

# European Green Deal: The Carbon Border Adjustment Mechanism and implications for South African and European Union trade

## OVERVIEW

The Carbon Border Adjustment Mechanism (CBAM) is a headline policy initiative of the European Green Deal (EGD). One of the drivers of the CBAM is that carbon emissions should have a price, and the CBAM is intended to “align the carbon price on imports with that applicable within the EU”. This policy brief provides an initial assessment of the CBAM and its implications for the global economy and South Africa-EU trade. South Africa’s trade with the EU will be greatly affected by the CBAM and other EU climate regulations. The South African government and exporters to the EU need to put in place measures and mechanisms to ensure trade resilience in a low-carbon global economy. These measures must have the just transition at their core to ensure that South Africa’s move to a low-emissions economy is inclusive, just and equitable, and protects communities and workers so they are not adversely affected.

## INTRODUCTION

The EU is one of South Africa’s major export destinations, accounting for 19% of its total exports in 2019 (Trade Map, n.d. -b). The EU has taken major steps in climate mitigation. While these efforts have not been sufficient for the Paris Agreement’s 1.5°C temperature limit, the union has exceeded its 2020 carbon reductions targets. Between 1990 and 2018, the EU reduced greenhouse gas emissions (GHG) by 23% below the 1990 level. The European Commission (EC) has set ambitious targets to reduce net greenhouse gas emissions by 55% by 2030 compared to 1990 levels and achieve carbon neutrality by 2050.

In 2019, the European Council introduced the EGD, a set of policy initiatives that aims to support these targets. The CBAM is a climate measure that aims to prevent the risk of carbon leakage and support the EU’s increased ambition on climate mitigation. According to the EU, the CBAM was designed to be compatible with World Trade Organization (WTO) rules, however,

its WTO compatibility will depend on implementation and whether it meets the double non-discrimination test: non-discrimination between domestic and foreign suppliers, and non-discrimination between foreign suppliers (Sapir, 2021).

The CBAM will also need to be compatible with EU free trade agreements. It will come into effect in January 2023 and will mirror the European Union (EU) Emissions Trading Scheme (EC, 2020). Initially, it will apply to sectors identified as at risk of carbon leakage, i.e. electricity, cement, fertilisers, steel and aluminium. Its current scope only covers direct emissions, i.e. emissions arising from production processes.

Although the European Parliament has adopted the resolution to support the CBAM, the legislative process has not been concluded (European Parliament, 2021). The European Parliament needs to assess the proposal and propose amendments. Once the amendments from the parliament are approved by the council the legislation will be passed.

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## WHAT IS CARBON LEAKAGE?

As the EU introduces stricter emission reduction measures for its industries, such as reductions in free allowances under the EU Emissions Trading System (ETS), it potentially faces the risk of carbon leakage. The ETS is a GHG cap and trade scheme that contributes towards emissions reduction targets by setting a cap on the maximum level of emissions for a number of sectors, and allows the trading of emission permits at a market-generated price (Brill, Bodelier and De Bie, 2021).

Carbon leakage occurs when industries relocate to jurisdictions with weaker climate change policies or stay put and lose domestic and foreign market share due to increased carbon prices (Lo, 2021). The CBAM aims to mitigate carbon leakage by introducing an embedded import tax equivalent to the ETS carbon price. The CBAM will equalise the price of carbon between EU products and imports, ensuring importers face similar conditions to EU manufacturers and that EU climate objectives are not undermined by carbon leakage (Brill, Bodelier and De Bie, 2021).

## HOW WILL THE CBAM WORK?

The CBAM will be a tax on embedded emissions for goods imported into the EU. It will impose a tax on imported goods that emit more GHG emissions than allowed for EU manufacturers under the ETS. The CBAM integrates into the EU ETS by applying an equivalent regime on imports. It will apply to carbon-intensive sectors at risk of carbon leakage, from non-Customs Union countries that do not have similar carbon regulations to the EU (Simon and Taylor, 2021).

