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THE CBAM GUIDEBOOK

Regional Politics and Pathways to Shared Prosperity

Acknowledgement

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Foreword

The Carbon Border Adjustment Mechanism (CBAM) is more than a tariff, it marks the integration of climate responsibility into global trade. While it provides a starting point for dialogue, the greater challenge lies in ensuring that nations, especially in the Global South, can pursue clean transitions without jeopardizing economic stability or social justice.

This work has been guided by the conviction that politics, diplomacy, and agreements must serve as instruments of fairness. South–South collaboration offers a pathway to amplify collective demands, while North–South partnerships demonstrate how recognition, support, and technology transfer can be secured. The examples of Morocco's renewable energy cooperation with the EU, Egypt's green hydrogen initiatives, and the bridging roles of Türkiye, Brazil, and South Africa remind us that mutual respect and consensus are essential for a just transition.

We extend our sincere gratitude to our partners and funders whose support has made this endeavor possible. Their commitment to equitable climate action and resilience has provided the foundation for this work. We also acknowledge the contributions of colleagues, institutions, and regional networks whose insights enriched the analysis and strengthened our vision.

It is through such collaboration that CBAM can be transformed from a symbol of vulnerability into a catalyst for cooperation, resilience, and shared prosperity.

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Manager Research & Development

Glossary

1. CBAM – Carbon Border Adjustment Mechanism
2. EU ETS – European Union Emissions Trading System
3. MRV – Monitoring, Reporting, Verification
4. WTO – World Trade Organization
5. FTA – Free Trade Agreement
6. SME – Small and Medium Enterprise
7. FDI – Foreign Direct Investment
8. R&D – Research and Development
9. GHG – Greenhouse Gas
10. UNFCCC – United Nations Framework Convention on Climate Change
11. COP – Conference of the Parties (UN Climate Summit)
12. GDP – Gross Domestic Product
13. PPP – Public–Private Partnership
14. CSR – Corporate Social Responsibility
15. LDCs – Least Developed Countries
16. AfCFTA – African Continental Free Trade Area
17. ASEAN – Association of Southeast Asian Nations
18. SAARC – South Asian Association for Regional Cooperation
19. ISA – International Solar Alliance
20. AU–EU Partnership – African Union–European Union Partnership
21. GCF – Green Climate Fund
22. ODA – Official Development Assistance
23. NDCs – Nationally Determined Contributions (Paris Agreement)
24. CCS – Carbon Capture and Storage
25. SCMs – Supplementary Cementitious Materials (e.g., fly ash, slag, calcined clays)
26. ECA – Export Credit Agency
27. ETS – Emissions Trading System
28. EIA – Environmental Impact Assessment
29. RECs – Renewable Energy Certificates
30. ISA – International Solar Alliance
31. OPEC+ – Organization of the Petroleum Exporting Countries plus allies
32. BRICS – Brazil, Russia, India, China, South Africa
33. MENA – Middle East and North Africa
34. LNG – Liquefied Natural Gas
35. H_2 – Hydrogen (chemical symbol, used in energy trade context)
36. CCU – Carbon Capture and Utilization
37. EIB – European Investment Bank
38. ADB – Asian Development Bank
39. AfDB – African Development Bank

Glossary

40. IDB – Islamic Development Bank
41. UNIDO – United Nations Industrial Development Organization
42. OECD – Organisation for Economic Co-operation and Development
43. FTAAP – Free Trade Area of the Asia Pacific
44. FTA – Free Trade Agreement
45. FTA+ – Enhanced Free Trade Agreement (with climate clauses)
46. CSR – Corporate Social Responsibility
47. SDGs – Sustainable Development Goals
48. REI – Renewable Energy Integration
49. HVCs – High-Value Commodities (steel, aluminum, fertilizers, cement)

What is CBAM: Mechanics and Context of Carbon Border Adjustment Mechanism

The Carbon Border Adjustment Mechanism (CBAM) represents a structural shift in the way international trade and climate policy intersect. For the European Union and the United Kingdom, CBAM is designed to prevent carbon leakage by ensuring that imported goods face the same carbon costs as those produced domestically under the EU Emissions Trading System (EU ETS). For exporters in the Global South, however, this mechanism is not simply a matter of compliance it is a potential inflection point that could reshape industrial competitiveness, trade balances, and national development strategies.

CBAM's timeline is critical. Between 2023 and 2025, exporters were required to submit emissions data during a transitional reporting phase, but no financial penalties were imposed. This period was intended to build familiarity with monitoring, reporting, and verification (MRV) systems. On January 1, 2026, however, the mechanism enters full implementation. Importers of covered goods—initially iron and steel, aluminum, cement, fertilizers, electricity, and hydrogen must purchase CBAM certificates priced in line with the EU carbon market. With the EU ETS carbon price fluctuating between €80 and €100 per ton of CO_2 in recent years, the financial implications for exporters are substantial.

The mechanics of CBAM are straightforward in design but complex in practice. Each imported product is assessed for its embedded emissions, and importers must surrender certificates equivalent to those emissions. If the exporting country has an equivalent carbon pricing system, the liability can be reduced. This creates a dual challenge for Global South governments: first, to establish credible carbon pricing frameworks that can be recognized by the EU, and second, to ensure that firms have the capacity to measure and report emissions accurately. Without these systems, exporters face the full weight of CBAM tariffs, eroding their competitiveness in European markets.

The sectors initially covered by CBAM are strategically chosen. Iron and steel exports from countries such as India, Brazil, and Turkey are heavily reliant on coal-based production, making them carbon-intensive. Aluminum exports from the Gulf states and parts of Africa face similar challenges due to energy inputs dominated by fossil fuels. Cement, a major export from North Africa and South Asia, is among the most carbon-intensive materials globally, with clinker production accounting for significant emissions. Fertilizers, particularly nitrogen-based products, are critical exports for Morocco, Egypt, and Sub-Saharan Africa, yet their production processes are energy-heavy. Electricity and hydrogen exports, though smaller in scale, represent emerging sectors where the EU seeks to ensure that imports align with its decarbonization agenda.

The probable issues for Global South exporters are evident. Many firms operate with outdated technologies, relying on coal or oil-based energy sources. MRV systems are weak or nonexistent, meaning that exporters cannot provide verified emissions data to EU authorities. Financial constraints are acute, particularly for small and medium enterprises (SMEs) that lack the capital to invest in green upgrades. Governments are often slow to introduce carbon pricing, fearing domestic backlash from industries and consumers. Finally, market dependency is a structural vulnerability: many Global South economies rely disproportionately on EU and UK markets, leaving them exposed to sudden tariff shocks.

Historical parallels underscore the gravity of the situation. The Smoot–Hawley Tariff Act of 1930, which raised U.S. tariffs on thousands of imports, triggered retaliatory measures and deepened the Great Depression. The Asian financial crisis of 1997 demonstrated how external shocks can devastate export-dependent economies, leading to widespread unemployment and fiscal instability. More recently, U.S. steel tariffs in 2002 disrupted global supply chains, forcing exporters to diversify markets and upgrade production. CBAM carries similar risks: without preparation, it could precipitate firm closures, job losses, and fiscal instability across the Global South.

Yet CBAM also presents opportunities. By aligning with EU standards, Global South exporters can accelerate industrial modernization, attract foreign direct investment (FDI) in green technologies, and position themselves as competitive suppliers in a decarbonizing global economy. Governments can leverage CBAM as a catalyst for introducing domestic carbon pricing, strengthening MRV infrastructure, and negotiating transitional flexibilities with the EU. Firms can use the mechanism as a driver for innovation, adopting renewable energy, improving energy efficiency, and building strategic alliances with European partners.

