AIDC
Alternative Information & Development Centre
Strengthening Alliances for a Wage-led, Low-Carbon, Sustainable and Equitable Development Path for Southern Africa

misereor
GEMEINSAM GLOBAL GERECHT

PowerShift

REFRAMING DEMAND

A SOUTH AFRICAN PERSPECTIVE ON REDUCING PRIMARY METAL CONSUMPTION IN THE GLOBAL NORTH

I. Introduction: Purpose and Framing

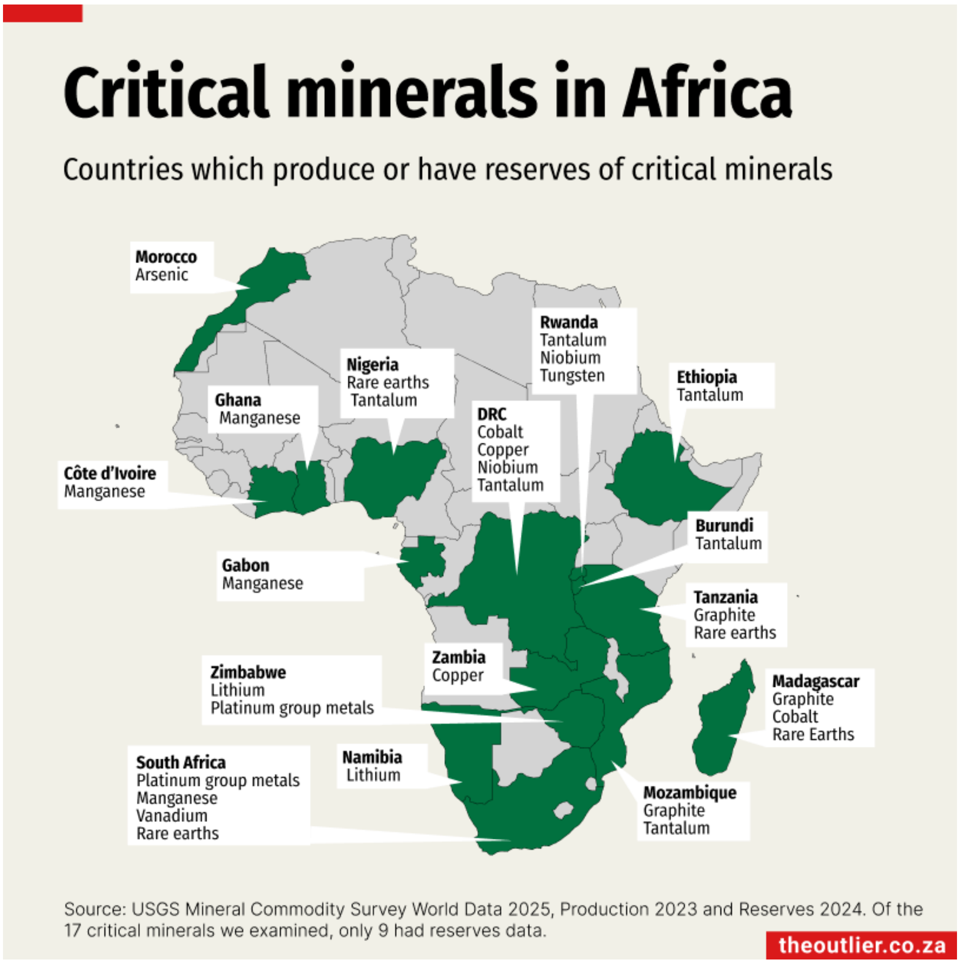
The European Union, and Germany in particular, remain among the world's largest consumers of primary metals. Despite accounting for less than six percent of the global population, the EU consumes approximately 25 to 30 percent of the world's metals. Germany's industrial economy plays a significant role in this demand, with the country ranking among the top consumers of aluminium, copper, zinc, nickel, and lead. However, these patterns of consumption are sustained by transnational extractivist relations that externalise social, environmental, and economic costs onto communities and ecosystems in the Global South.

This report contributes to ongoing efforts to confront this global asymmetry by offering a South African perspective on the imperative of demand reduction in the Global North. It draws on grounded experiences of extraction and its consequences, while also engaging in a systemic critique of export-led development and growth-centric industrialisation strategies. As previous work on the impacts of critical minerals mining by the Alternative Information and Development Centre (AIDC) has shown, South Africa continues to be viewed primarily as a mineral warehouse for global energy transitions, rather than as a site for inclusive industrial development (AIDC, 2024). The country's mineral wealth, particularly in manganese, platinum group metals, and iron ore, has positioned it as a key player in global supply chains for so-called transition minerals. Yet this status is underpinned by enduring patterns of colonial extraction, racialised dispossession, and corporate impunity.

South Africa's experience thus illustrates a broader pattern in the Global South, where industrialisation strategies have long been subordinated to the needs of capital accumulation elsewhere. Neoliberal export-oriented models of industrialisation have locked African economies into a peripheral position in the global division of labour and economic power. The pursuit of green industrialisation through battery value chains, hydrogen development, or electric vehicle assembly, while offering some potential for local benefit, risks deepening dependency if not coupled with a political project of structural transformation.