The CBAM will have a transitional period between 2023 and 2026. During the transitional period, the burden on exporters will be administrative rather than financial. Exporters will have to declare their emissions but will not be required to pay the tax. Once the transitional period is over, importers will have to purchase digital CBAM certificates. One certificate represents a tonne of carbon dioxide emissions embedded in goods. The price of the certificates will be linked to the average price of carbon permits under the EU ETS.

Once the CBAM becomes operational in 2026, the EU ETS will be revised, in particular the reduction of available free allowances in sectors covered by the CBAM. Free allocation allowances allow industries to emit a percentage of GHG emissions freely under an overall emissions budget that caps total emissions across all sources combined. Once the CBAM is

implemented, free allowances will be phased out progressively by 2035 (Brill, Bodelier and De Bie, 2021). The price of the certificates will increase by 10% every year from 2026 to 2035.

In May every year, importers will be required to declare the amount of GHG emissions embedded in goods imported plus the number of CBAM surrendered in the previous year. The declaration should contain the total quantity of goods imported during the calendar year, expressed in megawatt-hours for electricity and metric tonnes for other goods, multiplied by the embedded emissions of each good (Brill, Bodelier and De Bie, 2021).

Importers from countries that have a carbon price may claim a reduction in the number of CBAM certificates to be surrendered, corresponding to the carbon price paid in the country of origin for the declared emissions. While the CBAM rules are yet to be determined, it is proposed that the information provided and proof of carbon price paid by the exporter will need to be verified by an independent party (Brill, Bodelier and De Bie, 2021).

Failure to report the amount of GHG emissions embedded in goods imported and the number of CBAM surrendered in the previous year, or the submission false information, will result in a penalty. Importers will be liable to pay a penalty on the excess emissions. The penalty will be €100 for each tonne of CO<sub>2</sub> equivalent emitted. Payment of the penalty does not release the importer from the obligation to surrender the outstanding number of CBAM certificates. In addition to the fine, Member States may apply administrative or criminal sanctions for failure to comply with the CBAM legislation in accordance with their national rules (Brill, Bodelier and De Bie, 2021). It is currently unclear how Member States would enforce these administrative or criminal sanctions on foreign companies.

## WHICH SECTORS WILL BE AFFECTED?

The initial scope of the CBAM includes products from the iron and steel, cement, fertiliser, aluminium, and electricity generation sectors. As a start, the CBAM will apply only to direct emissions (emissions released from the production process and are in the control of producers), excluding indirect (Scope 2) emissions, such as those from electricity supply. It will also not apply to downstream products using the materials in the sectors covered (Brill, Bodelier and De Bie 2021).

By the end of the transition period, the EC will evaluate how the CBAM is working and whether to extend its scope to more products and services –

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including down the value chain, and whether to cover indirect emissions (Reuters, 2021). It is, however, likely that eventually these will be included and this will have serious implications for the rest of South Africa's exports to the EU.

The following subsections look at the iron and steel, aluminium, fertiliser and cement sectors. Electricity is not discussed as there are no direct exports from South Africa to the EU; however, the fact that the production and use of electricity may become an issue post-2026 is acknowledged. South Africa's dependency on coal for electricity and liquid fuels production would pose significant risks for exporters if indirect emissions are included in the CBAM design.

### **Iron and steel**

Steelmaking alone contributes 7% of global emissions. Efforts to decarbonise production methods have been intensified as steel is a key component underpinning development all along the value chains of major manufacturing sectors. While South Africa has a natural endowment of iron ore, it is a marginal steel producer, ranking 35th in global production (World Steel Association, 2021). Current production methods are primarily dependent on coal (primary production) or coal-based electricity (for secondary production). In 2019, South African steel production and steelmaking was more emissions-intensive than the world average (1900 kgCO<sub>2</sub>/tonne product), at 2295 kgCO<sub>2</sub>/tonne product (Climate Transparency, 2020).

Iron and steel exports to the EU accounted for about 15% of total South African iron and steel exports (Trade Map, n.d.-a). The sector will be at risk once the CBAM is implemented. The sector has experienced decades of economic difficulties, electricity supply issues and general lack of investment. That the industry may not have the resources needed to adequately invest in major efficiency improvements is a concern. The risk associated with the CBAM could further reduce the sector's competitiveness.

