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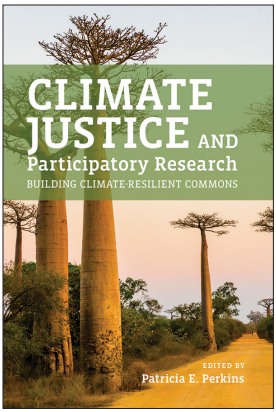

CLIMATE JUSTICE AND PARTICIPATORY RESEARCH: BUILDING CLIMATE-RESILIENT COMMONS

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Conflicting Perspectives in the Global South Just Transition Movement: A Case Study of the Mpumalanga Coal Region in South Africa

Andries Motau

Introduction: Coal As a Problematic Commodity in South Africa

South Africa's coal mining sector has had significant social, economic, and environmental impacts on the country. Coal is the source of over 90 per cent of the nation's electricity, roughly 30 per cent of the liquid fuel, and approximately 70 per cent of total energy needs. Coal mining in South Africa has been associated with negative legacies, especially in the province of Mpumalanga, where most coalfields are located (see Map 6, page 242). Benefits throughout coal mining regions in South Africa have not been equitably distributed, and coal mining communities are characterised by high levels of poverty, socio-economic inequalities, and environmental degradation.

In chapter five of the National Development Plan (South African National Planning Commission, 2013), South Africa's government has proposed Vision 2030, which addresses environmental sustainability and the equitable transition to a low-carbon climate-resilient economy and society. However, the proposal does not articulate clear pathways to a Just Transition.[1] There has

also been public outcry, especially from local and international civil society organizations. These groups argue that South Africa's coal industry must not expand any further; rather the country must transition away from coal and create a shared vision of a different future, and this must be accelerated.

A Just Transition in the context of a coal-dependent developing country such as South Africa presents many inter-related challenges, both on a national and local scale. Stakeholders have different, and often conflicting, priorities and perspectives on how the energy transition will impact communities, workers, the environment, and the economy. These complexities have created difficulties in reaching a consensus on how various trade-offs can be managed and how an inclusive and equitable transition can be achieved, from both local and national perspectives.

Given the many differences in information access, power, and agency (among other factors) across affected stakeholders, climate justice requires that a wide range of information and opinion sources be shared and weighed as part of decision processes, both formal and informal.

As in other such complex situations, participatory and multi-method research approaches are useful to help investigate and analyse different perspectives, discourses, and synergies towards realising a Just Transition in the Mpumalanga region of South Africa.

Coal plays a major role in many economies around the world, like in South Africa, and there is a growing realisation that coal-based growth is not sustainable. According to Kretschmann (2020) there is increasing disinvestment in coal mining in many coal regions, due to consumer and investor pressure, and as a result many entities are implementing decarbonization strategies across their portfolios. These disinvestment decisions are influenced by the impacts of coal at both global and local levels. These impacts include greenhouse gas (GHG) emissions, which contribute to climate change. In South Africa some of the impacts are a result of historic injustices from the apartheid era and inconsistent legal compliance by the coal sector. These have exacerbated levels of poverty and systemic inequality, as well as corruption and nepotism in mining-affected communities, and have reinforced the notion that mining operations disproportionately favour mining companies and the State (Fine & Rustomjee, 2018; Marais, 2013; McCarthy & Humphries, 2013; Baker et al., 2014; South African Human Rights Commission, 2017; Shongwe, 2018; Mandel, 2019).

At local levels, the impacts of coal mining include water contamination affecting the water quality, physical and chemical land degradation, air pollution through dust fall-out and emissions of particulate matter (PM) and toxic gases (Shongwe, 2018). Despite the negative impacts posed by coal production and utilisation, it needs to be recognised that coal mining plays a critical role in the mineral economy, as it contributes to energy needs, employment, exports, local communities' livelihoods, and gross domestic product (GDP) (Minerals Council South Africa, 2020). According to Keles and Yilmaz (2020) the negative repercussions overshadow the beneficial consequences of coal mining and coal consumption. Thus, there are calls and plans for the globe to move away from coal mining and production, with countries like Germany setting a phase-out by 2035. There have been many charges that the current trajectory of South Africa's coal dependency and growth is not sustainable, and that South Africa needs to transition to a low-carbon economy (Hallowes & Munnik, 2019). Whilst this need is undisputed, it is equally important that the transition be done in a just (morally justifiable) and fair manner, especially in a developing country such as South Africa (World Bank, 2018). The Just Transition movement is gaining momentum in South Africa, with campaigns such as "Life After Coal," which involves various non-governmental organisations, and "A Green New Eskom" (South Africa's public electricity company), led by the Climate Justice Coalition.

