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The Case for a Climate-Smart Update of the Africa Mining Vision

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Mining sector investments in Africa can be structured so that the continent may benefit from climate policy in developed countries that puts a global price on carbon. Current supply chains rely on complex, specialized networks where different parts of the production process are located in different regions of the world. This system of global value chains1 leads to greenhouse gas emissions through cross-border transportation and excess waste (especially in electronics and plastics). There is some evidence that border tariffs harm vertical specialization, where different regions are specialized in a very specific task.2 Therefore, carbon pricing, including carbon border tax, could lead to the localization of value chains. Multinational companies may move intermediate stages of production closer to the source of mineral extraction, providing a boost to foreign investment across Africa. The incentive for companies to shrink these value chains is even higher in the aftermath of the COVID-19 pandemic, which exposed some of the risks of relying on extensive global supply networks.3 These global trends sit within a broader and relatively recent context of soaring environment, social, and governance (ESG) investment affecting companies, shareholders, and governments alike.

The 2009 Africa Mining Vision (AMV)4 provides guidance for the industrialization of African countries by leveraging their mining sector. However, the global context has changed since its crafting and, consequentially, it does not include guidance on how governments should embrace the climate change agenda as an opportunity for better and further industrialization, deeper linkages, and sustainable development. Its neglect of climate change does not mean that the AMV is no longer relevant. On the contrary, its focus on skills and technology development is more important than ever to seize the opportunity of the localization of the global value chains, a trend that is still weak in many jurisdictions where critical minerals for the energy transition are produced. Moreover, the AMV’s focus on harmonizing mineral policies across sub-regional blocs and the continent would also serve countries well, given that the global energy transition would be determined not so much by national endowments of critical resources, but by the regional and continental dynamics of technology, skills, and governance systems.

There are many ways to look at the implications of international climate change policy for Africa, including through the increased extraction of minerals needed in clean energy application5 and the greening of mines.6 The localization of global value chains—induced by a rising carbon cost and by the desire to build resilience in supply chains in light of increased pandemic risks—provides another set of opportunities. Seizing this momentum will require policy guidance to ensure that the relocation of industries in global value chains occurs upstream (closer to mineral sources) rather than downstream (closer to final consumers). An open acknowledgment of the impact of climate change on the shifting global value chains for critical minerals and the need to broaden the governance framework to include the emerging role of sustainability and ESG requirements should form the foundation for a revised and revitalized AMV.

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Evidence for rising carbon prices and its effect on value chain localization

There are currently 64 regional carbon pricing initiatives, covering over 22% of global emissions,11 up from 16 initiatives covering less than 5% of emissions since the AMV was adopted in 2009. The largest scheme so far, by revenue, is the European Union’s (EU) internal cap-and-trade system, the Emissions Trading System (ETS) but other countries and sub-national regions are following suit.12 China, for instance has made forward moves towards carbon prices, working on draft regulations, conducting regional pilots, and implementation a national cap-and-trade system starting trading this year.13 Carbon prices and the scope of the carbon pricing schemes are on the rise everywhere and in particular in Asia. The EU ETS has undergone reforms that stabilized its carbon price at USD 27/CO₂ in 2019; it might be further reformed this year in the context of the EU’s commitment to reach carbon neutrality by 2050.14 Despite these increases in carbon prices globally, some policymakers continue to object to them due to their effects on domestic competitiveness. To address this, a key component of the EU Commission’s new agenda is a Carbon Border Adjustment Mechanism (CBAM); the Commission submitted the idea to public consultation and plans to adopt a proposal for an EU directive in the second quarter of 2021.15 The CBAM would impose a tariff on any product imported from a country without a carbon pricing plan.

Given that freight transportation accounts for 7% of the global CO₂ emissions, and the total CO₂ emissions from freight transportation are estimated to quadruple by 2050,16 there is a strong incentive for regulators to include the carbon cost of transportation, packaging, and waste in the final product carbon footprint that is subject to tax. While the complexity of carbon accounting along the value chain complicates its implementation,17 game theory research suggests that even the threat of border taxes could lead to a waterfall effect with other nations applying and increasing domestic carbon prices, so that they capture the revenue domestically.18 Moreover, research is already on the way to harmonizing carbon accounting methods.19 In light of these developments, a border-adjusted carbon tax system, accompanied by an increase in global carbon prices, can fundamentally reshape global value chains.