In sum, CBAM is both a threat and an opportunity. Its mechanics are clear, its timeline is fixed, and its implications are profound. For the Global South, the challenge lies in transforming vulnerability into resilience—by building cushions against tariff shocks, upgrading industrial capacity, and embedding sustainability into export strategies. The following chapters will explore sector-specific risks and policy recommendations in detail, providing a roadmap for governments and firms to navigate the CBAM era.

Luster of Wealth: Iron and Steel Sector

The iron and steel sector is among the most exposed industries to the Carbon Border Adjustment Mechanism. Steel is a foundational material for construction, automotive, and infrastructure, and its production is highly carbon intensive. For Global South exporters, the sector represents both a major source of foreign exchange and a significant vulnerability.

Historically, steel has been at the center of trade disputes. In 2002, the United States imposed tariffs on imported steel, citing the need to protect domestic producers. The measure disrupted global supply chains and forced exporters from Brazil, Russia, and South Korea to seek alternative markets. Similarly, the European Union has long used safeguard measures to protect its steel industry from surges in imports. CBAM introduces a new dimension to these historical patterns by linking tariffs directly to carbon emissions rather than to traditional trade concerns.

The production methods in many Global South countries rely heavily on coal-based blast furnaces. India, for example, produces the majority of its steel using coal, which results in high embedded emissions. Brazil, while benefiting from hydropower in some regions, still faces challenges in reducing emissions from its steel sector. Turkey, a major exporter to the EU, has invested in electric arc furnaces but continues to rely on imported coal for energy. These structural realities mean that CBAM tariffs will disproportionately affect Global South exporters unless significant changes are made.

The probable issues for the sector are clear. First, the lack of verified emissions data will prevent exporters from demonstrating lower carbon intensity where it exists. Without robust monitoring, reporting, and verification systems, firms will be assessed at default values that are often higher than actual emissions. Second, the financial burden of upgrading production facilities is immense. Transitioning from coal-based blast furnaces to hydrogen-based direct reduction requires billions of dollars in investment. Small and medium enterprises, which form a large part of the steel supply chain, lack access to such capital. Third, governments in the Global South have been slow to introduce carbon pricing mechanisms that could offset CBAM liabilities. Without recognized domestic carbon pricing, exporters will face the full tariff burden.

Policy recommendations for governments must focus on building cushions against these risks. Governments should establish national carbon pricing systems that align with EU standards, even if initially at lower levels, to demonstrate commitment and secure partial recognition under CBAM. Export support funds should be created to provide concessional finance for firms investing in low-carbon technologies. Diplomatic engagement with the EU is essential to negotiate transitional flexibilities, such as phased implementation or recognition of local standards. Capacity building in MRV systems must be prioritized, with investments in technical training, digital infrastructure, and certification bodies.

For firms, immediate action is required. Carbon footprint audits should be conducted to establish baselines and identify areas for improvement. Investments in energy efficiency, such as waste heat recovery and process optimization, can reduce emissions at relatively low cost. Strategic alliances with European firms can facilitate technology transfer, particularly in hydrogen-based steel production. Supply chain greening is critical, as upstream suppliers often contribute significantly to embedded emissions. Diversification of markets should also be pursued to reduce dependency on the EU and UK.

Financial and market cushions are equally important. Access to carbon finance instruments, such as green bonds and climate funds, can provide the capital needed for upgrades. Insurance mechanisms should be explored to protect exporters from sudden tariff shocks. SME protection schemes must be designed to support smaller firms that lack compliance capacity.

The long-term vision for the steel sector in the Global South must be one of transformation. Green industrial policy should prioritize hydrogen-based steel production, scrap recycling, and renewable energy integration. Regional cooperation can pool resources for MRV systems and technology adoption. Innovation ecosystems should be fostered to encourage research and development in low-carbon steel technologies.

This sector faces some of the most severe challenges under CBAM. The risks are structural, financial, and institutional, but they are not insurmountable. With coordinated action by governments and firms, the sector can transition from vulnerability to resilience, positioning itself as a competitive supplier in a decarbonizing global economy.

Charging Alloys: Aluminum Sector under Tariffs

The aluminum sector is another critical industry facing direct exposure to the Carbon Border Adjustment Mechanism. Aluminum is widely used in packaging, construction, automotive, and aerospace, and its production is highly energy intensive. For Global South exporters, aluminum represents both a strategic export commodity and a sector where structural vulnerabilities are pronounced.

Historically, aluminum markets have been shaped by energy costs and trade disputes. In the 1980s, the collapse of commodity prices exposed the dependence of several African economies on raw material exports, including bauxite and alumina. More recently, U.S. tariffs on aluminum imports in 2018 disrupted global trade flows, forcing exporters from the Gulf states, Russia, and China to redirect shipments. CBAM introduces a new layer of complexity by linking tariffs to carbon intensity rather than to traditional trade protection measures.

The production of aluminum is closely tied to electricity inputs. In many Global South countries, electricity generation is dominated by fossil fuels, particularly coal and oil. This results in high embedded emissions in aluminum exports. The Gulf states, for example, are major aluminum producers, but their reliance on natural gas and oil-based electricity makes their exports vulnerable under CBAM. African producers, such as Mozambique, benefit from hydropower in some regions, but transmission losses and reliance on fossil fuels elsewhere increase carbon intensity. South American producers face similar challenges, with Brazil's hydropower advantage offset by regional variability and infrastructure constraints.

The probable issues for the aluminum sector are multifaceted. First, the lack of verified emissions data will prevent exporters from demonstrating lower carbon intensity where renewable energy inputs exist. Without robust monitoring, reporting, and verification systems, firms will be assessed at default values that may not reflect actual emissions. Second, the financial burden of transitioning to renewable energy sources is significant. Building new hydropower plants, solar farms, or wind projects requires long-term investment that many governments and firms cannot easily mobilize. Third, the sector is highly exposed to global price volatility. Aluminum prices fluctuate with energy costs, and CBAM tariffs will add another layer of uncertainty. Fourth, SMEs in the aluminum supply chain, such as those involved in casting and fabrication, lack the capacity to comply with CBAM requirements.

Policy recommendations for governments must focus on energy transition and institutional capacity. Governments should prioritize investments in renewable energy infrastructure, particularly hydropower, solar, and wind, to reduce the carbon intensity of aluminum production. Export support funds should be established to provide concessional finance for firms investing in low-carbon technologies. Diplomatic engagement with the EU is essential to negotiate recognition of renewable energy inputs and transitional flexibilities. Capacity building in MRV systems must be prioritized, with investments in technical training, digital infrastructure, and certification bodies.

For firms, immediate action is required to reduce emissions and build resilience. Carbon footprint audits should be conducted to establish baselines and identify areas for improvement. Investments in energy efficiency, such as upgrading smelters and reducing transmission losses, can yield significant reductions in emissions. Strategic alliances with European firms can facilitate technology transfer, particularly in renewable energy integration.

Supply chain greening is critical, as upstream suppliers of bauxite and alumina often contribute significantly to embedded emissions. Diversification of markets should also be pursued to reduce dependency on the EU and UK.

Financial and market cushions are equally important. Access to carbon finance instruments, such as green bonds and climate funds, can provide the capital needed for upgrades. Insurance mechanisms should be explored to protect exporters from sudden tariff shocks. SME protection schemes must be designed to support smaller firms that lack compliance capacity.

The long-term vision for the aluminum sector in the Global South must be one of transformation. Green industrial policy should prioritize renewable energy integration, recycling, and innovation in low-carbon technologies. Regional cooperation can pool resources for MRV systems and technology adoption. Innovation ecosystems should be fostered to encourage research and development in low-carbon aluminum production.

In conclusion, the aluminum sector faces significant challenges under CBAM. The risks are structural, financial, and institutional, but they are not insurmountable. With coordinated action by governments and firms, the sector can transition from vulnerability to resilience, positioning itself as a competitive supplier in a decarbonizing global economy.