Against this backdrop, degrowth scholarship, primarily developed in the Global North, has entered policy debates as both an academic discourse and activist movement that challenges the hegemony of growth. While not primarily an economic concept, degrowth serves as a "wake-up call to radically question a growth obsession that, as degrowth proponents contend, hurts both people and planet" (Gräbner-Radkowitsch and Strunk, 2023). At its core, degrowth demands the "equitable downscaling of production and consumption" in the North (Schneider et al., 2010), in order to reduce global resource throughput and mitigate climate breakdown. But it also opens the space for critical reflection in the South, asking whether growth-oriented development itself is inherently flawed, or whether it remains necessary to achieve material wellbeing. Does South Africa, and the Global South more broadly, require a growth-centred approach to industrialise, or are their alternative strategies that encompass some aspects of the degrowth movement?

South African civil society has long grappled with these questions, often outside the vocabulary of degrowth but grounded in the material realities of extractive harm and demands for justice. The call for the "right to say no" and for alternatives rooted in community ownership and ecological reparations has gained traction among mining-affected communities (AIDC, 2024). These calls resonate with degrowth's insistence on plurality, autonomy, and sufficiency, and demand that resource justice debates centre the voices of those who bear the brunt of extraction.



This report is structured to build a cumulative argument about the necessity of a justice-centred transition beyond extractivism, beginning with the historical and ongoing socio-ecological impacts of mining in South Africa and the region. It then examines the structural constraints that limit meaningful industrialisation from below, before shifting focus to the responsibilities of the Global North. The second half of the report explores Southern perspectives on circular economy and demand-side mitigation, drawing attention to grassroots innovations in waste, repair, and post-extractive alternatives. These sections challenge dominant models of circularity and offer concrete pathways for transformation rooted in sufficiency and justice. The report concludes with recommendations targeted at EU and German policymakers, emphasising the importance of reduced material throughput and the need to support Southern-led post-extractive development.

II. Mining's Socio-Ecological and Human Rights Impacts in South Africa and the Region

Mining in South Africa, as across much of the African continent, continues to produce deep and systemic socio-environmental harm. These harms are most acutely experienced by communities located near extraction sites, smelters, and transport corridors. They include the destruction and contamination of vital water sources, forced displacement and land dispossession, occupational and community health risks, and the exacerbation of poverty and gendered inequality. These costs are frequently externalised, absorbed by communities, ecosystems, and future generations, while profits are extracted by transnational corporations (TNCs) and channelled to shareholders abroad. The following concrete examples provide vivid cases of the externalisation of costs.

- Acid mine drainage from abandoned and active mines pollutes between 1.6 and 4.3 billion litres of water every day in South Africa, contaminating key rivers like the Vaal and Olifants.

- The Department of Water and Sanitation has estimated that acid mine drainage could cost R30 billion (US Dollar 1.7 billion) to remediate in the Witwatersrand alone.

- In Limpopo, the expansion of the Venetia Diamond Mine displaced over 1,000 households in the 1990s, with communities still reporting loss of farmland and inadequate compensation, according to ActionAid in 2008.

- Across Africa, mining-related displacement has affected millions. For example, Rio Tinto's QMM ilmenite mine in Madagascar displaced hundreds of fishing households and restricted access to ancestral lands.

- South Africa has one of the world's highest rates of silicosis: more than 500,000 former mineworkers are estimated to have contracted the disease from gold mining.

- Mine tailings dumps expose communities to toxic dust containing uranium and heavy metals; in Johannesburg, more than 1.6 million people live within 5 km of tailings storage facilities.

- Despite generating enormous profits, mining towns are marked by poverty: in Rustenburg, at the heart of the platinum belt, 63 percent of residents live in informal housing or backyard shacks.

- Women in mining-affected communities face increased burdens: unsafe water access, care responsibilities for sick family members, and often exclusion from mining jobs – where women constitute less than 12 percent of the workforce.

- Between 2012 and 2019, Lonmin (before its acquisition by Sibanye-Stillwater) transferred over US Dollar 1.5 billion in profit shifting to to the benefit of shareholders abroad while failing to meet housing commitments for Marikana workers.

Foto: Fresh water pollution: waste from copper mining in Zambia flows into nearby river. Image credit: AIDC.

Water insecurity remains one of the most pressing impacts of extractive activity in the region. In manganese-producing areas such as the Kalahari Basin, companies like South32 and Assmang have been shown to consume massive volumes of water for mining and processing, often at the expense of local residents who lack access to reliable drinking water (AIDC, 2024). Similar patterns are evident in platinum mining around Rustenburg, where communities living in informal settlements experience chronic water shortages, while nearby operations draw heavily on both surface and groundwater reserves (Phakedi, 2024). These dynamics are intensified by climate change, which compounds existing vulnerabilities and increases the precarity of livelihoods dependent on already degraded land and water systems.