### **Aluminium**

Another energy-intensive product is aluminium. While, in 2020, South Africa's primary aluminium production carbon intensity is lower than the global average (8.5 tCO<sub>2</sub>e/t aluminium) at 1.9 tCO<sub>2</sub>e/t, the industry will be impacted by the CBAM as about 40% of South Africa's aluminium exports go to the EU (South32, 2021; Trade Map, n.d.-b).

The introduction of the CBAM is likely to have a limited impact on the aluminium sector until at least 2026 because about 88% of its carbon footprint takes the form of indirect emissions, which

are not covered. (South32, 2021). However, if indirect emissions are included in the scope of the CBAM, the industry will face significant risk as about 90% of the electricity input into production is from coal-powered electricity.

Despite its energy-intensive production, aluminium is regarded as a "green raw material" due to its recyclability. About 75% of all aluminium produced in the world is recycled and used through a circular economy loop frame. Recycling aluminium requires much less energy (only 5%) than primary production. It is not a coincidence that the EU has set the goal of achieving a 100% aluminium circularity by 2030, as it recognises the importance of aluminium in a circular economy (EC, n.a.). Increasing the share of recycled aluminium exports can assist in maintaining the industry's market share in the EU.

### **Chemicals/fertilisers**

The EU aims to increase the use of green chemicals. This will be achieved by, among other actions, boosting the investment and innovative capacity for production and using chemicals that are safe and sustainable by design, and throughout their life cycle. Inorganic fertilisers are identified among the products that will be affected by CBAM (Simon and Taylor, 2021). South Africa's exports of inorganic fertilisers account for less than 1% of exports to the EU, making exposure to the CBAM marginal.

### **Cement**

The EGD explicitly recognises the cement sector as an essential industry for the EU economy. Cement and concrete are vital for renewable energy infrastructure, low-carbon transportation systems, and sustainable buildings. They play a central role in achieving a carbon-neutral and climate-resilient society (Taylor, 2021). For South Africa, cement exports to the EU are insignificant and the sector does not face a significant risk exposure from the CBAM.

## **HOW WILL CBAM IMPACT THE FUTURE GLOBAL ECONOMY**

The CBAM has met with mixed reactions globally. Supporters of the CBAM have argued that it is a good measure to level the playing field for EU producers and that the EU is entitled to dictate rules for products placed on the single market provided they comply with international trade law. Supporters also argue that the revenue from the CBAM can be used to accelerate climate action and provide additional funds to support decarbonisation efforts outside of the EU (Cornago and Lowe, 2021).

Due to the risk of market share loss, the CBAM could encourage industries to transition their operations and business models to low-carbon models. It can also encourage investment in energy-efficient technologies, cleaner energy sources and technologies that reduce carbon emissions from production (EC, n.a.). If country exports are more carbon-intensive than other sectors, as in South Africa, the CBAM could shift resources to cleaner sectors.

Non-EU countries have expressed concerns over the CBAM's WTO compatibility, the treatment of developing countries, and the CBAM's value in climate mitigation, as the mechanism would cut only 0.1% of global CO<sub>2</sub> emissions (UNCTAD, 2021). Brazil, Russia, India, China and South Africa (BRICS) have opposed the proposed CBAM. The BRICS countries' primary concern is that the risks associated with the CBAM will not be equally distributed across the globe and may disproportionately impact the Global South. The extent of the risk not only depends on the policy exposure (the proportion of a country's exports to the EU) but also on the country's vulnerability (ability to adapt by shifting trade flows) and its ability to reduce and report emissions (Eicke et al., 2021). Another key concern is the policy's alignment with the Paris Agreement, specifically the principles of equity and of "common but differentiated responsibilities" in addressing climate change. According to Gore (2021), the CBAM conflicts with these principles by expecting countries to align with the EU or bear additional charges on their exports to the EU. There is also the risk that the CBAM could result in resource shuffling, in which corporations could export cleaner products to the EU and export the rest of their production to countries with laxer carbon laws.