Bricks and Walls: Cement Sector

The cement sector is one of the most carbon-intensive industries globally and therefore among the most vulnerable to the Carbon Border Adjustment Mechanism. Cement is indispensable for construction and infrastructure, yet its production process is structurally tied to high emissions. The central issue lies in *clinker*, the key intermediate product in cement manufacturing. Clinker is produced by heating limestone and other raw materials in kilns at extremely high temperatures, typically above 1,400°C. This process releases large amounts of carbon dioxide both from fuel combustion and from the chemical decomposition of limestone.

For Global South exporters, clinker production represents a critical challenge. Many plants operate with outdated technologies, relying on coal or heavy fuel oil. The embedded emissions in clinker are among the highest of any industrial product, making cement exports particularly exposed under CBAM. Countries such as Egypt, Pakistan, Vietnam, and Morocco are major exporters of cement and clinker to the EU and UK. Without significant changes, these exporters will face steep tariffs that could erode their competitiveness.

The vulnerability of cement exporters under CBAM echoes earlier commodity shocks. In the 1980s, African economies dependent on raw material exports suffered when global prices collapsed, leading to fiscal crises and debt burdens. Similarly, the Asian financial crisis revealed how external shocks can devastate industries tied to international markets. Cement exporters today face a comparable risk: sudden tariff imposition linked to carbon intensity rather than price volatility.

Comparative Emissions in Clinker Production

Region / Country	Typical Kiln Technology	Energy Source	CO_2 Emissions per ton of Clinker (approx.)	Vulnerability under CBAM
Egypt	Dry kilns (mixed efficiency)	Coal, oil	0.85–0.95 tons	High due to fossil fuel reliance
Pakistan	Dry kilns, some wet kilns	Coal	0.90–1.00 tons	Very high, outdated kilns
Vietnam	Modern dry kilns	Coal, biomass mix	0.80–0.90 tons	Moderate, but coal dependence
Morocco	Dry kilns, some upgrades	Coal, pet coke	0.85–0.95 tons	High, though potential for renewables
Brazil	Dry kilns, advanced tech	Hydropower + biomass	0.75–0.85 tons	Lower, potential CBAM advantage

This table illustrates how structural differences in technology and energy sources translate into varying vulnerabilities under CBAM. Countries with access to renewable energy or biomass have a relative advantage, while those reliant on coal face steep challenges.

Governments in the Global South must prioritize clinker substitution and energy transition. Policies should encourage the use of supplementary cementitious materials (SCMs) such as fly ash, slag, and calcined clays, which reduce clinker content and emissions. Export support funds should be established to finance upgrades in kiln technology and carbon capture pilots. Diplomatic engagement with the EU is essential to negotiate recognition of clinker substitutes and transitional flexibilities. Capacity building in MRV systems must be prioritized, with investments in technical training, digital infrastructure, and certification bodies.

Firms must act swiftly to reduce clinker intensity. Carbon footprint audits should be conducted to establish baselines and identify areas for improvement. Investments in energy efficiency, such as upgrading kilns and optimizing combustion, can yield significant reductions in emissions. Strategic alliances with European firms can facilitate technology transfer, particularly in carbon capture and utilization. Supply chain greening is critical, as upstream suppliers of raw materials contribute to embedded emissions. Diversification of markets should also be pursued to reduce dependency on the EU and UK.

Access to carbon finance instruments, such as green bonds and climate funds, can provide the capital needed for upgrades. Insurance mechanisms should be explored to protect exporters from sudden tariff shocks. SME protection schemes must be designed to support smaller firms that lack compliance capacity.

The long-term vision for the cement sector in the Global South must be one of transformation. Green industrial policy should prioritize clinker substitution, carbon capture, and renewable energy integration. Regional cooperation can pool resources for MRV systems and technology adoption. Innovation ecosystems should be fostered to encourage research and development in low-carbon cement technologies.

Clinker is the Achilles' heel of the cement sector under CBAM. Its high carbon intensity makes cement exports particularly vulnerable, but it also provides a clear target for policy and technological intervention. With coordinated action by governments and firms, the sector can transition from vulnerability to resilience, positioning itself as a competitive supplier in a decarbonizing global economy.

Fresh from the Farm: Fertilizers!

The fertilizer sector occupies a unique position in the CBAM framework because of its direct link to food security and agricultural productivity. Fertilizers are indispensable for sustaining crop yields, yet their production processes are among the most energy-intensive in the industrial landscape. Nitrogen-based fertilizers, in particular, rely on ammonia synthesis through the Haber–Bosch process, which consumes vast amounts of natural gas or coal. This reliance on fossil fuels makes fertilizer exports from the Global South highly vulnerable to CBAM tariffs.

Countries such as Morocco, Egypt, and Nigeria are major exporters of fertilizers to the EU and UK. Morocco dominates phosphate-based fertilizers, while Egypt and Nigeria are significant producers of nitrogen fertilizers. The embedded emissions in these products are substantial, primarily due to the energy inputs required for ammonia production. CBAM will impose tariffs that reflect these emissions, potentially eroding the competitiveness of Global South exporters in European markets.

There are certain structural challenges in fertilizer production, listed as follows:

1. Ammonia Synthesis: The Haber–Bosch process is energy intensive, with natural gas serving as both feedstock and fuel. In coal-based economies, the emissions are even higher.
2. Nitrous Oxide Emissions: Beyond carbon dioxide, fertilizer production releases nitrous oxide, a greenhouse gas with a global warming potential nearly 300 times that of CO_2.
3. Infrastructure Gaps: Many Global South producers lack modern plants capable of integrating renewable energy or carbon capture.
4. Market Exposure: Fertilizer exports are heavily concentrated in EU and UK markets, leaving producers exposed to sudden tariff shocks.
5. SME Vulnerability: Smaller firms involved in blending and distribution lack the capacity to comply with CBAM requirements.

Comparative Emissions in Fertilizer Production

Country / Region	**Dominant Fertilizer Type**	**Energy Source**	**CO_2 Emissions per ton of Ammonia (approx.)**	**Vulnerability under CBAM**
Egypt	Nitrogen fertilizers	Natural gas	1.6–1.8 tons	High, gas reliance with limited renewables

Nigeria	Nitrogen fertilizers	Natural gas	1.7–1.9 tons	High, infrastructure gaps
Morocco	Phosphate fertilizers	Mixed fuels	1.2–1.4 tons	Moderate, but phosphate mining adds emissions
China	Nitrogen fertilizers	Coal	2.0–2.2 tons	Very high, coal dependence
Brazil	Nitrogen fertilizers	Natural gas + biomass	1.4–1.6 tons	Lower, potential CBAM advantage

This table highlights how energy sources and production methods shape vulnerability. Coal-based production is the most exposed, while countries integrating biomass or renewables have relative advantages.

Governments must prioritize the transition to green ammonia. Investments in renewable energy-based hydrogen production can replace fossil fuels in the Haber–Bosch process. Export support funds should be established to finance upgrades in fertilizer plants. Diplomatic engagement with the EU is essential to negotiate recognition of green ammonia and transitional flexibilities. Capacity building in MRV systems must be prioritized, with investments in technical training, digital infrastructure, and certification bodies. Governments should also explore regional cooperation to pool resources for green ammonia projects, particularly in Africa and South Asia.

Firms must act swiftly to reduce emissions and build resilience. Carbon footprint audits should be conducted to establish baselines and identify areas for improvement. Investments in energy efficiency, such as upgrading plants and optimizing processes, can yield significant reductions in emissions. Strategic alliances with European firms can facilitate technology transfer, particularly in green ammonia production. Supply chain greening is critical, as upstream suppliers of raw materials contribute to embedded emissions. Diversification of markets should also be pursued to reduce dependency on the EU and UK.

Access to carbon finance instruments, such as green bonds and climate funds, can provide the capital needed for upgrades. Insurance mechanisms should be explored to protect exporters from sudden tariff shocks. SME protection schemes must be designed to support smaller firms that lack compliance capacity.

