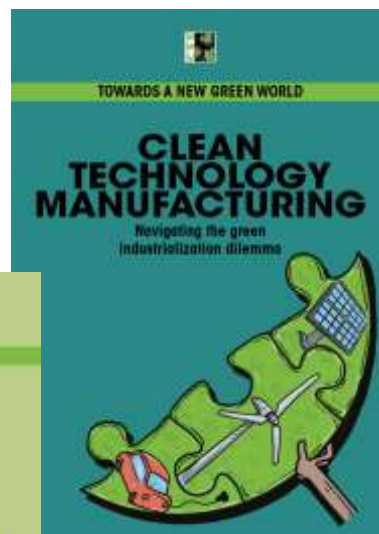
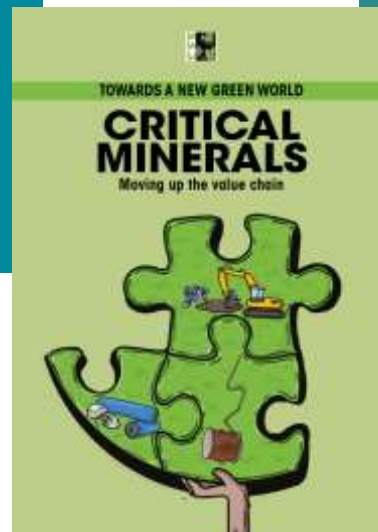
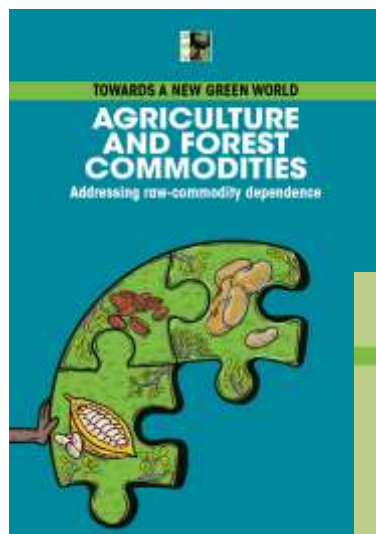
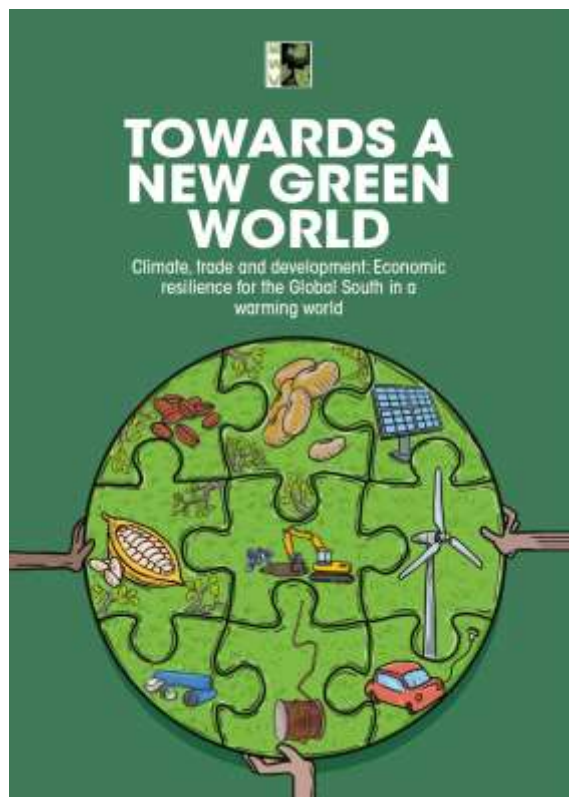


TOWARDS A NEW, GREEN WORLD





@COP 30
THE BELEM BUZZ

TOWARDS A NEW, GREEN WORLD

CLIMATE, TRADE, AND DEVELOPMENT: ECONOMIC RESILIENCE
FOR THE GLOBAL SOUTH IN A WARMING WORLD

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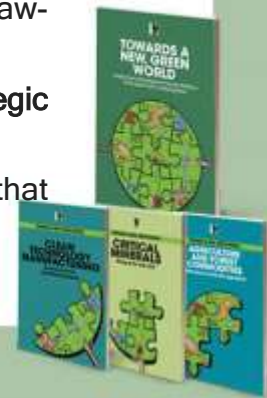


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Economic resilience in a warming world

