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The BRICS Energy Compass: A Framework for Decision- Makers

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Preface

This working paper is a strategic navigation tool for decision and policymakers, development finance practitioners, civil society actors and multilateral institutions tasked with navigating the complex and often contradictory BRICS energy and climate landscape.

It is the culmination of 18 months of original research (2024–2025) conducted by the South African Institute of International Affairs (SAIIA) Futures Programme to:

- identify systemic opportunities and challenges in the BRICS climate and energy agenda, with particular focus on China and South Africa;
- envision alternative and preferred futures for BRICS energy governance, grounded in the perspectives of diverse stakeholders; and
- develop transformative strategies that decision makers can act on, grounded in collaboration, foresight and policy innovation.

The report is structured to move from foundational context to systemic action:

- **Building the context** (Sections 1–3): These sections establish why the expanded BRICS bloc, now representing over 60% of the world's population and responsible for half of global emissions, is the most consequential arena in global climate politics. It introduces a functional actor typology, from 'Structural Pivots' like China to 'Incumbent Guardians' like Russia, and identifies the 'innovation niches' currently challenging the dominant fossil-industrial regime.
- **The narrative battle** (Section 4): This section argues that technical and financial solutions alone are insufficient. It explores how narrative sovereignty and culturally grounded frames, such as 'Eco-Ubuntu' and 'Energy Sovereignty', are preconditions for policy success in diverse BRICS contexts.
- **The action framework** (Sections 5–7): This is the core of the report. It presents six concrete insights for decision makers and introduces the BRICS Climate and Energy Compass, a five-axis framework for sovereign, just and resilient transitions. It further details three strategic priorities for funders, namely systemic reform of the financial architecture, catalysing investment in hard-to-abate sectors and localising climate finance at the community level.
- **Implementation pathways** (Section 8): The final section provides a tactical roadmap for the next five years, establishing accountability mechanisms and 'regime flip' metrics to ensure BRICS climate commitments translate into material transformation.

Key findings at a glance

BRICS is at a genuine turning point, but inaction is also possible. The bloc now accounts for over half of global carbon emissions, 60% of the world's population and an expanding share of renewable energy manufacturing. The 2024–2025 expansion to include Egypt, Ethiopia, Indonesia, Iran and the UAE has made BRICS simultaneously more powerful and more internally divided on climate. The window for coordinated action is real, but so is the risk of the bloc locking into a decade of hybrid compromise that changes little fundamentally.

The energy transition within BRICS is a power contest rather than a policy problem. The research systems mapping reveals that a major obstacle to faster, fairer energy transitions is incumbent power, perhaps more so than technology or finance. The fossil–industrial complex in BRICS countries (state-owned enterprises, national oil companies and the governments that depend on their revenues) is actively working to slow or co-opt the transition. Understanding who is blocking progress, and why, is an important starting point for effective intervention strategies.

China's role is a central variable, as both the largest emitter and the biggest enabler of energy transitions. China currently controls 80% of global solar panel manufacturing and 60% of battery production, and is the largest bilateral creditor to many BRICS members. It is simultaneously the world's largest emitter and the biggest enabler of the clean energy transition. How China chooses to deploy its manufacturing capacity and financial leverage within BRICS will determine, more than any other single factor, whether BRICS achieves a just transition or a green-washed one.

Six innovation niches have the potential to shift the system, but they need protection and connection. The research identified six areas where emerging alternatives are challenging the dominant fossil–industrial model. These are community-owned renewables, green hydrogen industrialisation, critical minerals beneficiation, transition finance mechanisms, Indigenous and traditional knowledge systems and BRICS financial architecture reform. None of these is sufficient to transform the system on their own. The strategic opportunity is to connect and strengthen these niche areas to holistically challenge the incumbent system.

The difference between energy substitution and energy justice is the difference between a green transition and a just one. Many BRICS countries are installing renewables at scale, but replacing fossil fuels with solar panels, without changing who owns the energy, who

benefits from it and who has a say in how it is governed, reproduces existing inequalities in a new form. True energy justice requires changes in ownership, access and decision-making power, in addition to the technology being deployed.

The stories that BRICS countries tell about energy and development are as important as their policies. In several BRICS contexts, coal is not only an economic preference; it is also a symbol of national development and sovereignty. This means technical and financial solutions alone will keep falling short. Narrative change, which involves shifting cultural and political stories about what development looks like and whom it serves, is a precondition for policies to work.

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Executive summary

The expanded BRICS bloc, which includes the original five members alongside Egypt, Ethiopia, Indonesia, Iran and the United Arab Emirates (UAE), now represents the most consequential arena in global climate politics. Collectively, these nations account for over 50% of global greenhouse gas emissions, 60% of the world's population and approximately 43.6% of global oil production. Despite this massive footprint, conventional policy analysis often flattens the bloc into a single coherent agenda. This fails to account for the deeply contested and contradictory internal dynamics that define the bloc's energy landscape.