The long-term vision for the fertilizer sector in the Global South must be one of transformation. Green industrial policy should prioritize green ammonia, renewable energy integration, and innovation in low-carbon technologies. Regional cooperation can pool resources for MRV systems and technology adoption. Innovation ecosystems should be fostered to encourage research and development in low-carbon fertilizer production.

In conclusion, fertilizers are both a lifeline for agriculture and a liability under CBAM. The sector's reliance on fossil fuels makes it highly vulnerable, but it also provides a clear pathway for transformation through green ammonia and renewable energy. With coordinated action by governments and firms, the fertilizer sector can transition from vulnerability to resilience, ensuring both export competitiveness and food security in a decarbonizing global economy.

Power plugs: Electricity Sector

The electricity sector is a distinctive case within the CBAM framework because it directly connects industrial competitiveness with national energy systems. Unlike steel, aluminum, or cement, electricity exports are not physical goods but cross-border flows of power. Countries in North Africa, the Balkans, and Eastern Europe supply electricity to the EU, while Gulf states and South Asia are exploring future hydrogen-linked electricity trade. CBAM's inclusion of electricity reflects the EU's determination to prevent carbon leakage in energy markets.

For Global South exporters, the challenge is structural. Electricity generation in many regions remains dominated by fossil fuels, particularly coal, oil, and natural gas. This results in high embedded emissions in exported electricity. CBAM will impose tariffs equivalent to the EU carbon price, making fossil-based electricity exports uncompetitive. The sector's vulnerability is compounded by weak grid infrastructure, limited storage capacity, and slow progress in renewable integration.

Grid modernization is central to reducing emissions and ensuring reliable electricity exports. Many Global South countries operate with outdated transmission and distribution networks that suffer from high losses. Transmission losses of 10–15 percent are common in South Asia and Sub-Saharan Africa, compared to 5 percent or less in advanced economies. These losses increase the carbon intensity of electricity exports because more fuel must be burned to deliver the same amount of power. Modernizing grids requires investment in smart meters, digital monitoring, and automated control systems. Without such upgrades, exporters cannot credibly demonstrate low-carbon electricity flows under CBAM.

Energy storage is another critical bottleneck. Renewable energy sources such as solar and wind are intermittent, requiring storage solutions to ensure stable supply. In many Global South countries, storage capacity is minimal. Lithium-ion batteries remain expensive, while pumped hydro storage is limited by geography. Without adequate storage, renewable electricity cannot be reliably exported to the EU. This creates a paradox: even when renewable generation capacity exists, the lack of storage undermines its export potential.

Comparative Vulnerabilities in Electricity Exports

Region / Country	**Dominant Energy Source**	**Transmission Losses**	**Storage Capacity**	**Vulnerability under CBAM**
North Africa (Morocco, Egypt)	Fossil fuels + renewables	8–12%	Limited battery, some hydro	High, but renewable potential
Balkans (Serbia, Bosnia)	Coal	10–15%	Minimal	Very high, coal dependence
South Asia (Pakistan, India)	Coal, gas	12–15%	Minimal	Very high, outdated grids

Gulf States	Gas, oil	5–8%	Emerging hydrogen storage	Moderate, but fossil reliance
Brazil	Hydropower	5–7%	Pumped hydro	Lower, CBAM advantage

This table illustrates how structural differences in energy sources, grid efficiency, and storage capacity shape vulnerability. Countries with hydropower and lower transmission losses have relative advantages, while coal-dependent exporters face steep challenges.

Governments must prioritize grid modernization as a national strategy. Investments in smart grids, digital monitoring, and automated control systems are essential to reduce losses and demonstrate efficiency under CBAM. Renewable energy integration must be accelerated through supportive policies, subsidies, and public–private partnerships. Storage capacity should be expanded through investments in batteries, pumped hydro, and emerging hydrogen storage technologies. Diplomatic engagement with the EU is essential to negotiate recognition of renewable electricity exports and transitional flexibilities. Capacity building in MRV systems must be prioritized, with investments in technical training, digital infrastructure, and certification bodies.

Firms engaged in electricity exports must act swiftly to reduce emissions and build resilience. Carbon footprint audits should be conducted to establish baselines and identify areas for improvement. Investments in energy efficiency, such as upgrading transmission lines and reducing losses, can yield significant reductions in emissions. Strategic alliances with European firms can facilitate technology transfer, particularly in renewable integration and storage solutions. Supply chain greening is critical, as upstream suppliers of fuel contribute to embedded emissions. Diversification of markets should also be pursued to reduce dependency on the EU and UK. Access to carbon finance instruments, such as green bonds and climate funds, can provide the capital needed for upgrades. Insurance mechanisms should be explored to protect exporters from sudden tariff shocks. SME protection schemes must be designed to support smaller firms that lack compliance capacity.

The long-term vision for the electricity sector in the Global South must be one of transformation. Green industrial policy should prioritize renewable energy integration, grid modernization, and storage expansion. Regional cooperation can pool resources for MRV systems and technology adoption. Innovation ecosystems should be fostered to encourage research and development in low-carbon electricity technologies.

Electricity exports are uniquely vulnerable under CBAM because they reflect the structural weaknesses of national energy systems. Grid modernization, storage expansion, and renewable integration are essential to reduce emissions and build resilience. With coordinated action by governments and firms, the electricity sector can transition from vulnerability to resilience, positioning itself as a competitive supplier in a decarbonizing global economy.

The Smallest Atom: Hydrogen!

Hydrogen represents both a frontier opportunity and a looming challenge for Global South exporters under the Carbon Border Adjustment Mechanism. Unlike traditional commodities such as steel or cement, hydrogen is an emerging sector where the EU and UK are actively shaping global standards. The inclusion of hydrogen in CBAM reflects Europe’s ambition to secure low-carbon energy imports while preventing carbon leakage in this strategic

fuel. For Global South producers, particularly in North Africa, the Gulf, and parts of South Asia, hydrogen exports could become a major revenue stream. Yet without careful preparation, CBAM tariffs could undermine competitiveness before the sector matures.

Hydrogen can be produced through multiple pathways, each with distinct carbon implications.

- Grey hydrogen: Produced from natural gas without carbon capture, resulting in high emissions.
- Blue hydrogen: Produced from natural gas with carbon capture and storage (CCS), reducing but not eliminating emissions.
- Green hydrogen: Produced using renewable electricity to split water via electrolysis, with near-zero emissions.

Most Global South producers currently rely on grey hydrogen due to cost and infrastructure constraints. Transitioning to blue or green hydrogen requires significant investment in renewable energy, electrolysis capacity, and CCS infrastructure.

Hydrogen exports are not simply a matter of production. They require specialized infrastructure, including pipelines, liquefaction facilities, and shipping terminals. Many Global South countries lack this infrastructure, making large-scale exports difficult. Storage is another critical issue. Hydrogen must be stored under high pressure or at very low temperatures, both of which require advanced technology and safety systems. Without adequate storage, hydrogen exports cannot be scaled reliably.

Comparative Pathways for Hydrogen Production

Country / Region	**Dominant Hydrogen Pathway**	**Infrastructure Readiness**	**CO_2 Emissions per kg H_2 (approx.)**	**Vulnerability under CBAM**
Gulf States	Grey hydrogen, pilot blue	Moderate (gas pipelines, LNG terminals)	9–10 kg	High, fossil reliance
North Africa (Morocco, Egypt)	Emerging green hydrogen	Limited, renewable potential	1–2 kg	Moderate, infrastructure gaps
South Asia (India, Pakistan)	Grey hydrogen	Weak, coal/gas reliance	10–12 kg	Very high, outdated systems
Brazil	Green hydrogen potential	Hydropower advantage	1–2 kg	Lower, CBAM advantage
China	Grey hydrogen, coal-based	Strong infrastructure	12–14 kg	Very high, coal dependence

This table highlights the divergence between regions. Countries with renewable energy potential, such as Morocco and Brazil, have relative advantages, while coal-dependent producers face steep challenges.