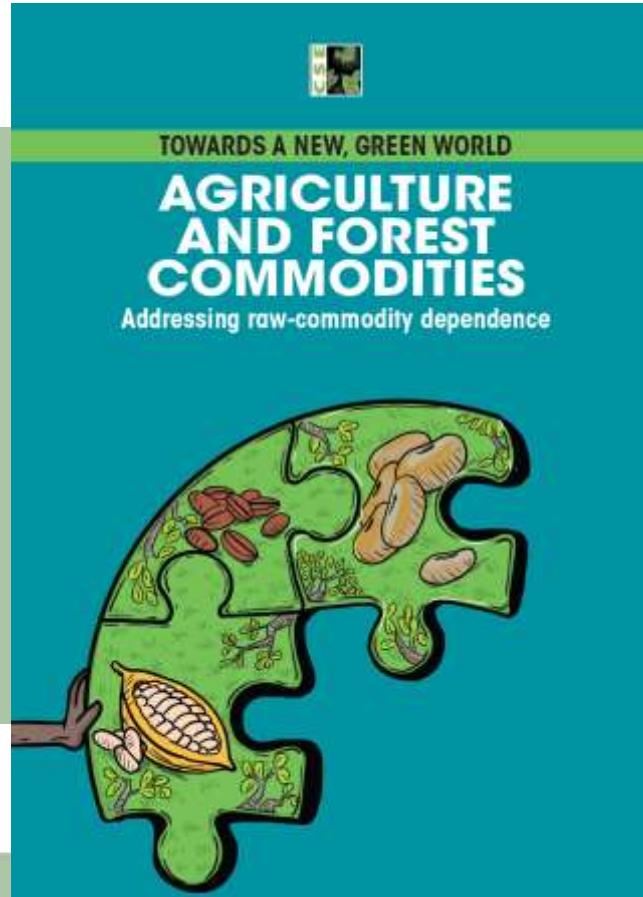
- The global green transition risks reproducing old inequities under a new climate-friendly banner unless the global South is empowered to capture greater value, diversify its economies, and shape the governance of emerging green industries
- We need to reinvent the climate agenda for the Global South. **Calling for decarbonisation without economic resilience is no longer viable.**
- In the following three papers we have traced the Global South's path through the green transition—from **dependence on low-value agricultural exports, to the geopolitics of critical minerals, and finally to the challenge of clean-technology manufacturing.** These are three strategic sectors, among others, in which structural inequities in global trade and finance regimes trap developing countries at the raw-material stage while advanced economies capture value through processing and innovation.
- Through these papers we call for green industrialization **rooted in diversification, localisation, strategic resource control, and reform of global trade rules.**
- Collectively, the papers explore pathways towards equitable climate-compatible development that strengthens autonomy, economic resilience, and value capture in the Global South.



Paper #1

AGRICULTURE AND FOREST COMMODITIES

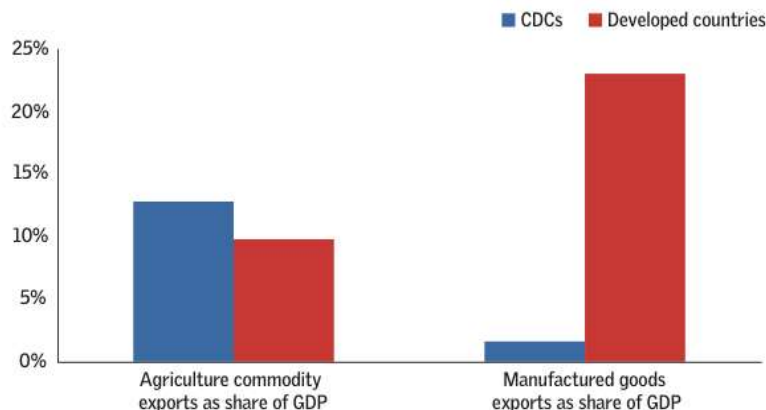
Addressing raw
commodity dependence



Commodity dependence conundrum

Graph 4: Comparison between agriculture-dominant CDCs and developed countries in 2021-23 vis-à-vis trade

b) Manufactured good exports contributed to less than 2 per cent of the GDP of CDCs in 2021-23

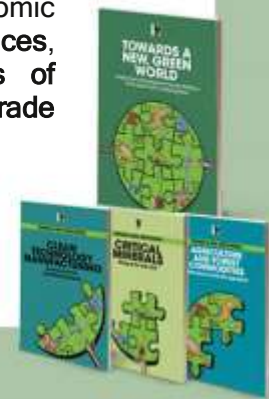


Note: The figures for agriculture-based commodities and manufactured goods are determined as per the codes under UNCTAD's classification of commodities under agriculture and manufacturing.
Source: CSE analysis, UNCTADSTAT, World Bank

95 of 143 developing countries and over 80% of least developed countries (LDCs) are dependent on commodity exports

Agriculture-based commodities account for 81.5% of total exports in these countries, vs 24.8% in developed ones. SIDS like Micronesia and Vanuatu show 79-98% dependency on agriculture exports

Their economies are more exposed to economic vulnerabilities due to **volatile commodity prices**, exacerbated by **disproportionate impacts of climate change** and **inequities in the global trade regime**



Price Volatility and Unequal Value Chains

- Commodity prices are more volatile than manufactured goods; volatility has intensified since the 1990s.