Mining also entails extensive physical displacement, particularly in manganese, iron ore and coal-rich areas such as the Northern Cape, KwaZulu Natal and Mpumalanga (Mostert and Mathiba, 2022). Communities forcibly relocated to make way for mine expansion frequently report the loss of arable land, livelihoods, sacred sites, and cultural cohesion, with little or no compensation. In many cases, relocations are carried out by private security firms and are associated with threats, intimidation, or outright violence. These patterns echo broader concerns about the criminalisation of dissent, the militarisation of extractive zones, and the systematic undermining of Indigenous and customary land rights across the continent (AIDC, 2024).

Labour exploitation remains central to the extractive economy. Although mining has long been a major employer in South Africa, the sector continues to be characterised by subcontracting, low wages, poor working conditions, and inadequate health and safety protections. The 2012 Marikana massacre exposed the deadly consequences of this labour regime, with ongoing struggles over decent work, unionisation, and corporate accountability. In Zambia and the Democratic Republic of the Congo, workers in cobalt and copper mines report similar patterns of overwork, exposure to toxic substances, and lack of protective equipment, often under the control of Chinese or European firms (AIDC, 2024). In South Africa, the issue of migrant labour in the mining sector has a long history leading to the breakdown of family structures, social and cultural and health crises (Vosloo, 2020).

Foto: Striking mine workers at Lonmin Mine in Marikana, North West Province, South Africa demand a living wage of R12 500. Image credit: AIDC.

These harms are further compounded by the carbon-intensive nature of mining and refining. In South Africa, the electricity that powers most extraction and smelting operations is overwhelmingly coal-based, contributing to both local air pollution and global emissions.

Companies such as Glencore and Anglo American rely heavily on Eskom's grid for energy, effectively entrenching the country's dependence on fossil fuels while branding their operations as part of a "„green transition"" (Monaisa and Montmasson-Clair, 2022). This contradiction is emblematic of a wider greenwashing trend, in which high-emission operations are justified in the name of supplying minerals for low-carbon technologies in the Global North.

The structural drivers of these harms lie in the logic of global metal demand, particularly from the EU and Germany, which is underpinned by energy- and material-intensive production systems. The demand for so-called transition minerals such as lithium, cobalt, nickel, manganese, and platinum is driven by automotive, defence, digital and renewable energy industries in Europe and China, which have set ambitious targets for electric vehicles, battery storage, and green hydrogen. Yet these ambitions are often pursued without serious consideration of the upstream impacts of extraction. The current „green transition" risks replicating the same colonial supply chains that underpinned the fossil fuel economy, with countries in Africa once again serving as providers of cheap raw materials (AIDC, 2024).

This pattern of externalisation enables continued overconsumption in the Global North. Rather than accounting for the full environmental and social costs of resource use, consumers and industries in Germany and across the EU are insulated from its impacts through transnational corporate structures, trade agreements, and the geopolitical geography of value chains. The resulting asymmetry is not only ecological but also moral and political, as it denies affected communities meaningful participation in decisions that shape their futures. The perpetuation of extractive violence is thus integral to sustaining material abundance in the North, a reality that challenges mainstream narratives of "green growth" and underscores the necessity of demand reduction from a perspective of global justice.

Table 1:
The list of critical minerals and metals for South Africa*

Criticality	Minerals and Metals
High-Criticality Minerals	Platinum
	Manganese
	Iron Ore
	Coal
	Chrome Ore
Minerals with Moderate to High Criticality	Gold
	Vanadium
	Palladium
	Rhodium
	Rare Earth Elements
Minerals with Moderate Criticality	Copper
	Cobalt
	Lithium
	Graphite
	Nickel
	Titanium
	Phosphate
	Fluorspar
	Zirconium
	Uranium
	Aluminium

** The list of critical minerals and metals will constantly be reviewed and updated as the criticality classification mix is dependent on underlying market conditions, technological advancement, substitutability, recycling and geopolitics among other factors.*