Governments must prioritize green hydrogen as a strategic export sector. Investments in renewable energy infrastructure, particularly solar and wind, are essential to power electrolysis. Export support funds should be established to finance hydrogen projects, including storage and transport infrastructure. Diplomatic engagement with the EU is critical to negotiate recognition of green hydrogen standards and transitional flexibilities. Capacity building in MRV systems must be prioritized, with investments in technical training, digital infrastructure, and certification bodies. Governments should also explore regional cooperation to pool resources for hydrogen projects, particularly in Africa and South Asia.

Firms must act swiftly to position themselves in the hydrogen market. Carbon footprint audits should be conducted to establish baselines and identify areas for improvement. Investments in electrolysis capacity and renewable integration can yield significant reductions in emissions. Strategic alliances with European firms can facilitate technology transfer, particularly in storage and transport infrastructure. Supply chain greening is critical, as upstream suppliers of energy contribute to embedded emissions. Diversification of markets should also be pursued to reduce dependency on the EU and UK.

Access to carbon finance instruments, such as green bonds and climate funds, can provide the capital needed for hydrogen projects. Insurance mechanisms should be explored to protect exporters from sudden tariff shocks. SME protection schemes must be designed to support smaller firms that lack compliance capacity.

The vision for the hydrogen sector in the Global South must be one of transformation. Green industrial policy should prioritize renewable energy integration, electrolysis capacity, and storage expansion. Regional cooperation can pool resources for MRV systems and technology adoption. Innovation ecosystems should be fostered to encourage research and development in low-carbon hydrogen technologies. The sector's reliance on fossil fuels makes it highly exposed, but it also provides a clear pathway for transformation through green hydrogen. With coordinated action by governments and firms, the hydrogen sector can transition from vulnerability to resilience, positioning itself as a competitive supplier in a decarbonizing global economy.

Financial Instruments and Market Cushions under CBAM

The introduction of the Carbon Border Adjustment Mechanism (CBAM) in January 2026 will not only reshape the industrial landscape of the Global South but also test the resilience of its financial systems. While sector-specific vulnerabilities in steel, aluminum, cement, fertilizers, electricity, and hydrogen are evident, the cross-cutting challenge lies in how exporters and governments can cushion themselves against sudden tariff shocks. This chapter explores in detail the financial instruments, insurance mechanisms, and market cushions that can be deployed to mitigate CBAM's impact. It draws on real narratives, existing agreements, and historical precedents to form a comprehensive scenario of how the Global South can prepare for this new era of carbon-linked trade.

The Financial Shock of CBAM

CBAM tariffs are not traditional duties imposed for protectionist reasons. They are linked directly to the EU carbon price, which has fluctuated between €80 and €100 per ton of CO_2 in recent years. For exporters in the Global South, this means that the cost of non-compliance is not fixed but variable, tied to the volatility of the European carbon market. A steel exporter in India or Turkey could suddenly face tariffs equivalent to 20–30 percent of the product's value if emissions are high. Fertilizer producers in Egypt or Nigeria could see their margins evaporate overnight.

This volatility creates systemic risk. Firms cannot plan effectively without financial cushions, and governments risk fiscal instability if export revenues collapse. The challenge is therefore to design instruments that can absorb shocks, spread risks, and provide liquidity for green transitions.

Carbon Finance Instruments

One of the most promising avenues is the use of carbon finance instruments. These include green bonds, climate funds, and blended finance mechanisms that mobilize capital for low-carbon projects.

- Green Bonds: Countries such as Nigeria and Indonesia have already issued sovereign green bonds to finance renewable energy and infrastructure projects. Extending this model to CBAM compliance could provide firms with access to capital for upgrading production facilities. For example, a Moroccan cement producer could issue corporate green bonds to finance clinker substitution projects, backed by government guarantees.
- Climate Funds: The Green Climate Fund (GCF), established under the UNFCCC, provides concessional finance for climate projects in developing countries. Governments in the Global South should negotiate with the GCF to prioritize CBAM-related projects, such as MRV system development and industrial upgrades.
- Blended Finance: Combining public and private capital can reduce risks and attract investment. For instance, a regional development bank could provide concessional loans for hydrogen projects, while private investors supply equity. This model has been used successfully in renewable energy projects in Africa and could be extended to CBAM compliance.

Insurance Mechanisms

Insurance mechanisms are critical to protect exporters from sudden tariff shocks. These can take several forms:

- Risk-Sharing Pools: Governments can establish national or regional insurance pools that compensate firms for CBAM-related losses. For example, the African Union could create a CBAM insurance fund, financed by member states and international donors, to support exporters facing sudden tariffs.
- Export Credit Agencies (ECAs): ECAs in countries such as India, Brazil, and South Africa can provide guarantees and insurance for exporters. By extending their mandates to cover CBAM risks, ECAs can cushion firms against volatility.

- Parametric Insurance: This innovative model pays out based on predefined triggers, such as the EU carbon price exceeding a certain threshold. For instance, if the EU carbon price rises above €100 per ton, exporters could receive compensation to offset increased tariffs.

SME Protection Schemes

Small and medium enterprises (SMEs) are particularly vulnerable under CBAM. They often lack the capital to invest in low-carbon technologies or the capacity to comply with MRV requirements. Governments must therefore design targeted protection schemes.

- Concessional Finance: Governments can provide low-interest loans or grants to SMEs for energy efficiency upgrades.
- Technical Assistance: Training programs and digital tools can help SMEs measure and report emissions.
- Market Diversification Support: Governments can assist SMEs in identifying alternative markets outside the EU and UK, reducing dependency.

Real Narratives and Agreements

Several real narratives and agreements provide lessons for CBAM cushioning:

- African Continental Free Trade Area (AfCFTA): AfCFTA has already begun harmonizing trade standards across Africa. By integrating carbon standards into AfCFTA, African countries can build collective resilience against CBAM. A regional MRV platform could reduce costs and improve credibility.
- ASEAN Energy Cooperation: Southeast Asian nations have cooperated on cross-border electricity trade. Extending this cooperation to CBAM compliance could involve joint investments in renewable energy and MRV systems.
- EU–Morocco Renewable Energy Partnership: Morocco has signed agreements with the EU to develop renewable energy projects, including solar and wind. These partnerships can be leveraged to support green hydrogen exports and CBAM compliance.
- India's International Solar Alliance (ISA): India has spearheaded the ISA to promote solar energy globally. By linking ISA projects to CBAM compliance, India can position itself as a leader in low-carbon exports.

A Coordinated Cushion Strategy

Imagine a scenario in which the Global South adopts a coordinated cushion strategy by 2026.

- Governments: Nigeria issues sovereign green bonds to finance upgrades in fertilizer plants. Morocco negotiates with the EU to recognize its renewable energy inputs in cement production. India integrates carbon pricing into its national policy, aligning with EU standards.

- Regional Blocs: AfCFTA establishes a CBAM insurance fund, financed by member states and international donors. ASEAN creates a regional MRV platform, reducing costs for member countries. SAARC launches a green industrial corridor, supported by concessional finance from the Asian Development Bank.
- Firms: A Brazilian steel producer partners with European firms to adopt hydrogen-based production. An Egyptian fertilizer company invests in green ammonia, financed by climate funds. A Pakistani cement producer diversifies markets by exporting to Africa and Asia, reducing dependency on the EU.
- Financial Institutions: Regional development banks provide concessional loans for CBAM compliance projects. Export credit agencies extend guarantees to cover CBAM risks. Private investors participate in blended finance schemes, attracted by government guarantees.