COCOA

- Ivory Coast & Ghana (56% of global production) earned only 6.2% of value-added cocoa export revenue (2021–23).
- Netherlands & Germany captured >35% of value-added profits.
- Farmers get 6–7% of total profit; manufacturers & retailers 80–90%.

COFFEE

- Brazil, Vietnam, Colombia produce >50% of global coffee, earning ~33% of revenues.
- Germany & Switzerland earn ~17% from roasting alone.

Price swings hurt purchasing power—e.g., beef exports once bought 37 barrels of oil (2004) but only 27 in 2014.

Revenue generation from value-added cocoa products amongst countries

Despite producing half of the world's cocoa beans, Ivory Coast and Ghana earn negligible revenue from exports of chocolate and other processed products

Countries	Export revenue
Ivory Coast and Ghana	6.20 per cent
Netherlands and Germany	35.50 per cent

Source: CSE analysis, UN Comtrade

Note: Values are the annual averages during 2021–23



Compounding crises: The climate and trade pressures

CLIMATE IMPACTS

Commodity-dependent countries (CDCs) are disproportionately impacted by climate change, facing catastrophic losses.

Top agriculture-based CDCs
vs. developed countries from
extreme weather (1993-2022)

TRADE

Tariff Escalation: Developed nations impose higher tariffs on processed goods (like chocolate) than raw materials (like cocoa beans), trapping CDCs as low-value exporters.

Protectionism: Unilateral rules, like the EU Deforestation Regulation (EUDR), add high compliance costs and threaten to exclude millions of smallholders from the market.

**24 times more affected
persons (per 100,000 people)**

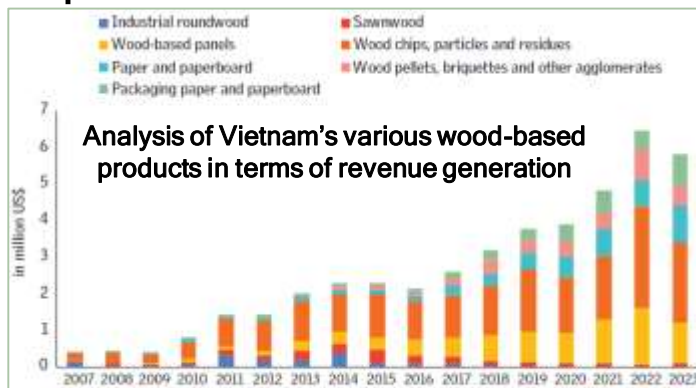
9 times higher GDP losses



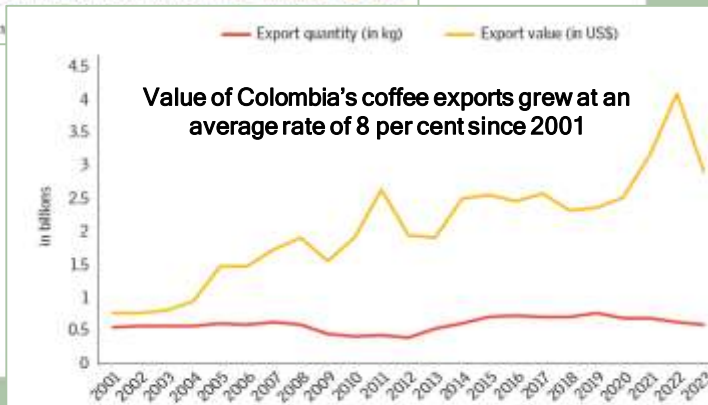
Pathways to value addition: Examples from the Global South

There is evidence from the last 25 years to show that Global South countries can move up the value chain with strategic interventions

- **Vietnam in forestry:** Shifted from exporting raw timber to processed wood products. It was supported by national-level policies like timber harvesting in plantation forests and Payment for Forest Environmental Services (PFES).
- **Colombia in coffee:** Captured more value through on-farm wet processing, a strong national-level farmer federation (FNC), and a powerful global branding (Juan Valdez).
- **Uganda in cotton:** Used policy incentives like tax breaks and electricity subsidies to encourage local processing and build a domestic textile industry.
- **China in timber** - Expanded timber processing; revenues grew 6x since 1994.