III. Structural Dependency and the Limits of Industrialisation from Below

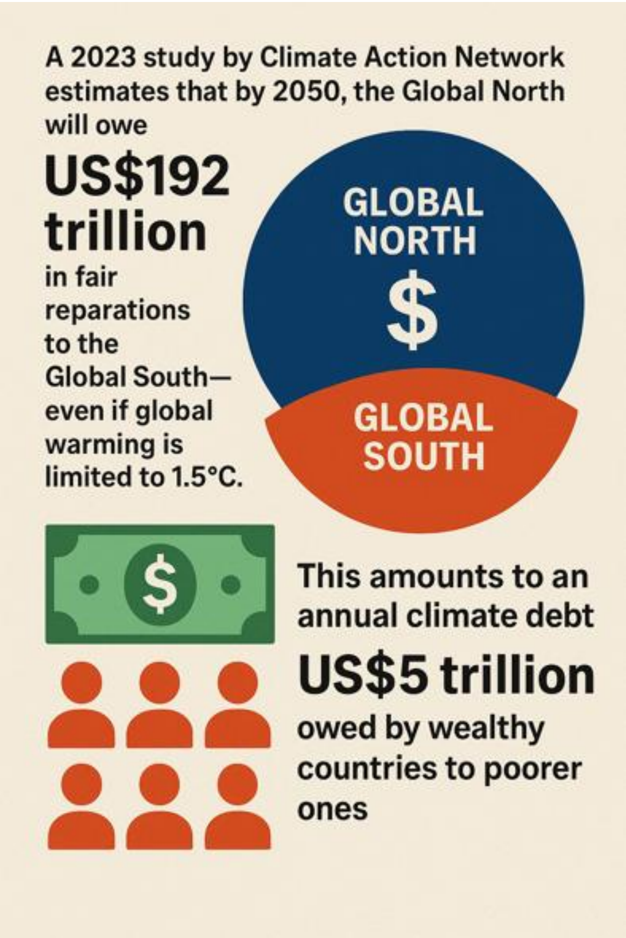
Despite rhetorical commitments to beneficiation and industrialisation, most African countries, including South Africa, remain locked into structurally subordinate positions in global extractive regimes. South Africa, while possessing a significant industrial base and relatively advanced infrastructure, continues to function as a primary commodity exporter, supplying raw or minimally processed metals such as manganese, platinum group metals (PGMs), and iron ore to industrial economies in the Global North. The promise of industrial "catch-up" through mineral-led growth has long been part of post-colonial development discourse, yet in practice, the dominant pattern has been one of enclave extractivism and limited domestic value retention. In fact, South Africa in the post Apartheid era has experienced significant deindustrialisation whereby the manufacturing sector has declined from 25 percent OF GDP in the early 1990s to just 12 percent currently.

As already discussed, contemporary strategies of "green industrialisation" risk reproducing this pattern. Mainstream approaches across the continent rely on a familiar set of tools, local beneficiation, regional integration, and strategic public-private partnerships, are stated to be designed to increase domestic value capture while participating in global green value chains. Zimbabwe's ban on unprocessed lithium exports, for example, represents a policy attempt to force upstream investment in processing capacity (Neema and Van Staden, 2024), while Namibia's collaboration with the EU to develop green hydrogen refining infrastructure aims to leverage its resource base into long-term industrial benefits (European Commission, 2022).

However, such initiatives face deep constraints, including high capital costs, unreliable electricity, inadequate technical capabilities, and elite political capture. Moreover, even where beneficiation succeeds at the level of refining or semi-processing, this does not necessarily translate into structural transformation. Local communities remain excluded from decision-making and see little benefit from value chain participation, while bearing the brunt of intensified extraction and environmental degradation. At the national level, foreign capital investment in local infrastructural development perpetuates the old strategies of pit-to-port. In this context, industrialisation from below, that is, industrialisation rooted in domestic needs, democratic participation, and ecological care, is stifled by both internal governance failures and external structural pressures.

A central structural barrier lies in continued overconsumption in the Global North. So long as countries like Germany and broader EU markets sustain their current levels of material throughput – much of it embedded in green technologies – the pressure on resource-rich countries to intensify extraction will remain. The shift from fossil to green energy does not in itself dismantle extractive dependency; it merely reorients it. "green transitions" premised on ever-expanding demand for raw materials will simply reproduce the same asymmetries of power and profit that characterised the fossil fuel era (AIDC, 2024). This dynamic is starkly evident in regional integration projects such as the DRC-Zambia Battery Council. While the initiative ostensibly aims to build an integrated value chain from mineral extraction to battery precursor production, its opaque governance, lack of civil society inclusion, and continued export orientation point to limited transformation of power relations (Olan'g and Scurfield, 2023). The battery initiative reflects a broader tension: between the desire of African states to climb global value chains, and the ecological and social limits of doing so without disrupting the logic of overconsumption in the Global North.

The same applies to efforts to leverage existing "brown" industrial capabilities into "green manufacturing". South Africa's automotive industry is often cited as a potential site for electric vehicle or battery production (Karkare and Medinilla, 2023), but these efforts remain constrained by global intellectual property regimes, foreign technology dependence, and uncertain local demand. Without greater regional coordination, public investment, and a shift in global trade and investment flows, the promise of green industrialisation will remain elusive.



IV. Responsibilities of the Global North

The countries of the Global North bear a disproportionate responsibility for the ecological crises confronting the planet. Their industrialisation, sustained over centuries, has been underpinned by extractive practices that have externalised environmental and social costs to the Global South. In the context of the current „green transition", these asymmetries risk being further entrenched unless there is a deliberate and systemic effort to address historical injustices and redistribute ecological and material burdens.

The Global North owes a vast ecological and climate debt to the Global South, rooted in centuries of extractive and exploitative practices. This debt encompasses not only the accumulation of carbon emissions that have driven climate change, but also the degradation of ecosystems, the dispossession of Indigenous and local communities, and the depletion of mineral and energy resources. Although the climate crisis is a shared challenge, its impacts are not equally distributed. The governments, elites, and corporations of the Global North have contributed disproportionately to the crisis, while communities in the Global South bear its harshest consequences.