In this scenario, CBAM becomes not a threat but a catalyst for transformation. Governments, firms, and regional blocs build cushions that absorb shocks, spread risks, and mobilize investment. The Global South transitions from vulnerability to resilience, positioning itself as a competitive supplier in a decarbonizing global economy.

Long-Term Vision

The long-term vision must be one of systemic resilience. CBAM should be seen not only as a tariff risk but as an opportunity to embed sustainability into financial systems. By developing carbon finance instruments, insurance mechanisms, and SME protection schemes, the Global South can build a cushion that ensures stability and competitiveness. Regional cooperation and international partnerships will be essential to mobilize resources and share expertise.

Cross-Cutting Strategies and Regional Cooperation

The preceding chapters have examined sector-specific vulnerabilities under the Carbon Border Adjustment Mechanism. Yet the reality for Global South exporters is that CBAM will not strike in isolation. It will affect multiple sectors simultaneously, creating systemic risks that require integrated strategies. Governments and firms must therefore move beyond siloed responses and embrace cross-cutting approaches that build resilience across the entire export economy.

Integrated Policy Frameworks

CBAM compliance cannot be achieved through fragmented measures. Governments must design integrated policy frameworks that align industrial, energy, and trade strategies. This means embedding carbon pricing into national economic planning, linking export competitiveness with climate commitments, and ensuring that MRV systems cover all major sectors. Such frameworks should be supported by legislation that provides clarity and predictability for firms, reducing uncertainty and encouraging investment in low-carbon technologies.

Regional Cooperation

Regional cooperation is essential to pool resources and build collective resilience. Many Global South countries face similar challenges: outdated infrastructure, weak MRV systems, and limited access to finance. By

cooperating regionally, countries can share technical expertise, establish joint certification bodies, and negotiate collectively with the EU. Examples include:

- Africa: The African Continental Free Trade Area (AfCFTA) can serve as a platform for harmonizing carbon standards and building regional MRV capacity.
- South Asia: SAARC members can collaborate on renewable energy projects and green industrial corridors.
- ASEAN: Southeast Asian nations can coordinate on low-carbon supply chains and regional carbon markets.

Technology transfer is critical to reducing emissions across sectors. Governments should negotiate with the EU for technical assistance and recognition of local standards. Firms should pursue strategic alliances with European partners to access advanced technologies in hydrogen, carbon capture, and renewable integration. Innovation ecosystems must be fostered to encourage research and development in low-carbon solutions, supported by universities, research institutes, and private firms. Robust MRV systems are the backbone of CBAM compliance. Governments must invest in technical training, digital infrastructure, and certification bodies to ensure accurate emissions reporting. Regional cooperation can help establish joint MRV platforms, reducing costs and improving credibility. Firms must integrate MRV into their operations, ensuring that emissions data is reliable and verifiable.

CBAM should be seen not only as a tariff risk but as a catalyst for industrial modernization, regional integration, and sustainable development. By embedding low-carbon strategies into national and regional planning, the Global South can turn vulnerability into competitiveness.

In conclusion, cross-cutting strategies and regional cooperation are essential to cushion the systemic impact of CBAM. Governments must design integrated frameworks, firms must adopt low-carbon practices, and regional blocs must pool resources. Together, these measures can ensure that the Global South not only survives CBAM but leverages it as a driver of resilience and transformation.

Institutional Capacity and Governance for CBAM Compliance

The effectiveness of any cushion against the Carbon Border Adjustment Mechanism ultimately depends on institutional capacity and governance. While financial instruments, sectoral strategies, and regional cooperation provide critical buffers, they cannot succeed without strong institutions that can design, implement, and enforce compliance frameworks. For the Global South, building this capacity is both a technical and political challenge. Many Global South countries lack the institutional infrastructure to measure, report, and verify emissions at the level required by the EU. Ministries of trade, industry, and environment often operate in silos, with limited coordination. Regulatory agencies may be underfunded, understaffed, or politically constrained. Without credible institutions, exporters cannot provide verified emissions data, and governments cannot negotiate recognition of domestic carbon pricing systems.

Carbon pricing is central to CBAM compliance. The EU allows exporters to reduce CBAM liabilities if their home country has equivalent carbon pricing. Yet most Global South countries either lack carbon pricing systems or

operate them at levels far below EU standards. Establishing carbon pricing frameworks requires legislation, administrative capacity, and political will.

- South Africa has introduced a carbon tax, but its coverage and enforcement remain limited.
- China has launched a national emissions trading system, though it is still evolving.
- India has resisted carbon pricing, fearing impacts on competitiveness and consumers.

For the Global South, the challenge is to design carbon pricing systems that balance competitiveness with compliance. This may involve phased implementation, sectoral coverage, and revenue recycling to support vulnerable industries.

Monitoring, reporting, and verification (MRV) systems are the backbone of CBAM compliance. Without reliable MRV, exporters cannot demonstrate actual emissions, and governments cannot negotiate recognition of domestic standards. Building MRV capacity requires technical training, digital infrastructure, and certification bodies.

- Morocco has begun developing MRV systems for renewable energy projects, supported by EU partnerships.
- Vietnam has piloted MRV systems in the cement sector, with support from international donors.
- Nigeria faces significant challenges due to weak institutional capacity and limited technical expertise.

Regional cooperation can help reduce costs and improve credibility. For example, AfCFTA could establish a regional MRV platform, while ASEAN could develop joint certification bodies.

Strong regulatory institutions are essential to enforce compliance. This includes ministries of environment, trade, and industry, as well as independent agencies. Regulatory institutions must have the authority, resources, and credibility to enforce carbon pricing, oversee MRV systems, and support exporters.

- Brazil’s environmental agencies have played a critical role in enforcing deforestation regulations, providing a model for CBAM compliance.
- Egypt’s energy regulators have overseen renewable energy projects, demonstrating the importance of institutional capacity.
- Pakistan’s regulatory institutions face challenges due to political instability and limited resources, highlighting the need for reform.

Comparative Overview of Institutional Capacity

Country / Region	Carbon Pricing	MRV Systems	Regulatory Institutions	CBAM Readiness
South Africa	Carbon tax (limited)	Emerging	Moderate	Partial readiness
China	National ETS (evolving)	Developing	Strong	Moderate readiness
India	No carbon pricing	Weak	Moderate	Low readiness
Morocco	No carbon pricing	Emerging	Strong (renewables)	Moderate readiness
Brazil	No carbon pricing	Strong (forestry, energy)	Strong	Moderate readiness

This table illustrates the diversity of institutional capacity across the Global South. Some countries have made progress in carbon pricing or MRV systems, while others remain far behind.

Recommendations for Governments

Governments must prioritize institutional capacity as a national strategy. This includes:

- Establishing carbon pricing frameworks that align with EU standards.
- Investing in MRV systems through technical training, digital infrastructure, and certification bodies.
- Strengthening regulatory institutions with resources, authority, and credibility.
- Coordinating ministries of trade, industry, and environment to ensure integrated policy frameworks.
- Engaging with regional blocs to build collective capacity and negotiate with the EU.

Recommendations for Firms

Firms must integrate institutional capacity into their operations. This includes:

- Participating in MRV systems and providing reliable emissions data.
- Engaging with regulatory institutions to ensure compliance.
- Supporting carbon pricing frameworks through voluntary participation and advocacy.
- Building internal capacity for emissions measurement and reporting.

The Chessboard: Diplomatic Engagement and Negotiation Strategies

The Carbon Border Adjustment Mechanism is not simply a technical regulation; it is a geopolitical instrument that will reshape the terms of trade between the Global South and Europe. For exporters, compliance is not only about emissions reporting but also about how their governments position themselves diplomatically. The ability to negotiate transitional arrangements, secure recognition of domestic standards, and mobilize international support will determine whether CBAM is experienced as a punitive tariff regime or as a negotiated framework that allows space for adaptation.