Source: Food and Agriculture Organization Statistics



Source: UN Comtrade

The way forward

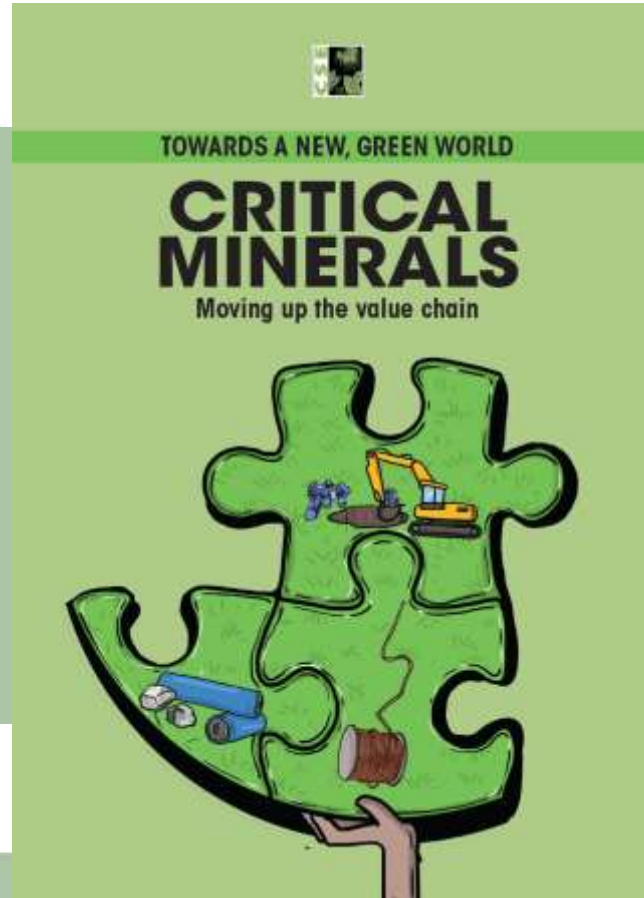
- **Diversify horizontally and vertically:** Move beyond raw commodities and add value to existing ones
- **Adopt climate-smart agriculture:** Build resilience and improve productivity to protect livelihoods.
- **Catalyse technology transfer:** Establish a fair system of sharing knowledge, finance, and tools for domestic processing.
- **Strengthen regional trade:** Build regional value chains (for ex., through AfCFTA) to create new markets.
- **Ensure fair market access:** Strategise on tariff escalation and unfair non-tariff barriers.
- **Foster international cooperation:** Demand real financial/technical support, to comply with due diligence



Paper #2

CRITICAL MINERALS

Moving up the value chain



Climate action and development through the lens of minerals: Uneven value capture

Graph 2: Countries with the highest revenue from export of raw copper in 2020-24



Source: CSE Analysis, UN Comtrade

Graph 3: Countries with the highest revenue from export of processed copper in 2020-24



Source: CSE Analysis, UN Comtrade

- 'Critical' minerals (copper, lithium, nickel, rare earth elements) are vital inputs for low-carbon technologies: EVs, solar PVs, and wind turbines.
- Demand driven by clean energy technologies projected to dominate total mineral use by 2040 (IEA).
- Challenge: The Global South extracts, but the Global North processes – value capture is highly uneven.
 - Chile → 30% of raw copper exports, only 12% of processed copper revenue.
 - Australia → 76% raw lithium, China → 23% of processed lithium exports.
 - Indonesia → 60% mined nickel, but China/Japan refine 75%.



Uneven value capture

Graph 6: Countries with the highest revenue from export of raw nickel in 2020-24



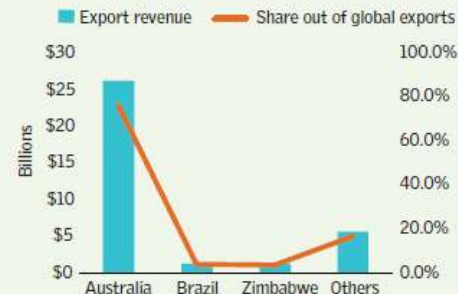
Source: CSE Analysis, UN Comtrade

Graph 7: Countries with the highest revenue from export of processed nickel in 2020-24



Source: CSE Analysis, UN Comtrade

Graph 4: Countries with the highest revenue from export of raw lithium in 2020-24



Source: CSE Analysis, UN Comtrade

Graph 5: Countries with the highest revenue from export of processed lithium in 2020-24

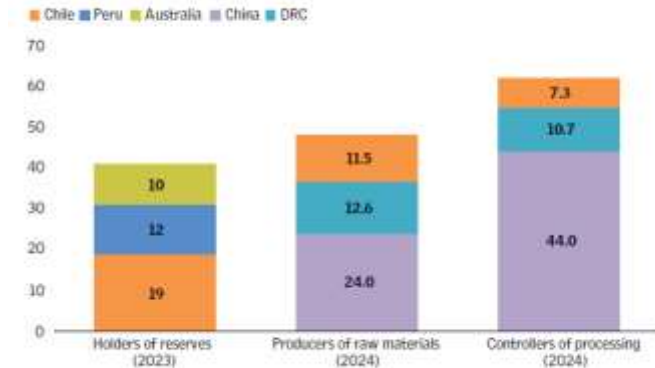


Source: CSE Analysis, UN Comtrade

Global supply-chain concentration across transition-critical minerals

Copper: Chile, Peru and Australia hold 41 % of reserves;
China, DRC and Chile produce 48 % of raw copper and
control 62% of processing (China alone 44 %).