First, the finance, resources, and technological solutions already exist, yet political will remains lacking. While trillions of dollars are readily available for militarisation and fossil fuel subsidies, they could instead be redirected towards addressing climate injustice and supporting sustainable transitions. Despite the agreement at COP28 in Dubai to transition away from fossil fuels, the Global North continues to prioritise economic growth through the expansion of oil, gas, and coal. This not only delays the necessary rapid reduction in emissions but also deepens the climate debt already owed. All new fossil fuel investments must cease immediately if there is to be any hope of addressing this historical and ongoing injustice.

Second, the Global North must actively support redistributive climate and trade policies that prioritise material justice. This involves shifting away from growth-centred models of development and toward systems of production and consumption grounded in sufficiency, solidarity, and reciprocity. Trade regimes must no longer be designed to secure cheap raw materials for Northern economies under the guise of "free" markets. Instead, climate and trade governance must be restructured to enable Global South countries to retain greater value from their resources, develop diversified economies, and transition on their own terms. This may include differentiated tariffs, the renegotiation of investment treaties, and the implementation of global rules that curb overconsumption and excessive resource footprints in high-income countries (Trilling, 2024).

Third, there is a clear obligation to finance just transitions in resource-exporting countries through international solidarity mechanisms. Global North countries must go beyond voluntary climate finance pledges and ensure predictable, grant-based support that enables Global South governments and communities to develop contextually appropriate transition strategies. These strategies should be rooted in social dialogue, local ownership, and ecological stewardship – not externally imposed technical blueprints. Debt cancellation, technology transfers, and capacity-building must form part of a broader effort to redistribute not just resources but power in global climate governance (Lowitt, 2021).

Finally, the Global North must cease practices of "green grabbing" – the rebranding of extractive projects as sustainable or necessary for the „green transition" without transforming the underlying colonial patterns of accumulation. Too often, investments in lithium, cobalt, or hydrogen are justified as part of a "clean energy future" while replicating the same logics of land dispossession, labour exploitation, and ecological sacrifice. Addressing this requires confronting the material demands of the „green transition" itself: reducing overall resource throughput, scaling down militarised and luxury consumption, and decoupling wellbeing from material expansion. It also requires centring the right of communities, especially Indigenous and rural populations, to say no to extractive development, even in its greenest form (AIDC, 2024).

Ultimately, the responsibility of the Global North is not only to reduce its own demand for energy and materials but to contribute to the conditions under which just, regenerative, and post-extractive futures can emerge in the Global South. Anything less risks entrenching the very injustices that the energy transition purports to solve.

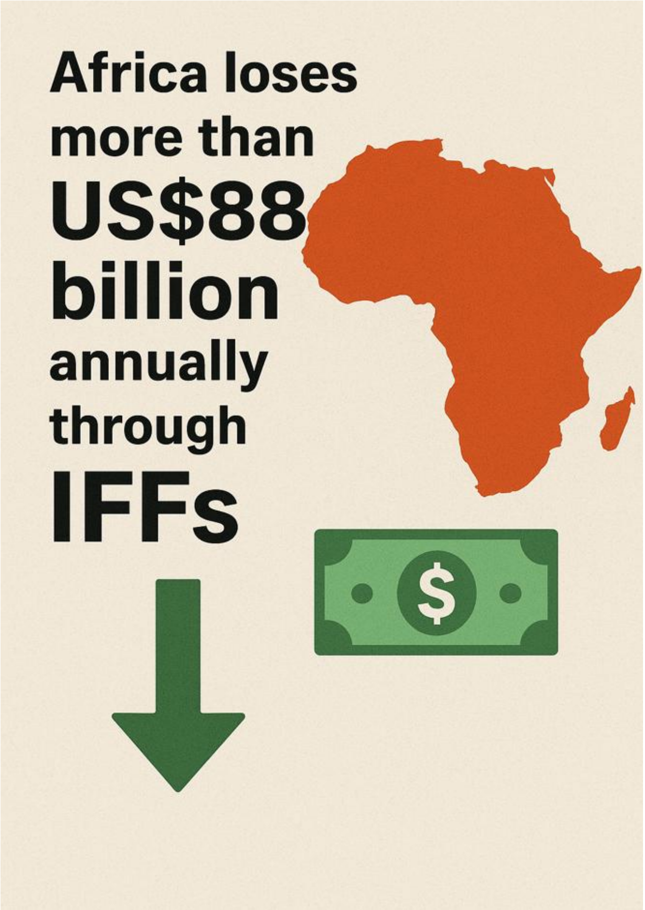
V. Critique of Loss of Government Revenue from Mining

Conventional arguments about mining as a key source of government revenue must be fundamentally reframed. South Africa's and the wider SADC (Southern African Development Community) region's reliance on mineral extraction is not a neutral economic choice; it is rooted in colonial structures that have locked the region into a role as a supplier of raw materials for global capital. This dependence reflects a distorted development trajectory that prioritises foreign exchange earnings and elite accumulation over people-centred development.

While the extractive industry does contribute royalties and taxes to national treasuries, these fiscal gains are often overstated and come at tremendous social, environmental, and long-term economic cost. In mining-affected communities across Limpopo, Northern Cape, and Mpumalanga, the promised benefits of mining rarely materialise. Instead, local people are left with degraded ecosystems, toxic water sources, collapsed infrastructure, and broken health systems. These hidden costs are seldom accounted for in national balance sheets.