While South Africa's National Development Plan includes mention of a national Just Transition pathway (South African National Planning Commission, 2019), showing recognition of the need to collectively plan toward a transition, the government remains committed to coal and is driving a political agenda to invest in coal due to its economic implications and benefit. (Hallowes & Munnik, 2019). Nalule (2020) argues that though there is a realisation in many developing countries of the need to transition, countries such as South Africa are still conflicted, with the government having plans to transition whilst also seeking developments in the coal sector. Montmasson-Clair (2017) maintains that although there are good policies in place for South Africa's sustainability, there has been a lack of government initiative in implementation.

This conflict of interest escalates already existing tensions between different stakeholders with different priorities. For example, environmental justice groups are pushing for a coal phase-out due to its negative externalities, whilst trade unions are concerned about job losses for coal workers (Cock,

2019). These conflicting perspectives have resulted in a lack of coordination, and concerns about the lack of inclusivity in the Just Transition (Swilling and Annecke, 2012; Baker and Wlokas; 2014; Bond, 2019; Cock, 2019; Reinouad, 2019). These concerns are driven by South Africa's previous economic growth trajectories, where only a few mining companies benefited whilst mining communities were left worse off, as elaborated below (Fine & Rustomjee, 2018; Marais, 2013; McCarthy & Humphries, 2013; Baker et al., 2014). The minerals-energy complex centred on coal represents a continuation of such an economic path (Froestad et al., 2018).

Mpumalanga is one of the provinces where negatively affected mining communities are found, especially in the Emalahleni area where the economy is mainly dependent upon coal mining. After many years of coal mining in the area, civil society came together to raise concerns around mining. According to Munnik (2019), the discourse on climate change and anti-coal activism in Mpumalanga gained momentum in 2014 when a group of communities affected by coal came together with activists and non-governmental organizations (NGOs) in a forum called "push back coal," the aims of which were to coordinate and share knowledge and build resistance against coal and put in place plans to transition away from fossil fuels. Furthermore, the push-back forum continued to do community work on environmental and climate justice with NGOs such as groundWork, Earthlife Africa, and the Centre for Environmental Rights, establishing a core alliance with the "Life After Coal" campaign, which emphasises a move from resistance against coal to a Just Transition (Munnik, 2019).

The resistance to coal has been mostly from environmental groups, but when it comes to the Just Transition the situation is more complex, as there are several different actors across various levels involved with different and sometimes conflicting priorities, perspectives, and goals. Mining communities are often not involved in debates, but rather represented by third parties with their own agenda, whilst government policies are not consistent or well aligned. These complexities and gaps are preventing a coordinated and inclusive Just Transition approach in South Africa. An in-depth understanding and analysis of the actors, their discourses and shifting power relations is required to inform transformative Just Transition policy and planning.

Local Environmental and Social Impacts of Coal Production and Combustion

South Africa is ranked amongst the world's top eight countries for coal production and consumption and, due to the country's large supply of coal and its pressing development priorities, advocating lower coal consumption is politically difficult (Burke & Nishitateno, 2013). Coal is South Africa's principal source of energy for fuel and petrochemical production, and a significant contributor to the country's GDP and to its socio-economic development (Mathu & Chinomona, 2013; Zhao & Alexandroff, 2019). Although coal mining contributes to the economy, coal mining and combustion have significant adverse impacts on local environments and communities, in South Africa as in other countries across the globe.

Studies on Just Transition have tended to focus on economic impacts of fossil fuel dependence, and this has resulted in a growing gap in literature on Just Transition coordination, especially when it comes to actors and their various vested interests (Cahill & Allen, 2020). In Mpumalanga province, studies have not only focused on the economic contributions of coal mining and production but they have also looked at the social and environmental impacts. For instance, a study by Aneja et al. (2012) found that activities such as surface coal mining are a source of air pollution through the blasting and wind erosion of exposed areas, and these emissions also occur during transportation, handling of coal at the mines, and during coal processing. A Greenpeace (2019) investigation of a full year of TROPOMI (Tropospheric Monitoring Instrument) satellite monitoring of nitrogen dioxide emissions and other scientific datasets declared the coal-fired power plant and industrial cluster in Mpumalanga to be the world's worst hotspot for nitrogen dioxide (NO_2) and sulphur dioxide (SO_2) emissions, and the area overall ranks fourth for NO_2 and third for SO_2 emissions in the world (Greenpeace, 2019). These toxic pollutants can result in increased risk of respiratory infections, increased risk of stroke, and increased risk of death from diabetes. Due to the high levels of gaseous pollutants, the Emalahleni area was declared a Priority Area, in terms of section 18(1) of the South African National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (Department of Environmental Affairs, 2018; Gray, 2019).