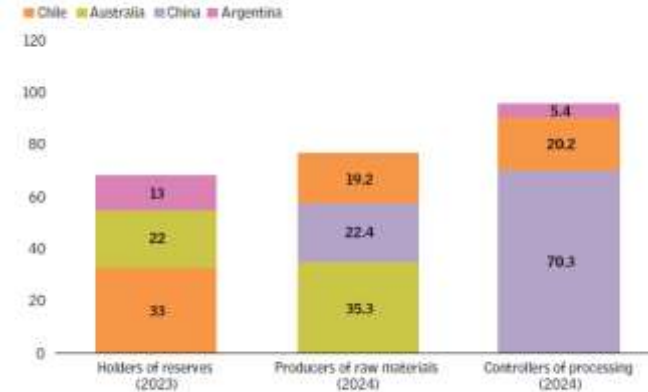
Graph 10: Top countries influencing the different elements of supply chains of copper



Source: Our World in Data, IEA
Note: Values are in percentages

Lithium: Chile, Australia and Argentina hold 68 % of reserves;
Australia, China and Chile mine 77 % of supply, but China
dominates processing (~70 %), creating major supply-side
dependence.

Graph 11: Top countries influencing the different elements of supply chains of lithium



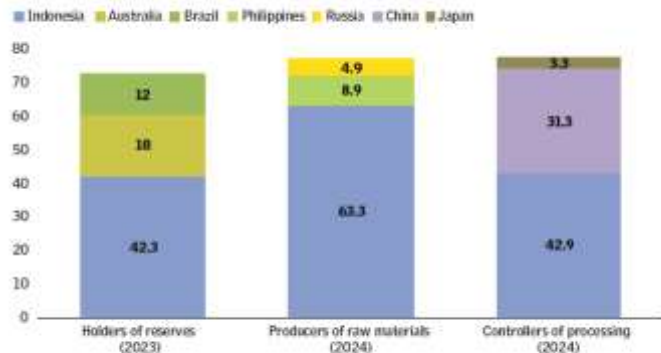
Source: Our World in Data, IEA
Note: Values are in percentages



Global supply-chain concentration across transition-critical minerals

Nickel: Indonesia, Australia and Brazil hold 72 % of reserves; Indonesia, Philippines and Russia produce 77 % of mined nickel, while China and Japan lead refining (77 % of global output).

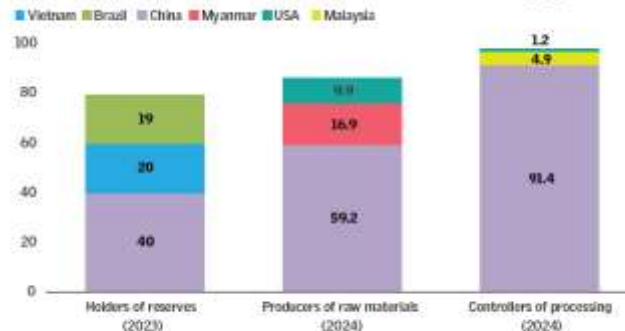
Graph 12: Top countries influencing the different elements of supply chains of nickel



Source: Our World in Data, IEA
Note: Values are in percentages

Rare Earth Elements: China holds 40 % of reserves, produces 59 % of mined REE and controls over 91 % of processing; top three countries account for ~98 % of global refining (China, Malaysia and USA).

Graph 13: Top countries influencing the different elements of supply chains of REE



Source: IEA, Our World in Data
Note: Values are in percentages

Mineral reserves lie largely in developing countries, but a majority of refining and processing remains concentrated in China and a few developed nations. The latter capture more value in global supply chains.



Global partnerships attempting to break supply chain strongholds

- **Western alliances:** The US-led **Minerals Security Partnership (MSP)** and the EU **Critical Raw Materials Act (CRMA)** are designed to cut over-reliance on China.
- **Potential ‘South-South’ cooperation:** Countries in South America and Africa are forming alliances to retain value locally: the Argentina - Chile Binational Lithium Working Group; talks of a “Lithium OPEC” with Bolivia; and the DRC - Zambia Battery Council backed by Afreximbank and UNECA for joint battery production.
- **Multilateral level ethics and justice push:** The UN Secretary-General’s Panel on Critical Energy Transition Minerals urges human rights safeguards, ecosystem protection, responsible finance and local value addition to ensure that the energy transition is equitable and benefits producer communities in the Global South.



A comparative assessment of mineral-rich Global South countries



Strengths

- **DRC:** Strong and growing global demand of cobalt in clean technologies; Exercising autonomy over its natural endowments (Feb '25 export ban).
- **Indonesia:** Large resource base, producer leverage; Export-ban policy successfully pulled capital into domestic processing.
- **Chile:** Innovator in reducing mining's ecological impact; Cost-effective production of lithium.