Trade diplomacy is the first line of defense. Governments must engage directly with the European Union and the United Kingdom to secure concessions that ease the transition. This may involve pressing for phased implementation schedules that give industries more time to adjust, or seeking recognition of domestic carbon pricing systems even if they are less stringent than the EU Emissions Trading System. In some cases, governments can negotiate technical assistance packages that provide funding and expertise for monitoring, reporting, and verification systems. Morocco's renewable energy partnership with the EU illustrates how bilateral diplomacy can be leveraged to secure credibility and recognition. Egypt's cooperation with European partners on green hydrogen and ammonia projects shows how strategic sectors can be used to anchor negotiations.

Beyond bilateral channels, multilateral platforms provide opportunities for collective bargaining. The World Trade Organization is particularly relevant, as CBAM raises questions about its compatibility with international trade rules. Global South countries can use the WTO to challenge aspects of CBAM or to negotiate exemptions. The UNFCCC also provides a climate diplomacy platform where developing countries can argue that CBAM undermines the principle of common but differentiated responsibilities. Regional blocs add another layer of leverage. The African Continental Free Trade Area can negotiate collectively with the EU, reducing fragmentation and increasing bargaining power. ASEAN has the potential to coordinate CBAM compliance across Southeast Asia, while SAARC could develop regional strategies for carbon pricing and emissions verification that strengthen its negotiating position.

Diplomacy is not only about institutions but also about narratives. Global South governments must frame CBAM as an issue of equity and development. They can argue that the mechanism penalizes countries that have contributed least to historical emissions, while demanding recognition of their right to development. They can emphasize the need for technology transfer, highlighting that compliance requires access to advanced low-carbon technologies that are currently concentrated in Europe. They can link CBAM compliance to international climate finance commitments, reminding the EU of its pledge under the Paris Agreement to mobilize $100 billion annually for developing countries. These narratives are not rhetorical flourishes; they are bargaining tools that can shape negotiations and secure concessions.

Several existing agreements provide models for how diplomacy can be deployed effectively. The EU–Morocco renewable energy partnership demonstrates how bilateral agreements can secure recognition of renewable inputs. The EU–Egypt cooperation on green hydrogen shows how strategic sectors can be leveraged for CBAM compliance. India's International Solar Alliance provides a multilateral platform for negotiating renewable energy support. The African Union–EU partnership offers a framework for collective bargaining on CBAM and climate

finance. These examples show that diplomacy is not abstract but grounded in real agreements that can be expanded and adapted to the CBAM context.

A coordinated diplomatic strategy would involve multiple layers of engagement. Morocco could secure EU recognition of its renewable energy inputs in cement production, while Egypt negotiates phased implementation for fertilizers. India could leverage the International Solar Alliance to secure EU support for solar-based hydrogen projects. AfCFTA could challenge CBAM's compatibility with WTO rules, while ASEAN negotiates collective recognition of regional emissions verification systems. SAARC could develop a regional carbon pricing framework, strengthening its negotiating position. At the same time, Global South governments could frame CBAM as a matter of development equity, technology transfer, and climate finance, mobilizing international support.

In such a scenario, diplomacy transforms CBAM from a unilateral tariff regime into a negotiated framework that recognizes the realities of the Global South. The long-term vision must be one of diplomatic resilience. CBAM should be seen not only as a tariff risk but as an opportunity to strengthen trade diplomacy, climate negotiations, and regional cooperation. By leveraging bilateral agreements, multilateral platforms, and collective narratives, the Global South can soften CBAM's impact and secure pathways for sustainable development.

Practical Pathways for Collaboration – Regional Politics and Strategic Roles in Cushioning CBAM

The Carbon Border Adjustment Mechanism is not arriving in a political vacuum. Its impact will be filtered through the realities of regional politics, the ambitions of middle powers, and the capacity of nations to forge coalitions that balance climate responsibility with economic survival. For the Global South, the challenge is not only technical compliance but also how to navigate the geopolitical chessboard to prevent economies from being crushed under the weight of new tariffs.

Regional Politics as a Driver of Strategy

Africa, South Asia, the Middle East, and Eurasia each face distinct political dynamics that shape their ability to respond to CBAM. In Africa, the African Continental Free Trade Area (AfCFTA) is emerging as a unifying framework, but political fragmentation and uneven institutional capacity remain obstacles. North African states such as Morocco and Egypt, with their proximity to Europe and established energy partnerships, are positioned to lead continental negotiations. Their ability to secure recognition of renewable energy inputs and green hydrogen projects could set precedents for the rest of Africa.

South Asia presents a more complex picture. India, with its leadership in the International Solar Alliance, has the diplomatic weight to negotiate transitional flexibilities. Yet regional politics within SAARC are fraught, with tensions between India and Pakistan limiting cooperation. CBAM could paradoxically provide a new incentive for collaboration, as both countries face similar vulnerabilities in steel, cement, and fertilizers. A regional carbon pricing framework, even if modest, would strengthen South Asia's negotiating position with the EU.

In Southeast Asia, ASEAN's tradition of consensus politics provides a platform for harmonizing CBAM responses. Countries such as Vietnam and Indonesia, with their industrial exports, have strong incentives to push for

collective MRV systems and renewable energy investments. ASEAN's ability to present a unified front could reduce compliance costs and increase bargaining power.

The Middle East and Eurasia add another layer of complexity. Gulf states, with their fossil-based economies, are investing heavily in hydrogen and renewable projects to secure future export markets. Their political stability and financial resources give them leverage in negotiations. Turkey, however, occupies a uniquely strategic position. As a bridge between Europe and Asia, and a candidate for EU accession, Turkey can play a pivotal role in mediating CBAM compliance pathways. Its steel and cement industries are deeply integrated into European supply chains, giving it both vulnerability and influence. By aligning partially with EU standards while advocating for transitional flexibilities for the Global South, Turkey could act as a diplomatic broker.

Türkiye's position is particularly significant. It is not formally part of the EU, yet its customs union with Europe ties its economy closely to European markets. Turkish steel and cement exports are among the most exposed to CBAM, but Turkey also has the institutional capacity and political leverage to negotiate. Its role as a NATO member and its balancing act between Europe, Russia, and the Middle East give it diplomatic weight.

Türkiye could lead a coalition of middle powers—including Brazil, South Africa, and Indonesia—that advocate for transitional arrangements under CBAM. By presenting itself as both a vulnerable exporter and a credible partner, Turkey can argue for phased implementation, recognition of domestic carbon pricing, and technical assistance. Its ability to mediate between the EU and the Global South could prevent CBAM from becoming a unilateral imposition.

Practical Pathways Through Agreements

Existing treaties and agreements provide practical pathways for collaboration, but they must be adapted to the realities of regional politics. The Paris Agreement remains the overarching framework, with its principle of common but differentiated responsibilities. Global South nations can argue that CBAM undermines this principle unless transitional flexibilities and support mechanisms are provided.

AfCFTA offers a continental platform for harmonizing carbon standards and negotiating collectively with the EU. Morocco and Egypt, with their renewable energy partnerships, can lead this effort. SAARC, despite political tensions, could use CBAM as an incentive for cooperation, developing a regional carbon pricing framework that strengthens its negotiating position. ASEAN's consensus politics provide a model for integrating CBAM compliance into regional energy cooperation.

Bilateral agreements also play a role. Morocco's renewable energy partnership with the EU and Egypt's green hydrogen cooperation demonstrate how strategic sectors can be leveraged for CBAM compliance. India's International Solar Alliance provides a multilateral platform for promoting renewable energy and negotiating support. Turkey's customs union with the EU offers a unique pathway for mediating CBAM compliance, balancing European demands with Global South vulnerabilities.