Moreover, the loss of government revenue from mining is not simply due to a transition away from extraction, it is already happening under the current system. Through abusive tax practices, trade misinvoicing, under-reporting of export values, and shifting profits to secrecy jurisdictions, transnational mining corporations are actively draining public resources. The scale of illicit financial flows (IFFs) from the continent is staggering. The African Union has estimated that Africa loses more than US Dollar 88 billion annually through IFFs, with a large proportion linked to extractive industries (AIDC, 2021). In South Africa, high-profile cases and investigative research have revealed systemic practices of base erosion and profit shifting (BEPS) by large mining firms, including those domiciled in Canada, the UK, and Australia.

Tax justice is therefore central to any just transition. This includes addressing legal loopholes and institutional weaknesses that allow mining corporations to externalise costs and repatriate profits. Strengthening the South African Revenue Service (SARS), implementing transparent country-by-country reporting, curbing harmful tax treaties, and enhancing parliamentary oversight are critical first steps. At the regional level, SADC countries must coordinate on measures such as common transfer pricing rules and joint investigations



into corporate tax practices, given that many mineral value chains cross borders.

But curbing IFFs is not enough. The real question is: what kinds of economic activity should be supported to replace and surpass extractive rents in a just and low-carbon economy?

Transitioning away from mining dependence presents an opportunity to reclaim sovereignty over development paths. Instead of doubling down on extractivism, states must invest in regenerative, socially rooted alternatives that offer longer-term benefits and greater economic resilience. This means redirecting public and private investment towards sectors that support:

- Care-based economies, including public health, early childhood development, education, and elder care, which offer stable employment, especially for women, and generate high social returns.

- Circular economies, such as small-scale, decentralised industries focused on repair, reuse, remanufacturing, and recycling of materials. The growth of electronic waste recycling, scrap metal recovery, and textile upcycling already provides income to thousands in urban and peri-urban areas, but requires formalisation, infrastructure, and skills support to become truly dignified work.

- Agroecology and land restoration, particularly in former mining regions and degraded communal lands. These approaches can enhance food sovereignty, rebuild biodiversity, create climate-adaptive livelihoods and aid the ongoing issues of lack of mine closure.

- Green manufacturing for domestic and regional markets, including the production and assembly of solar thermal water heaters, electric minibus taxis and buses, and clean cookstoves. South Africa and neighbouring countries have significant industrial capabilities that can be repurposed for green production, provided there is political will and strategic public procurement.

Public revenue should be raised through progressive taxation and reinvested in these alternatives, not squandered on tax breaks for extractive industries or outsourced to foreign investors. The state has a vital role to play in shaping the direction of development, not merely as a regulator but as an active economic agent. Public ownership and cooperative models in key sectors of the circular economy, from recycling hubs to agro-processing cooperatives, can ensure that surplus is retained and reinvested locally.

In summary, the real loss of revenue is not the result of a move away from mining, but of a failure to confront structural injustices in the current system. Breaking with the extractive model opens space for a regenerative economy rooted in dignity, care, and community self-determination. For South Africa and the SADC region, this is not just an economic imperative—it is a moral and ecological one.

VI. Circular Economy and Demand-Side Mitigation: Southern Perspectives

As the adoption of renewable energy accelerates, reducing material consumption and reconfiguring industrial systems has become central to global policy. The European Union's New Green Deal and Critical Raw Materials Act, for instance, promote circular economy strategies like recycling and resource efficiency to reduce reliance on primary extraction. Yet these frameworks often externalise environmental and social costs to the Global South, framing circularity as a technocratic fix that enables continued overconsumption in the North under a green guise. Critics from the Global South warn that without deeper political change, circular strategies risk becoming greenwashing—masking structural inequalities and ecological harm.

This section offers a Global South critique of dominant circular and demand-side strategies, arguing for an approach grounded in justice, reparations, and post-extractivist transformation. It centres the experiences of mining-affected communities, informal recyclers, and waste workers—groups typically marginalised in industrial narratives yet essential to building equitable alternatives. Drawing on Southern political ecology, degrowth, and ecofeminist thought, it proposes a justice-based circularity rooted in community ownership, reduced consumption, ecological care, and economic localisation.

If circularity is to serve as a pathway toward justice rather than greenwashed accumulation, it must be grounded in the everyday practices and demands of communities already resisting extractivism and enacting alternatives. Across South Africa, diverse examples of such alternatives already exist—often marginalised in policy but rich in lessons for a justice-based transition.

Waste Picker Cooperatives and the Informal Commons

South Africa's urban recycling systems rely heavily on waste pickers who recover and sort post-consumer materials from landfills and city streets. In cities like Johannesburg, Tshwane, and Cape Town, reclaimers perform essential ecological work with little recognition or compensation. "Reclaimers recycle 80 to 90 percent of plastic and packaging in South Africa, saving authorities up to R750 million (US Dollar 53 million) in landfill costs, the Pretoria-based Council for Scientific and Industrial Research estimates" (Global Citizen, 2019). Movements such as the African Reclaimers Organisation (ARO) have called for public recognition of reclaimers as service providers while resisting top-down, technocratic approaches that displace or criminalise them.