Weaknesses

- **DRC:** Low profit margins captured domestically from cobalt value chain (China controls 8 out of 14 largest mines); Economic dependence and price sensitivity.
- **Indonesia:** Uneven value addition across sectors (stainless steel grew, EV batteries lagged)
- **Chile:** Unable to move up the value chain of lithium; Discouraging private-sector investments, missing out on potential revenue maximization



A comparative assessment of mineral-rich Global South countries



Opportunities

- **DRC:** Developing local processing through a coherent industrial policy
- **Indonesia:** Climbing the EV battery value chains through international collaborations
- **Chile:** Boosting lithium through effective governance of existing 'resource nationalist' policies

Threats

- **DRC:** Internal political instability challenges
- **Indonesia:** Social and environmental costs of mining
- **Chile:** Water intensive lithium extraction and environmental justice concerns in the Atacama; Reduced future demand of lithium due to alternative battery technologies



Key Findings and Way Forward

- Processing concentration, and not ore scarcity, in conjunction with a country's political economy determines who captures the most revenue from copper, lithium, nickel and rare earth element's value chains.
- When mineral-rich countries intervene through a set of policies (such as export bans, local content requirements, creation of industrial parks, diversified supply- and demand-side contracts and agreements) that prioritizes resource sovereignty, it can lead to a shift in outcomes, as evidenced by the DRC, Indonesia and Chile.

Way Forward

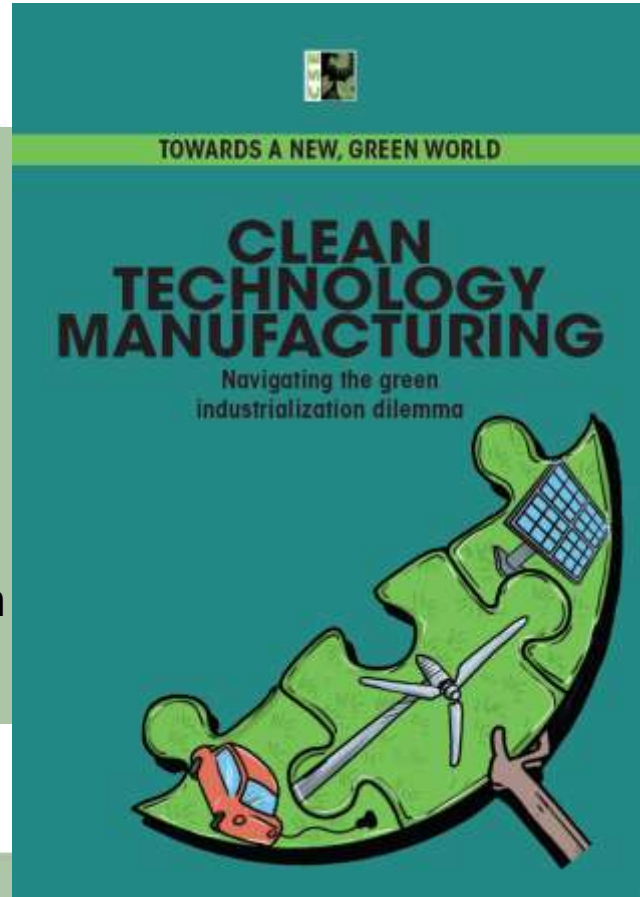
- Trade rules
- Sufficiency (led by the Global North)
- Recycling
- Regional Cooperation
- Economic Diversification



Paper #3

CLEAN TECHNOLOGY MANUFACTURING

Navigating the green
industrialization dilemma

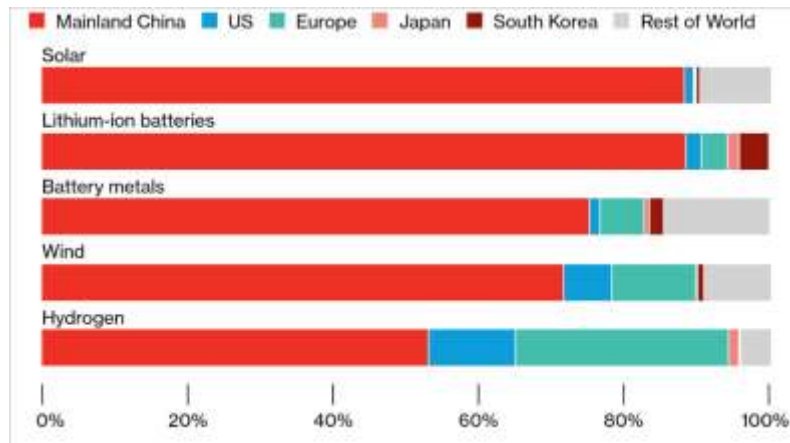


The Dual Challenge: Industrialize While Decarbonizing

- The Global South faces a “double-barrelled” challenge: industrializing while reducing emissions.
- Manufacturing is central to both economic transformation and climate action.
- Traditional high-carbon paths used by the Global North are no longer viable.
- Solution: Green industrialization by participating in clean technology manufacturing (solar, batteries, EVs).