Coordinated Collaboration with Regional Politics

Imagine a scenario in which regional politics are harnessed to cushion CBAM's impact. AfCFTA integrates carbon standards into its framework, with Morocco and Egypt leading continental negotiations. SAARC develops a modest carbon pricing framework, with India and Pakistan cooperating despite political tensions. ASEAN extends its energy cooperation to CBAM compliance, investing in renewable energy and shared MRV systems.

Türkiye, recognizing its vulnerability and leverage, leads a coalition of middle powers that advocate for transitional arrangements. Brazil, South Africa, and Indonesia join Türkiye in presenting a unified front, arguing for phased implementation and recognition of domestic standards. The EU, facing pressure from both bilateral partners and multilateral platforms, agrees to transitional flexibilities and technical assistance.

In this scenario, CBAM becomes not a unilateral imposition but a negotiated framework that reflects the realities of regional politics. Economies are cushioned against shocks, industries are modernized, and new export opportunities are created.

By integrating carbon standards into regional agreements, leveraging bilateral partnerships, and mobilizing multilateral platforms, the Global South can prevent economies from collapsing and build resilience in a decarbonizing global economy.

In conclusion, practical pathways for collaboration must incorporate regional politics and the strategic roles of middle powers. South–South cooperation builds collective resilience, North–South collaboration secures recognition and support, and middle powers such as Turkey provide diplomatic leverage. Together, these pathways create a cushion that ensures stability and competitiveness, transforming CBAM from a threat into a catalyst for transformation.

Short-Term Actions (2025–2026)

The immediate priority is to avoid sudden shocks when CBAM tariffs begin. Governments must establish emergency frameworks that provide exporters with clarity and support. This includes issuing interim guidelines for emissions reporting, creating temporary subsidy schemes, and negotiating transitional flexibilities with the EU and UK.

Firms must conduct carbon footprint audits to establish baselines. Without verified data, exporters will be assessed at default values, which are often higher than actual emissions. SMEs should be provided with technical assistance to ensure they can comply. Exporters in highly exposed sectors—steel, cement, fertilizers—must begin diversifying markets to reduce dependency on Europe.

Diplomatically, governments should intensify bilateral negotiations. Countries such as Morocco and Egypt can leverage existing renewable energy partnerships to secure recognition of local standards. Turkey, with its customs union ties to the EU, should act as a mediator, advocating for phased implementation for Global South exporters. Regional blocs must also mobilize quickly. AfCFTA can establish a provisional MRV platform, while ASEAN can coordinate emissions reporting across member states.

Medium-Term Actions (2026–2030)

Once CBAM is fully operational, the focus must shift to structural reforms. Governments should introduce carbon pricing systems that align with EU standards. Even modest carbon taxes or pilot emissions trading schemes can reduce CBAM liabilities and demonstrate commitment. Revenue from carbon pricing should be recycled to support vulnerable industries and households.

MRV systems must be institutionalized. This requires investment in digital infrastructure, certification bodies, and technical training. Regional cooperation can reduce costs. For example, AfCFTA could establish a continental MRV authority, while SAARC could develop a shared carbon pricing framework.

Firms must invest in low-carbon technologies. Steel producers should explore hydrogen-based direct reduction, cement firms should adopt clinker substitutes, and fertilizer companies should transition to green ammonia. Strategic alliances with European firms can facilitate technology transfer. Financial institutions must support these transitions through green bonds, concessional loans, and blended finance mechanisms.

Diplomatically, governments should leverage multilateral platforms. The WTO provides an arena to challenge CBAM's compatibility with trade rules, while the UNFCCC offers a climate diplomacy platform. Narratives of development equity, technology transfer, and climate finance must be deployed to secure concessions. Middle powers such as Turkey, Brazil, and South Africa should lead coalitions that advocate for fair terms.

Long-Term Actions (2030 and beyond)

The long-term vision must be one of transformation. CBAM should be seen not only as a tariff risk but as a catalyst for industrial modernization and sustainable development. Governments must embed low-carbon strategies into national development plans, ensuring that industrial competitiveness is aligned with climate commitments.

Regional blocs should evolve into platforms for green industrial policy. AfCFTA can promote renewable energy corridors across Africa, ASEAN can develop regional hydrogen hubs, and SAARC can integrate carbon pricing into regional trade agreements. These initiatives will reduce emissions, create new export opportunities, and strengthen bargaining power.

Firms must position themselves as leaders in low-carbon exports. This requires continuous investment in innovation, R&D, and supply chain greening. Exporters that succeed in reducing emissions will not only avoid CBAM tariffs but also gain competitive advantages in global markets.

Diplomatically, the Global South must continue to negotiate fair terms. This includes securing recognition of domestic standards, mobilizing climate finance, and advocating for technology transfer. Middle powers such as Turkey will remain critical, acting as bridges between Europe and the Global South.

Comparative Roadmap Overview

Phase	Government Actions	Firm Actions	Regional Actions	Diplomatic Actions
Short-Term (2025–2026)	Interim guidelines, subsidies, transitional negotiations	Carbon audits, market diversification	Provisional MRV platforms	Bilateral negotiations, Turkey as mediator
Medium-Term (2026–2030)	Carbon pricing, institutionalized MRV	Low-carbon tech adoption, alliances	Regional MRV authorities, carbon pricing frameworks	WTO challenges, UNFCCC diplomacy
Long-Term (2030+)	Green industrial policy, development integration	Innovation, R&D, supply chain greening	Renewable corridors, hydrogen hubs	Continued negotiation, middle power coalitions

The Carbon Border Adjustment Mechanism is not a passing trade measure; it is a structural reordering of global commerce that will define the next decades of industrial competitiveness. For the Global South, the stakes are existential. Without preparation, CBAM tariffs could erode export revenues, destabilize industries, and trigger cascading economic shocks. Yet with foresight, collaboration, and strategic diplomacy, CBAM can be transformed from a threat into a catalyst for modernization.

The journey through this guidebook has highlighted sectoral vulnerabilities in steel, aluminum, cement, fertilizers, electricity, and hydrogen. It has mapped financial cushions, institutional reforms, and diplomatic strategies. It has shown how regional politics—from AfCFTA's continental ambitions to ASEAN's consensus model, from SAARC's fragile cooperation to Turkey's unique role as a bridge between Europe and Asia—shape the pathways available to exporters. The lesson is clear: resilience cannot be built in isolation.

Final policy recommendations must therefore emphasize integration. Governments must embed carbon pricing into national economic planning, ensuring that revenues are recycled to support vulnerable industries. MRV systems must be institutionalized, with regional platforms reducing costs and improving credibility. Firms must invest in low-carbon technologies, diversify markets, and build alliances with European partners for technology transfer. Financial institutions must mobilize capital through green bonds, concessional loans, and blended finance.

Diplomacy remains central. Bilateral partnerships, such as Morocco's renewable energy cooperation with the EU or Egypt's green hydrogen projects, provide models for securing recognition and support. Multilateral platforms, from the WTO to the UNFCCC, must be leveraged to argue for equity, technology transfer, and climate finance. Regional blocs must act collectively, harmonizing standards and negotiating as unified actors. Middle powers such as Turkey, Brazil, and South Africa must lead coalitions that advocate for transitional arrangements and fair terms.

The long-term vision must be one of transformation. CBAM should be seen not only as a tariff risk but as an opportunity to embed sustainability into economic systems, strengthen regional cooperation, and leverage diplomacy. By acting in phases—short-term cushioning, medium-term reforms, and long-term transformation—the Global South can prevent economies from collapsing and build resilience in the face of systemic change.

In closing, CBAM is a test of adaptability and foresight. Those who prepare will not only survive but thrive, positioning themselves as competitive suppliers in a decarbonizing global economy. Those who fail to act risk marginalization and decline. The Global South must therefore embrace CBAM as a catalyst for resilience, modernization, and transformation. The pathway is demanding, but the rewards are profound: stability, competitiveness, and a sustainable future in a world where carbon is no longer free.

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