Studies have also investigated impacts of coal mining and production on water pollution; it was found that there are severe strains on the quality

of water in Mpumalanga as a result of coal mining, due largely to acid mine drainage which has contaminated and disturbed vast amounts of land, destroyed wetlands, rerouted streams, and contaminated ground and surface water (Geldenhuis & Bell, 1998; McCarthy, 2011; Nzimande & Chauke, 2012; Mhlongo et al., 2018; Gupta & Nikhil, 2016; Kholod et al., 2020).

Research has also been conducted on the negative social impacts of coal mining in local communities (Munnik, 2019). Coal mining communities are often faced with detrimental effects that include damage to homes due to blasting, damage to roads and infrastructure due to large vehicles, forced and unplanned removals, and negative impacts on health and well-being (Centre for Environmental Rights, 2016). Coal mining has also had negative impacts on crop and livestock farming in Mpumalanga, and these negative impacts have contributed to rising tension and conflicts within communities between farmers and miners, resulting in activism, protests, and litigation (Shongwe, 2018).

From the different arguments about the environmental, social, and economic impacts of coal mining and production, it is still unclear how social justice and environmental sustainability can be balanced in achieving a Just Transition in Mpumalanga, or in South Africa overall. The reality is that the issues of social justice and environmental sustainability are extremely complex when translated into practice, as there are many trade-offs that must be considered and mediated (Ciplet & Harrison, 2020; Culwick & Patel, 2020). An understanding of the complexity of issues of social justice and environmental sustainability requires consideration of how justice and sustainability interact at different temporal, social, and spatial scales, as these issues are both conceptual and practical (Fatti et al., 2021). Also involved in each particular context are social trust, institutional structures for mediating conflicts and deciding benefit-sharing, and the overall governance system in which power and agency are distributed and exercised.

Coal Mining and Global Climate Change

Like other fossil fuels, mining and utilisation of coal give rise to the GHG emissions responsible for global warming. According to Pandey et al. (2018), coal mining activities are responsible for direct emissions of GHGs such as methane and carbon dioxide (CO_2), as well as indirect emissions through the consumption of fossil-fuel derived electricity and other materials. Coal

mining also emits increased GHGs through spontaneous combustion (Carras et al., 2009; Mohalik et al., 2016), which can occur when coal is stored in bulk. Coal-fired power plants are the largest emitters of GHGs in the coal-to-power value chain in South Africa.

According to Strambo et al. (2019), 50 per cent of South Africa's GHG emissions are accounted for by public electricity utility Eskom and chemical firm Sasol, and they are responsible for 85 per cent of the coal used in the local market by volume. This has resulted in South Africa's being ranked the world's fourteenth-largest emitter of GHGs (Climate Transparency, 2020). Emissions remain high even as areas of South Africa such as the Highveld plateau, which includes part of Mpumalanga, are warming at double the global rate (groundWork, 2018). Changing climatic conditions resulted in one of the worst historic droughts in the Highveld in 2015/16 that withered the maize crop and sent prices spiralling; this affected poor people negatively due to a reduction in the availability and quality of food (groundWork, 2018).

Seen through justice and environmental sustainability lenses, such issues as pollution and food security drive marginalisation and inequalities within communities. Decades after the end of apartheid, areas such as the Highveld are still characterised by prolonged inequalities and environmental degradation, despite being resource rich. Davis (2010) argues that climate injustice derives from both the causes and effects of climate change; those who are likely to be most adversely affected have not only contributed the least to and benefited the least from the development and consumption of resources that have caused climate change, but have also had limited influence over decisions that affect future impacts. Thus, increased agency for marginalized people must be part of the Just Transition agenda.