A Story of Dominance

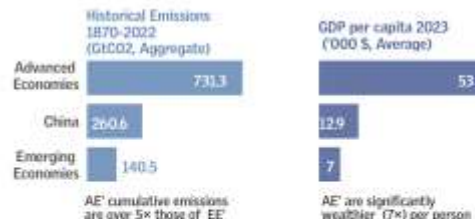


- Clean-tech manufacturing is a \$700 billion global market (2023), but manufacturing is highly concentrated: China, EU, and US account for 91% of global clean-tech growth (2023)
- Developing countries in Latin America, Africa, and Southeast Asia together: <5% of production value
- China holds ~75% of new investment; 84.6% of solar PV production. Dominance built through deliberate “industrial policies”, i.e., government directed policies geared towards strategic sectors – subsidies, tax cuts, R&D, and public procurement.
- The rich world is now escalating a global subsidy race in response, that most developing economies cannot afford.
- Structural asymmetries persist – developing nations assemble goods but import value-heavy inputs.



TOWARDS A NEW, GREEN WORLD

Long industrialization histories



Industrial bases are bigger,



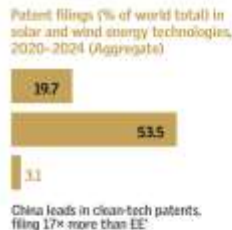
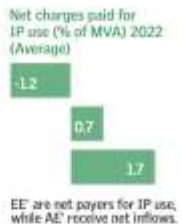
deeper,



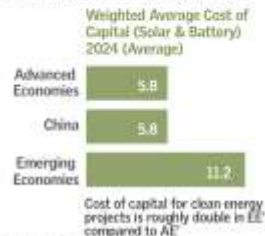
and sophisticated.



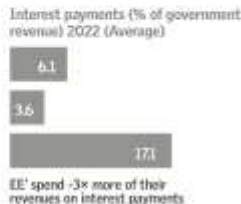
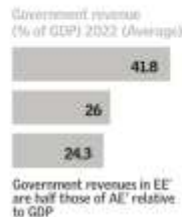
Technological capabilities diverge further along the innovation chain



Financing costs are sharply unequal



and fiscal capacity remains constrained.



Source: CSE

Notes:

1. Emerging economies (EE) include Brazil, India, Indonesia, Mexico, South Africa, and Vietnam. Advanced economies (AE) include the United States, United Kingdom, Germany, France, Canada, and Japan. China is shown separately.
 2. Group values represent the average of countries within each group. Aggregate indicators (e.g., total emissions, total manufacturing DVA) represent the sum of countries in each group.
 3. MVA refers to manufacturing value added; DVA refers to domestic value added.
- Data sources: Global Carbon Budget, World Bank, OECD, Harvard's Growth Lab, WIPO, IEA

The Global South's Dilemma:
Industrialize cleanly under inequitable conditions of finance, trade, and technology

Prohibitive finance and subsidy asymmetries - WACC 2-3x higher than in advanced economies; limited fiscal capacity.

Subordinate position in global value chain - trapped in low-value assembly (India's modules vs wafers, DRC & Indonesia's raw exports).

Restrictive global trade & technology regimes - WTO rules limit industrial policy; <2% of green patents in the Global South.



Case Studies

Divergent national strategies illustrate the trade-offs in national approaches

Country	Policy Tools	Key Outcomes	Constraints and risks
China – EV Export Boom	Persistent state support: subsidies, NEV programs, industrial planning. Strong R&D, domestic demand, and full value-chain integration.	EVs = 47.9% of sales (2024). Global EV/battery export leader.	Coal-heavy grid; global trade backlash risk.
India – Solar Manufacturing	Production Linked Incentive (PLI) scheme, tariffs, 'Make in India'.	30.4 GW PV capacity, 38,500 jobs, exports to US.	81% import dependence on China; 97% exports to US.
Mexico – Auto Assembly	Export-oriented under USMCA; nearshoring and lithium nationalization.	EV output +70% (2025), \$7.5B FDI inflow.	Low domestic value-add; weak tech transfer.
Indonesia – Nickel Nationalism	Export ban (2020), mandatory local processing, FDI-driven smelting.	Nickel exports \$6B→\$30B; 36 smelters; jobs created.	75% Chinese-controlled; high environmental cost.



Case Studies

Takeaways

China: Demonstrates the success of large-scale, persistent state intervention (over US \$230.9 billion in subsidies 2009-2023) and long-term industrial coordination, combined with a massive domestic market

India: Success in scaling manufacturing through subsidies but still stuck in low-value assembly. Needs diversification and R&D.