From a degrowth perspective, reclaimers are not marginal but central to the construction of a circular commons. Their work reduces waste flows, extends the life of materials, and challenges linear extractivism. A justice-centred circular economy would redirect public funds away from privatised waste contracts toward reclaimer-led cooperatives, and resist large-scale waste-to-energy schemes that erode recyclable streams and reproduce pollution.

Repair, Reuse, and Resourceful Livelihoods

In townships and peri-urban areas, repair and reuse economies flourish: shoe menders, phone fixers, clothing repairers, and backyard mechanics maintain everyday goods in circulation. These labour-intensive, low-tech practices are often dismissed as informal or survivalist, yet they embody the principles of sufficiency, care, and circularity more effectively than many formal interventions (van Eyk, et al, 2022).

State support for community repair hubs, mobile tool libraries, and peer-led skills programmes could strengthen these economies. Rather than privileging high-tech or export-oriented solutions, policy could centre the preservation of local capacity, dignified work, and use-value. Complementary systems such as community currencies, barter networks, and solidarity economies also support wellbeing without increasing material throughput.

Ecological Reparations and Post-Extractive Restoration

South Africa's mining legacy has left behind tailings dams, acid mine drainage, and degraded landscapes, especially in Gauteng and Mpumalanga. Private rehabilitation contracts typically aim to "mine the waste" for residual value. While this reprocessing is a good step to bolster "green industrialization", it often repeats extractive logics. In contrast, community-led approaches frame rehabilitation as ecological reparation, guided by local and Indigenous knowledge. Currently, examples of community led post-extractive restoration are far and few in-between, however, public investment in these processes – centred on biodiversity, cultural reconnection, and social repair – can support a restorative model of circularity that prioritises healing over profit.

Deprioritising Extractive Demand

Reducing material demand in the Global North, particularly for luxury and militarised consumption, would significantly relieve pressure on extraction zones in South Africa. The automotive sector remains a major driver of platinum and palladium demand for catalytic converters, especially in luxury vehicles. Reducing reliance on private cars and investing in public transport would directly reduce extraction in the Bushveld Complex. Similarly, the global scale-up of "green technologies" risks overproduction of solar panels, wind turbines, and battery systems that intensify demand for manganese and other minerals, often sourced from marginalised communities in the Northern Cape.

Military-industrial consumption is another hidden driver of mineral demand. South African titanium, for instance, is used in weapons and aerospace technologies, yet this sector is often ignored in circular economy debates. Deprioritising such uses could reduce discretionary extraction without impacting essential needs.

Post-Extractive Transitions and Local Alternatives

If high-income countries were to implement binding material footprint caps and prioritise demand reduction, communities in South Africa would gain space to imagine and enact post-extractive futures. Reduced demand for critical minerals would alleviate water stress, health risks, and land conflicts in mining regions, while creating opportunities for alternative livelihoods based on food sovereignty, agroecology, and community-based circular economies.

These transitions must be supported by global financial flows – through climate finance, debt relief, and reparative trade terms – that empower Southern governments and communities to redirect development pathways away from extractive dependence.

VII. Conclusion and Recommendations

The current trajectory of resource use and green industrialisation, dominated by the priorities of the Global North, is fundamentally unsustainable. While framed as a shift toward sustainability, today's „green transition" strategies continue to rely on extractive economic relationships, reproducing colonial patterns of appropriation and sacrifice. European consumption levels, driven by high material throughput and an expanding demand for critical minerals, are placing intolerable pressures on communities and ecosystems in the Global South, particularly in mineral-rich countries like South Africa.

The prevailing model of circularity, rooted in technocratic efficiency and market logic, does little to address these underlying structural harms. Rather than fundamentally reducing the material footprint of the North, it often legitimises continued extraction under the guise of "green growth". Justice-centred circularity offers an alternative, one grounded in sufficiency, democratic control, and ecological care. Such an approach reorients circularity away from elite consumption and towards the collective provisioning of basic needs, both locally and globally.

Communities in South Africa, Bolivia, Indonesia and elsewhere are already forging alternative visions for post-extractivist futures. From FPIC-based resistance to corporate mining, to community-driven just transition plans and proposals for public resource governance, these movements outline a path toward degrowth that is socially just and ecologically viable. They insist that any meaningful circular economy must centre community agency, ecological repair, and material sufficiency, rather than the endless circulation of profit.

VIII. Key Recommendations for EU and German Policymakers

To align climate, trade, and industrial policy with the principles of justice-centred circularity and global sufficiency, the following policy shifts are urgently needed:

1. Enforce Material Footprint Reductions

Adopt legally binding material footprint caps for the EU and Germany, in line with planetary boundaries and historical responsibility.

Establish sectoral demand reduction targets, prioritising the auto industry, aviation, luxury goods, and defence, all of which drive disproportionate harm through mineral demand.

Support international agreements to deprioritise green tech overbuild, including electric vehicle fleets and renewable energy infrastructure scaled beyond domestic sufficiency needs.