If not addressed, these issues could cause resistance and retaliation from non-EU countries. The EU will need to engage with trading partners to ensure the CBAM is implemented in an equitable and acceptable manner (White and Van Den Hende, 2021).

Given the urgency of the climate crisis, the CBAM could inspire other jurisdictions to implement mechanisms of their own or apply standards on carbon intensity to both domestic and foreign products. Under the current proposal, countries with their own carbon pricing and trading regimes could gain levels of exemption from the CBAM. Already countries such as Canada, Japan and the US are considering introducing carbon border taxes (PwC, 2021).

## WHAT ARE THE MITIGATION MEASURES FOR SOUTH AFRICA?

In its current form, the CBAM does not appear to pose serious short-term risks to small enterprises, however, they may be impacted by the broadening of its scope over time. Exporters and government will need to prepare for the broader CBAM to secure market access to the EU, to build South Africa's future trade resilience, and to ensure that South Africa can

take advantage of the opportunities which may arise from the CBAM. Preparation for the broader CBAM will require policy consistency and support instruments such as subsidies and investments. Preparation for the CBAM, much like the transition towards a low-carbon economy, must ensure it includes the principles of a just transition.

### Short-term measures

Due to the administrative burden of the pilot period of the CBAM, supporting importers with the reporting requirements will be crucial. Importers will be required to monitor, report and verify the emissions intensity of their products. As the capacity for tracking and reporting carbon content differ by industry, a domestic carbon reporting system, which could be led by the Department of Forestry, Fisheries and the Environment, could ease the administrative burden of South African firms.

### Long-term measures

In the long term, the scope of the CBAM could be expanded to include indirect emissions and downstream suppliers to the initial sectors. The following long-term measures apply:

- **Decarbonising industries:** Companies and government should accelerate the decarbonisation of these carbon-intensive industries. Increasing renewable energy in production processes and investing in energy-efficient technologies will serve to decarbonise industrial sectors.
- **Decarbonising South Africa's electricity system:** South Africa's over-reliance on coal as a feedstock for electricity and liquid fuels production makes it one of the most carbon-intensive economies in the world. Increasing renewable energy in the national grid will decrease the indirect emissions of sectors that consume large amounts of electricity.
- **Introducing more ambitious climate-change policies:** South Africa's climate-change policies are not ambitious by global standards. An ambitious national climate change policy is required to steer the country towards a low-carbon development trajectory.
- **Reforming South Africa's carbon tax to reflect global carbon pricing** will be critical to ensure that the country's carbon-intensive products reflect the social price of carbon. Increasing the South African carbon price will stimulate heavy emitters to reform their business models and operations.

## CONCLUSION

The EGD looks to accelerate the pace of change in the European economy. However, the EGD is still a work-in-progress. Although the European Parliament has adopted the resolution to support the CBAM, the legislative process has not been concluded and has to undergo amendments and approval by the European Council before it comes into effect (EC, Brill, Bodelier and De Bie, 2021).

*The CBAM has created an urgency for countries to introduce stricter climate policies and regulations, and to address the emissions from heavy emitting industries by placing a price on their carbon emissions. South Africa is no exception.*

South African exporters to the EU need to prepare for the CBAM, to assure long-term competitiveness in a changing EU market. The EU is a major trading partner with South Africa. The bloc accounts for about 24% of South Africa's exports (Trade Map, n.d.-b). In the current proposal, indirect emissions are not included in the scope of the CBAM, providing some reprieve (Brill, Bodelier and De Bie, 2021). If indirect emissions are included in future, South African exporters will face additional risks as the country is heavily reliant on coal for its electricity and liquid fuels.

It is important to monitor the policy and legislative processes in the EU carefully to assess the potential impact and implications for production and trade. South Africa should have contingency plans in place to respond to EGD regulations and requirements. South Africa should also fast-track its journey towards a net-zero carbon economy as other countries could follow the EU in introducing border carbon taxes.

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