Gegenstände und disziplinären Zugänge belasten für Kastner (ebd.: 13) nicht nur die Annahme, dekolonialistische Theorie sei ein in sich geschlossenes Projekt, sondern stehen auch der Suche nach den theoretischen Ursprüngen in einzelnen Texten oder in gesammelten Schriften einzelner Autor*innen entgegen. Daher bringt der Autor den Leser*innen dekolonialistische Theorie über die Rekonstruktion von und kritische Auseinandersetzung mit sechs Debatten näher. Kastner legt damit – wie Scalet in seiner Rezension treffend bemerkt – einen „Kompass der Dekolonisierung“ (Scalet 2022) vor, der etwa auf die dekoloniale Kritik der Moderne, auf normative Konzepte wie das *border thinking* (Anzaldúa) oder auf die dekoloniale Wissens- und Wissenschaftskritik und ihre Auseinandersetzung mit dem Begriff der epistemischen Gewalt verweist.

Allerdings rezipiert Kastner auch Kritiken an dekolonialistischer Theorie und fügt seine

eigenen differenzierenden Perspektiven hinzu. Einerseits kritisiert er die eindeutig antisemitischen Positionen von Mignolo und Grosfoguel (ebd.: 27, 97ff.). Andererseits stellt er (ebd.: 188ff.) Dussels These infrage, den Marginalisierten seien emanzipatorische Absichten und Haltungen inhärent. Zweifelsohne bleiben die Erfahrungen der Marginalisierten Anknüpfungspunkte für dekolonialistische Bewegungen und für eine dekolonialistische Wissenschaft (ebd.: 193). Jedoch folgen aus der alltäglichen Erfahrung nicht notwendigerweise emanzipatorische Positionierungen. Diese sorgfältigen Differenzierungen bereichern Kastners gelungene Übersetzung dekolonialistischer Theorie und ermöglichen eine breitere Debatte.

Dennoch hätte in meinen Augen die Relevanz dekolonialistischer Theorie für die Analyse gegenwärtiger sozialer Phänomene stärker betont werden können. Wie interpretiert Kastner zum Beispiel aus seiner differenzierenden dekolonialistischen Perspektive die Ausladung von Achille Mbembe von der Ruhrtriennale 2020 und die daran anschließenden Debatten über Antisemitismus und Kolonialismus (vgl. Brumlik 2021: 44f.)? Offen bleibt für mich

auch, wie auf eine Annäherung von Kritischer und dekolonialistischer Theorie hingearbeitet werden könnte (vgl. Korak 2023) oder wie Anknüpfungen an kolonialkritische Ansätze im Umfeld des *Black Marxism* möglich wären.

Schließlich teilen dekolonialistische Theorie (vgl. Kastner 2022: 74) und Robinsons (2021: 106ff.) *Black Marxism* dieselbe Prämisse: 1492 muss als kolonialer Einschnitt in die Globalgeschichte begriffen werden. Jedoch arbeitet Robinson (ebd.: 2, 26) heraus, wie innereuropäische Konflikte die Expansion Europas, aber auch die Entstehung von Rassismus als Macht- und Herrschaftsverhältnis bedingt haben. Der Politikwissenschaftler (ebd.: 121ff.) plädiert auch dafür, die Widerstände von Sklav*innen in den *Americas* als Ausgangspunkte für antikoloniale Praxen heranzuziehen. Ähnlich dazu wird in dekolonialistischen Ansätzen, wie Kastner (2022: 168ff.) verdeutlicht, die zapatistische Bewegung als möglicher dekolonialer Akteur rezipiert. Diese Parallelen legen für mich eine theoretische Annäherung nahe, auf die Kastner noch hätte eingehen können.

Dieser offene Punkt mindert allerdings nicht die Bedeutung von Kastners Buch für den deutsch-

sprachigen Kontext. Auch die fehlende Auseinandersetzung mit Kritik als Methode – der Autor bedient für mich Elemente einer immanenten (vgl. ebd.: 18ff.) und einer Standpunktkritik (ebd.: 32ff.; 167ff.) – ist wohl nur für das sachkundige Fachpublikum relevant. Hingegen fallen die fehlenden Schlussworte stärker ins Gewicht. Direkt im Anschluss an Kastners (ebd.: 193) Diskussion von Dussels These zu den Marginalisierten werden Leser*innen in den (kolonialen) Alltag zurückgeworfen. Zur Orientierung in und Veränderung von dieser kolonialen Welt halte ich Kastners Buch dennoch für unverzichtbar.

JOHANNES KORAK

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Journal für Entwicklungspolitik (JEP)

ISSN 0258-2384, Erscheinungsweise: vierteljährlich

Heft XXXIX, 3/4-2023, ISBN 978-3-902996-33-6

Preis des Einzelhefts: Euro 15,00

Preis des Doppelhefts: Euro 25,00

Preis des Jahresabonnements: Euro 55,00 (Österreich);

Euro 70,00 (Europa); Euro 77,00 (Welt).

Weitere Informationen: www.mattersburgerkreis.at

Abonnementbezug über die Redaktion:

Journal für Entwicklungspolitik, Sensengasse 3, A-1090 Wien,

office@mattersburgerkreis.at, www.mattersburgerkreis.at/jep

Das Abonnement kann unter Einhaltung einer dreimonatigen

Kündigungsfrist zum Jahresende gekündigt werden.

1. Auflage 2023

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Satz: Anne Lange Design, Wien

Druck: Interpress, Budapest

Offenlegung nach § 25 Mediengesetz

Medieninhaber: Mattersburger Kreis für Entwicklungspolitik an den österreichischen Universitäten, Sensengasse 3, A-1090 Wien

Grundlegende Richtung des JEP: Wissenschaftliche Analysen und Diskussionen von entwicklungspolitischen Fragestellungen und Berichte über die entwicklungspolitische Praxis. Verantwortlich für Inhalt und Korrekturen sind die AutorInnen bzw. die Redaktion.