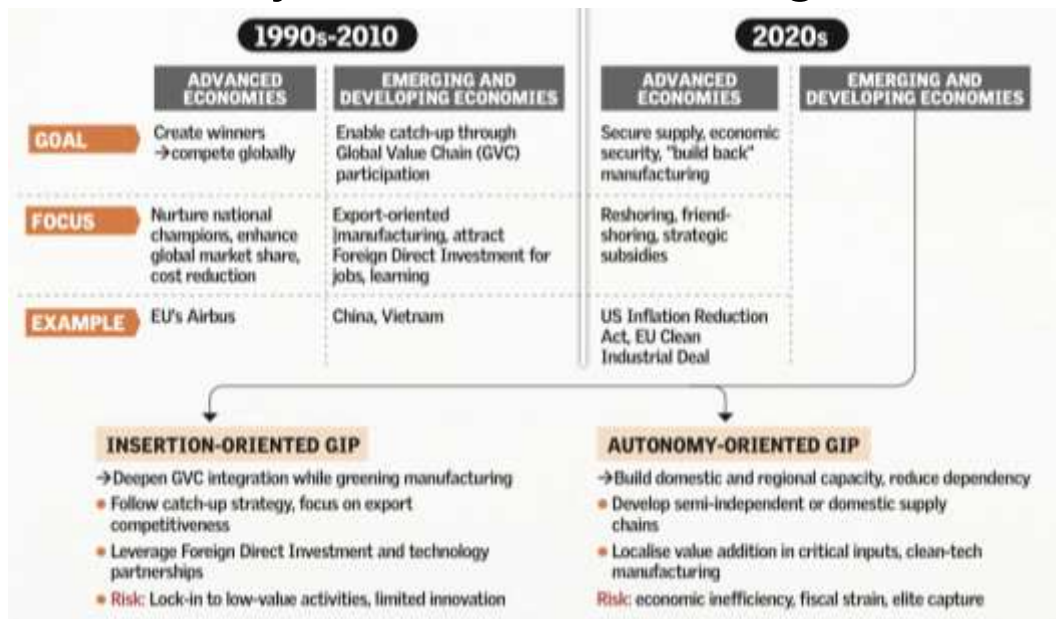
Mexico: Shows benefits and limits of export-oriented integration, but also the risk of low domestic value capture and limited innovation spillovers

Indonesia: Resource nationalism enabled downstreaming but deep Chinese dependence poses strategic and environmental risks.

Collective lesson: The Global South must balance green industrial ambition with autonomy, building fiscal and technological resilience.



The Way Forward: Building Green Industrial Autonomy



- **Domestic Efforts** - Developing countries must build state capacity, create domestic demand, and deploy hybrid industrial policies that combine global integration with local value creation to drive green industrialization.
- **Confront Dependencies** - Negotiate fairer technology transfer and localization terms, especially with China.
- **Collective Reform** - Push for global rule changes (WTO climate waiver, fiscal space, climate finance, debt relief).

In the 2020s, emerging economies have strategic paths to choose:

- Insertion-oriented policies that deepen global value chain integration
- Autonomy-oriented approaches that build domestic capacity and reduce dependency



In summary



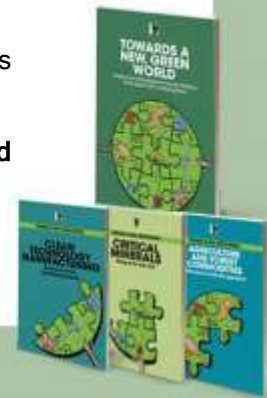
Developing countries cannot be left behind in the new, green economy

- Agriculture and forest commodities: Dependence on low-value exports exposes developing economies to climate shocks and price volatility; viable diversification pathways exist
- Critical minerals: Mineral-rich countries remain locked in extractive roles, as value addition and processing are captured by industrial powers—especially China—highlighting a persistent structural asymmetry
- Clean technology manufacturing: “Double-barrelled challenge” of industrialising while decarbonizing; need for new forms of green industrial policy, collective South-South action, and reform of global trade rules

Across commodities, minerals, and manufacturing, developing countries face a common dilemma: they supply the world's resources but capture too little of the value. The green transition is repeating old patterns of extraction and dependence – from raw cocoa and copper to lithium and solar cells.

Climate policies and new trade rules (like EU deforestation and critical raw materials acts) risk deepening inequities unless they account for development realities.

The future green economy must not mirror the inequalities of the old one. The Global South needs not just a greener world – but a fairer one, with economic resilience at its core, in hand with climate action.



Developing countries cannot be left behind in the new, green economy

- **Climate and development must converge:** Decarbonisation without economic resilience is not viable.
- **Structural inequities persist:** From cocoa to copper to clean tech – value is still captured elsewhere.
- **Green industrialisation is possible and must be central to the climate agenda:** Through diversification, localisation, and strategic resource control.
- **Collective Global South agency for reform is essential:** Demanding fairer trade rules, technology access, and climate finance must be reimagined.