2. Reform Trade and Supply Chain Governance

Introduce binding supply chain legislation that includes provisions for Free, Prior and Informed Consent (FPIC), the right to say no, the right to negotiate alternatives, environmental liability, and corporate accountability for cumulative and historical harm.

End EU trade policies that promote extractive liberalisation; instead, support responsible trade frameworks that centre Southern agency and ecological thresholds.

Reverse investment protections and corporate privileges in trade agreements that prevent resource-rich countries from pursuing post-extractivist industrial policies.

3. Redirect Public Finance Toward Reparative and Sovereign Transitions

Ensure that climate finance and „green transition" funding is non-debt creating, community-led, and supports alternative development models, including agroecology, public mineral governance, and solidarity-based industrial cooperation.

Fund South-South technology cooperation for local recycling, repair, and manufacturing that reduces dependency on Northern value chains.

IX. Final Reflections: Sufficiency as Global Co-Responsibility

The transition to a post-carbon economy must not replicate the injustices of the fossil age. A meaningful degrowth or circularity transition in the Global North cannot succeed without confronting the externalisation of harm onto communities in the South. At the same time, it must open space for those same communities to shape the terms of the transition, not as passive victims or sites of extraction, but as co-authors of planetary futures.

South African and African movements, and struggles across the Global South, show that alternatives do exist. These proposals illuminate a politics of sufficiency grounded in solidarity, self-determination, and ecological repair. If the EU and Germany in particular are serious about sustainability, they must commit not only to reducing their material footprint, but to transforming the extractive relationships that sustain it.

Bibliography:

AIDC, 2021. LOSING OUT ON THE LION'S SHARE A primer on illicit financial flows, tax and wage evasion in South Africa. https://aidc.org.za/wp-content/uploads/2022/02/AIDC-IFF-BEPS-digital-final.pdf

AIDC, 2024. The Controversy of Green Energy: Uncmasking Southern Africa's Critical Mineral Sacrifice Zones. https://aidc.org.za/the-controversy-of-green-energy-unmasking-southern-africas-critical-mineral-sacrifice-zones/#flipbook-df_15870/1/

Climate Action Network (CAN). 2024. 5 Trillion Owed to Golbal South by Global North due to Climate Crises. https://climatenetwork.org/2024/09/20/us5trillion-owed-to-global-south-by-global-north-due-to-the-climate-crisis/

Finland's Technological Industry Association. 2024. The World of Metals. https://teknologiateollisuus.fi/metallinjalostajat/en/get-inspired-to-join-the-industry/the-world-of-metals/

Global Citizen. 2019. South African Waste Pickers and Plastic Recycling. https://www.globalcitizen.org/en/content/south-africa-waste-pickers-plastic-recycling/

Gräbner-Radkowitsch, C., and Strunk, B. 2023. Degrowth and the Global South? How institutionalism can complement a timely discourse on ecologically sustainable development in an unequal world. Journal of Economic Issues, 57(2), 476-483.

Lowitt, S. 2021. WORKING PAPER FOR THE PRESIDENTIAL CLIMATE COMMISSION FINANCE AND THE JUST TRANSITION. TIPS.

Monaisa, L, and Montmasson-Clair, G. 2022. A TALE OF LIFE AND DEATH: THE COAL VALUE CHAIN'S IMPACTS ON LOCAL COMMUNITIES IN SOUTH AFRICA. TIPS. https://www.tips.org.za/research-archive/item/download/2384_9c38defab3a2776af4c1d400e738fdfc

Mostert, H., and Mathiba, G. 2022. Mine community displacement and resettlement in South Africa. In The Routledge Handbook of Property, Law and Society (pp. 61-74). Routledge.

Phakedi, T. 2024. Water crisis deepens in Platinum City, affecting residents, mining. SABC News. 10 April 2024. https://www.sabcnews.com/sabcnews/931242-2/

Schneider, F., Kallis, G., and Martinez-Alier, J. 2010. Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. Introduction to this special issue. Journal of cleaner production, 18(6), 511-518.

Trilling, M. 2024. Make polluters pay: How to tax excessive ecological footprints. EURODAD

Van Eyk, M., Amoah, F., and Yase, T. 2022. Sustaining the Township Economy: An Investigation into the Factors Influencing the Shopping Experience of Spaza Shop Customers in South Africa. Journal of Economics and Behavioral Studies, 14(3(J), 20-32. https://doi.org/10.22610/jebs.v14i3(J).3304

Vosloo, Christo. 2020. Extreme apartheid: the South African system of migrant labour and its hostels. Image and Text, (34), 1-33. https://doi.org/10.17159/2617-3255/2020/n34a1

Imprint

Publisher:

AIDC – Alternative Information & Development Centre / aidc.org.za/

Misereor / misereor.de

PowerShift, Greifswalder Str. 4, 10405 Berlin. Contact: info@power-shift.de / power-shift.de

Authors:

AIDC – Alternative Information & Development Centre

Editors:

AIDC – Alternative Information & Development Centre, Constantin Bittner, Lisa Pier, Michael Reckordt und Mattes Tempelmann

South Africa / Germany October 2025