This research addresses a key policy and sociological gap. It challenges the tendency to treat energy transitions as purely technical or financial challenges. Instead, it argues that the transition is primarily a power contest. Existing scholarship often overlooks the 'grey space' of hybrid compromise, where ambitious climate rhetoric masks the continued expansion of the fossil fuel industrial complex. By identifying specific leverage points and innovation niches, this work contributes a new framework for understanding how the Global South can navigate a transition that meets climate targets while ensuring sovereign development.

This report is the culmination of 18 months of original research conducted by the South African Institute of International Affairs' (SAIIA) Futures Programme. The participatory futures and action research methodology applied examined the underlying drivers of systemic change beyond surface-level policy. The following methods were employed:

- systems mapping across 10 BRICS countries to identify dynamics of power, resources and relationships;
- strategic interviews with senior policymakers, finance practitioners and community leaders to capture diverse stakeholder perspectives;
- Futures Literacy, Scenario and Policy Innovation Labs utilising the Three Horizons Framework to distinguish between the strained present, transitional innovations and transformed energy futures;
- causal layered analysis (CLA) to uncover deep-seated cultural stories and worldviews, such as 'coal as a symbol of development', acting as narrative lock-ins against change; and
- a multi-level perspective (MLP) analysis to understand how external landscape pressures, such as falling tech costs, allow innovation niches to challenge the dominant fossil-industrial regime.

Key findings

- A primary obstacle to transition is incumbent power. State-owned enterprises and national oil companies actively work to slow or co-opt transition efforts to maintain revenue.

- China is a central variable as the world's largest emitter and dominant clean-energy manufacturer, controlling 80% of solar production and 60% of battery production.¹ How China deploys its leverage is a key success factor for BRICS energy transitions.
- Without intervention, the bloc risks a grey space of hybrid compromise, in which niche innovations are absorbed into centralised, extractive models rather than replacing them.
- Six high-potential innovation niche areas were identified, including community-owned renewables, green hydrogen and critical mineral beneficiation. These require protection from incumbent co-optation.
- Technical solutions will continue to fall short unless they are culturally grounded in frameworks like 'Eco-Ubuntu' or 'Energy Sovereignty'.

Recommendations

The report introduces the BRICS Climate and Energy Compass, a five-axis navigation tool.

- Sovereign energy transitions: This involves investing in local manufacturing and protecting mineral assets.
- Just socio-ecological development: Energy should be a public good with community ownership.
- Strategic foresight: Utilising futures thinking is essential to navigate economic and geopolitical shocks.
- Multipolar cooperation: Strengthening alliances through joint research and development (R&D) and local currency settlements is critical.
- Narrative sovereignty: Development goals should be defined based on local cultural values.

Strategic priorities for funders

- Systemic financial reform: This includes advocating for multilateral development bank (MDB) reform and enhancing the New Development Bank (NDB) to provide concessional, non-debt finance.
- Hard-to-abate sector investment: There is a need to create dedicated transition finance for heavy industries such as steel and cement.
- Localising climate finance: Establishing direct access windows for subnational governments and communities is crucial.

¹ Georgina Gustin, "[China Could Reach Peak Greenhouse Gas Emissions Sooner Than Beijing Planned, New Report Suggests](#)", *Inside Climate News*, February 11, 2026.

The larger implication of this research is that the 2025–2027 window represents a unique moment. Decisions made in 2025 during Brazil's COP30 and South Africa's G20 presidency will likely influence the bloc's trajectory for the next decade. To move from navigating the transition to real energy transformations, decision makers must exploit the contradictions within the current fossil–industrial regime rather than rely on linear progress.

This report provides a tactical roadmap for the next five years, including an accountability framework featuring a proposed BRICS Ombudsperson for Climate Justice. It introduces regime flip metrics to measure true transformation, such as the ratio of distributed versus centralised capacity, rather than merely counting projects.

Immediate priorities include establishing independent national climate commissions and a BRICS Climate Knowledge Commons. These initiatives can help bridge the gap among BRICS, national policy and community-level action. The research concludes that the transition is not a blueprint to be implemented uniformly. Rather, it requires navigating diverse sovereign contexts towards a shared, Global South-led climate order.

Section 1: The BRICS climate and energy transitions arena: Context, actors and fault lines

The BRICS bloc began as a summit-level grouping in 2009, bringing together Brazil, Russia, India and China, with South Africa joining in 2011. Over 2024–2025 it expanded to include Egypt, Ethiopia, Indonesia, Iran and the UAE, which represented a fundamental shift that added both weight and complexity to the bloc's consensus-driven model.