Just Transition: Drivers and Barriers

The concept of a Just Transition emphasises the need to phase out industries that pose harms for workers, community health, and the planet, whilst at the same time creating opportunities and pathways for workers to transition to other jobs (Smith, 2017; Climate Justice Alliance, 2018). An analysis of the literature indicates that research on the Just Transition has been mainly focused on developed countries rather than the Global South. Furthermore, much existing research emphasises the economy rather than the above priorities (harm for workers, community health, and the planet) and tensions between

different actors (Snell, 2018; Cock, 2016). According to Smith (2017), the global definition of the Just Transition has changed from a focus on shifting coal and other fossil fuel workers to "green jobs," to embracing broader issues across economic, social, and environmental dimensions of sustainability. According to Cock (2016), transitioning to green jobs is a more moderate version of shifting to a low-carbon economy as this involves a shallow, reformist transformation focused narrowly on building a new energy regime with "green" jobs, new technology, social protection, and consultation. Cock (2016) argues that a Just Transition approach of this nature is somewhat defensive as it is often manipulated to act as if it is representing and protecting the interests of the most vulnerable. Ward (2018) holds that a Just Transitions discourse has progressed beyond the jobs-versus-environment argument. Through interaction with the environmental justice and climate justice movements, a Just Transition has evolved as a broad framing that supports an expanded scale of reflections across economic, social, and environmental aspects of sustainability (Ward, 2018).

Whatever the evolution and different understandings of the term, Just Transition remains a challenge in South Africa, and this is because the current political economic systems that are in place in South Africa need to change for South Africa to have a transformative Just Transition. Ward (2018) argues that the approaches to South Africa's sustainability, especially looking at the green economy accord signed at the South African National Parliament in 2011, have not been explicit about a Just Transition but have referred to it only in a passive and minimalist sense. This poses a threat in achieving a transformative Just Transition if it is expected to occur within a capitalist economy that has been enabled by current policies and unjust political systems, both old and new (Ward, 2018). Avelino and Wittmayer (2016) argue that transformative approaches are key to sustainability transitions; however, transformation cannot be perceived from a single perspective, as there are often shifts in power from different actors and sectors who play crucial roles in transition debates. Montmasson-Clair (2017) holds that although there are multiple plans and strategies in place for a transition to development that is sustainable in South Africa, there are great challenges from a policy and institutional perspective, and this is due to the inconsistencies and the misalignments in strategies and plans. Efforts to achieve transformations towards sustainability will always be contested due to the highly political nature of transformations, which can result in different actors being affected in

different ways with both gains and losses (Meadowcroft, 2011, van den Bergh et al., 2011).

A major barrier to achieving a Just Transition in line with South Africa's sustainability principles is the large number of actors with diverse and sometimes competing priorities, and the tensions between ecological and socio-economic imperatives. There are often competing social and ecological concerns in a Just Transition; for instance, social adjustments take time while climate change requires immediate action (Snell, 2018). This is particularly the case in South Africa, where there is considerable conflict between environmental activists and trade unions as they have deeply held but differing perspectives on social and ecological concerns (Snell, 2018). This conflict has revealed fault lines within the Just Transition discourse as there are tensions between labour and environmental movements on Just Transition priorities.

Global South Anti-Coal Campaigns

There have been mass protests and campaigns in South Africa against coal mining and production. These campaigns have been catalysed by global calls about the changing climate, pollution from coal mining, threats to water security, and human rights (Baker et al., 2014, Shongwe, 2018). Some of the more prominent campaigns are "Life After Coal," which is a joint campaign by Earthlife Africa Johannesburg, groundWork, and the Centre for Environmental Rights. This campaign aims to discourage the development of new coal-fired power stations and coal mines and support the reduction of emissions from existing coal infrastructure while encouraging a coal phase-out in response to both climate change and South Africa's previous exploitive trajectories of economic growth (Munnik, 2019).

"Life After Coal," along with eight civil society organizations, challenged the authorization of a proposed coal mine in the Mabola Protected Environment, a strategic water source area near Wakkerstroom in Mpumalanga Province. The opposition was considered successful, because the constitutional court ruled in favour of the civil society organisations (Life After Coal, 2019). Another climate justice campaign that has gained prominence is in Somkhele, Kwazulu-Natal, which aims to unify opposition to the Fuleni Coal Mine on the border of the iMfolozi Wilderness area. It is led by the civil society organizations Global Environmental Trust (GET) and the Mfolozi Environmental Justice Organisation (MCEJO).