Companies have been serious about reducing the emissions in their operations in response to the threat of rising carbon costs. Some companies, like Apple, Microsoft, Shell, and Volvo, have decided to reduce emissions from their entire supply chains, not just their own direct emissions. Apple’s carbon neutrality pledge puts emphasis on reducing the emissions in their materials supply chain.20 More than 1,200 companies worldwide are either

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pursuing internal carbon pricing or preparing to do so.21 Notably, BP has recently revised its carbon prices for the period to 2050, and these now include a price of US$ 100/tCO₂e in 2030.22 More than 2,000 companies have joined “We Are Still In,” a group of businesses, cities, states and universities that commit to the Paris Agreement. Together, they compose half of the U.S. carbon emissions and represent 68% of U.S. GDP as well as 65% of the U.S. population.23 Self-interest is one contributing factor furthering this movement: climate change constitutes a real ESG risk to the operations of these large companies. In January 2020, Larry Fink, the CEO of BlackRock, the largest asset manager in the world, declared that “climate risk is investment risk.”24 Climate Action 100+, a nonprofit group of over 300 large investors, helped persuade three of the world’s largest mining and steel companies, ArcelorMittal, Thyssenkrupp and BHP, to commit to becoming carbon neutral by 2050.25 As of February 2021, nearly 80 global companies have pledged to reach carbon neutrality by 2050.26 The significantly increased focus from global capital and financial markets on climate- and ESG-related issues tends to induce structural changes in many productive sectors, particularly affecting mining and energy investments in Africa.

Moreover, there is not much evidence in literature to support the argument that companies are looking to avoid carbon taxes by moving their operations to less regulated countries. Several research projects, including by the World Bank,28 conclude that carbon costs do not lead to the exploitation of carbon havens, suggesting that multinationals will take the rise in carbon cost seriously. They should further adapt their production process, including reducing the carbon bill coming from the reliance on transportation to freight intermediate products from site to another. Evidence from Chile already demonstrates how large emissions reductions can be achieved through the localization of the copper value chain.29 Multinationals are therefore likely to consider supply chain localization in response to the pressure to reduce their upstream emissions. This localization trend will be amplified as companies respond to COVID-19, as noted by the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development.30


There is a need for research on how Africa can make the most of this trend

Africa is a major source of many minerals that are likely to face large demand growth in the future, especially in the clean energy sector. The World Bank’s Climate-Smart Mining report published in 2020 claims that the green transition will be mineral intensive and that the demand for graphite, cobalt, and lithium may increase by 500% by 2050. A large proportion of these minerals are found in many African countries such as the Democratic Republic of Congo (cobalt), Gabon (manganese), Madagascar (graphite), Zambia (copper), and Zimbabwe (lithium). The localization of mineral-based global value chains presents an opportunity for Africa to industrialize. There is some evidence supporting a high localization potential in Africa for solar photovoltaic and wind energy value chains, given the right conditions.31

Despite these reasons to believe that there might be opportunities for Africa arising from increases in carbon prices, there is limited knowledge about the effects of carbon costs on supply chain localization. There are also gaps in knowledge about how likely it is for Africa to benefit from this shift and which industries have high localization potential in Africa. Filling these knowledge gaps is crucial to developing an updated industrialization plan for Africa.

Moreover, there is a need to understand roles that stakeholders can play that the AMV had not envisaged. For the longest time possible, mineral resource governance in Africa has played out within the arena of public sector institutions and private companies negotiating concessions for resource exploitation and management. Little attention has been paid to the role of company boards, shareholders, and private sector regulators (such as the stock market regulators), whose interests, often wrongfully, are equated with those of the corporate entity in the forefront of attaining sustainable mining. Moreover, impact investing capital allocated to solving sustainable challenges is on the rise too.32 Climate change, the COVID-19 pandemic, and the ESG wave have catalyzed a new set of investor actions (to which board of directors should be accountable to) that can positively and directly impact people and planet.

To inform the update of the AMV or Africa’s industrialization policies in general, extensive consultations must be undertaken with boards of directors and strategists at mining companies and along their value chains, operation managers in Africa, institutional investors, industrialization and business development experts, as well as with international institutions accompanying policy developments in Africa, such as UNECA, UNIDO, AfDB and AU. CCSI’s view is that research on four fronts should serve as the basis for a climate-smart update of the AMV:

1. Understanding the extent to which the rise in carbon costs, the COVID-19 crisis, and the rising pressure of institutional investors has already reshaped and may reshape global value chains.

2. Identifying the extent to which Africa is well-positioned to take advantage of any trends toward regionalization of minerals-based global value chains.

3. Providing policy recommendations to governments, the mining industry, directing boards, and institutional investors in Africa to help maximize the benefit from trends resulting from climate policy by supporting the participation of African countries in the global supply chains of critical minerals, thus contributing to achieving SDGs and the AMV.

4. Fostering a new governance framework that engages all stakeholders—comprising governments, mining companies, mining company boards, shareholders, impact investors, and affected communities—in a constructive dialogue to create sustainable supply chains adaptable to shifting ESG-related demands.