Bond (2019) argues that environmental groups in South Africa are still not yet as militant and effective as in other places, comparing South African movements with Germany's Ende Gelände annual movement. Ende Gelände is an anti-nuclear and anti-coal movement that has been in existence since 2015, organizing non-violent direct-action protests against lignite and coal mining and coal-fired plants in Germany. According to Bond (2019), despite local opposition to fossil fuels' environmental impacts in several places, and the emergence of anti-coal activist networks, South Africa's climate justice groups remained fragmented and unable to focus on broad climate justice priorities: the need for ecologically constructive employment via Just Transition programs spanning gender, race, geographic, and intergenerational equity.

Some South African movements oppose the short-term impacts of coal mining and production, which include local and direct environmental impacts related to mine pollution, and community health and well-being, while others focus on the long-term impacts of coal such as GHG emissions and global warming, which also affect the quality of life and livelihoods of local communities while including equity-based critiques of the economic systems that cause climate change. This broader understanding of climate justice creates the possibility of linking labour unions, women's movements, environmentalists, low-income community activists, and youth climate movements in unified or networked decarbonization campaigns.

Activist researchers can assist this broadening of perspectives by working with local organizations to document and share the nuanced information that emerges from engaged participatory research with organisations such as groundWork, including their involvement with smaller organisations such as the Vukani Environmental Justice Movement in Action (VEM, Vukani Environmental Movement, for short), one of the grassroots movements in Emalahleni, which to date have proven to be the most successful push-back measures on coal.

My doctoral research on climate justice in South Africa's coal industry involves collaboration with groundWork and the VEM, guided by a participatory action research approach. Debates and planning for a Just Transition have presented many viewpoints from different stakeholders, and some of these stakeholder voices, especially those of the most marginalized, tend to be lost or ignored. Participatory research creates opportunities to engage and reflect the arguments of all active stakeholders within the Just Transition debates, even those not regarded as influential actors. For example, VEM

is a community-led climate-justice movement that advocates against coal's impacts, especially on community health, pollution, worker safety, racial and gender equity. VEM as a grassroots organisation plays a critical role in obtaining and sharing needed information that can inform community members and also influence planning decisions for a better Just Transition at the grassroots and local level. If grassroots movements such as VEM are disregarded because they are not seen as having much influence, unlike more established union-linked movements such as groundWork, this can result in their messaging not making it all the way to be included in decision-making processes, which is a real loss for climate justice.

Participatory research highlights issues of local concern regarding coal-mining impacts, and identifies how grassroots organisations such as VEM can partner better with other established organisations in influencing democratic decision-making. A Just Transition involves negotiating many contested perspectives, and in the context of Mpumalanga participatory research plays a critical role in understanding and influencing the ever-changing landscape, debates, and power dynamics.

Conclusion

Coal mining and production have had significant impacts in South Africa and many of these are still playing out, as South Africa remains a country highly reliant on coal. The challenges to a Just Transition in South Africa are multi-faceted, with the main barrier being how to interpret and implement the country's sustainability principles; there are a large number of actors with diverse and sometimes competing priorities, so tensions emerge between ecological and socio-economic imperatives. Thus, coordination of a transition or phase-out of coal in South Africa has been hampered by the presence of these diverse viewpoints. To achieve consensus on how to move ahead and create a transformative economy, and to build institutions that allow this, many differing perspectives need to be understood, even when most stakeholders agree that a new and different trajectory is needed in contrast to previous environmentally damaging and socially exploitative systems.

Civil society remains key in pressing for any sort of Just Transition, and this can be seen from civil society organizations' involvement in opposing coal mining and utilization. The organisation groundWork has been at the forefront and has built strong credibility with labour unions, including miners'

unions. Through groundWork's growing involvement with other organisations, it is evident that the narrative about a Just Transition has moved far beyond the "jobs versus environmental protection" debate to include how those who previously have been marginalised can begin to benefit economically. The slow progress in policy development and implementation, and the South African government's lack of efforts to fast-track decisions on green-movement initiatives, have been a great challenge that has held back some of the victories of civil society in the fight against human rights violations. Civil society activism on Just Transition issues should be seen as a starting point in conversations with key stakeholders who are moving South African politics on this pressing issue. A transformative and progressive Just Transition is needed, and can be achieved; its success relies on communication among many stakeholders within frameworks that fairly weigh the priorities of the environment, the people, and the economy.

NOTE

1 Just Transition means a framework of social processes, interventions and practices to secure workers' rights and livelihoods, and place-based community agency and power, in shifting from extractive to sustainable, regenerative economies.

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