The expansion has significantly enhanced BRICS climate action. Iran and the UAE bring OPEC+ perspectives and hydrocarbon wealth; Indonesia adds critical mineral resources and acute energy access challenges; and Egypt and Ethiopia bring climate vulnerability and adaptation priorities to the table.

According to data from the BRICS Secretariat, member state countries now account for approximately 43.6% of global oil production and nearly 48.5% of the world's population. These countries are also responsible for an estimated 45% of global greenhouse gas emissions, while collectively generating more than half of global solar power capacity, underscoring the rapidly growing role of BRICS in renewable energy manufacturing and deployment.²

If BRICS countries successfully navigate the transition to clean energy, the policy pathway established can set a precedent for other emerging economies. Conversely, if BRICS locks into decades of continued fossil fuel dependence while layering on green rhetoric, the global climate effort cannot succeed.

This combination of scale and internal contradiction makes BRICS the most consequential arena in global climate and energy politics. If BRICS countries collectively navigate a just and effective energy transition, the pathway they establish will set a precedent for other emerging economies. If they do not, no amount of ambition elsewhere can compensate. Understanding this arena, who plays in it, how they are positioned, where they agree and disagree and what the recent flashpoints reveal is the foundation for everything that follows in this report.

1.1 The forums that shape BRICS climate action

BRICS countries do not engage in climate and energy diplomacy as a bloc in most global forums. Rather, these countries engage as individual members of overlapping coalitions, each with its own agenda.

² BRICS Data, "BRICS Brazil 2025", accessed January 20, 2025, <https://brics.br/en/about-the-brics/brics-data>

Understanding which forums matter, and how different BRICS members use them, is essential in reading the bloc's collective climate behaviour.

Table 1 focuses on the forums most relevant to BRICS climate and energy diplomacy. It is condensed from a broader landscape to the venues where BRICS positions are most actively formed and contested.

Table 1: BRICS climate and energy diplomacy forums

Forum	Why it matters for BRICS climate and energy
UNFCCC	The UN Framework Convention on Climate Change (UNFCCC) is the primary international climate treaty framework. All BRICS members are parties. The main forum where BRICS countries negotiate on emissions targets, climate finance obligations and the rules of the Paris Agreement.
G20	Coordinates economic and financial policy among the world's largest economies. Seven of 10 BRICS members participate. The 2024 Rio Summit and 2025 South African presidency both advanced BRICS climate finance positions. Not all BRICS members are members (Ethiopia, Iran and the UAE are absent).
G77 + China	The largest coalition of developing countries at the UN, and BRICS's primary vehicle for advancing equity, common but differentiated responsibilities and respective capabilities (CBDR-RC) and climate finance demands. Almost all BRICS members participate. It is the ideological home of the climate justice narrative.
NDB / AIIB	The New Development Bank (NDB, BRICS-founded) and Asian Infrastructure Investment Bank (AIIB, China-led) are the primary institutional vehicles for BRICS-controlled development finance. The NDB has committed 40% of investments to climate transition by 2026. Their reform and capitalisation is a key strategic factor.
OPEC+	The oil production cartel to which Iran, the UAE and Russia belong and which Brazil joined as an observer in 2025. Represents the institutionalised voice of the incumbent fossil-industrial regime within the BRICS constellation. Its presence within BRICS creates a structural tension that climate declarations cannot paper over.
Africa Group / AU	South Africa, Egypt and Ethiopia participate in the Africa Group of Negotiators at the UN and in the AU, where they advocate specifically for African development-oriented climate positions, and where adaptation, vulnerability and access to finance are centred more explicitly than in BRICS-wide forums.

Source: Compiled by authors

Three 2024–2025 developments significantly advanced, and in some cases complicated, the BRICS climate agenda across these forums. Brazil's 2025 BRICS presidency produced the Roadmap for BRICS Energy Cooperation 2025–2030 and the Leaders' Framework Declaration on Climate Finance and established the BRICS Laboratory for Trade, Climate Change and Sustainable Development. South Africa's 2025 G20 presidency advanced reforms to the climate finance architecture, producing technical reports on climate-resilient debt clauses and MDB effectiveness despite a challenging consensus environment. And COP29 in Baku, widely expected to be the 'Finance COP', delivered a tripled climate finance target of \$300 billion annually by 2035, which is far below developing country demands of \$1.3 trillion, while failing to maintain the fossil fuel phaseout momentum from COP28.

1.2 How BRICS members are positioned in climate and energy transitions

1.2.1 Five actor groups

Rather than treating the 10 BRICS members as individually distinct, which risks losing the strategic picture in a list of country profiles, the systems mapping conducted for this research identifies five functional actor groups within the bloc. These groups share a common climate and energy posture and collectively define the political terrain that BRICS-level climate and energy initiatives must navigate.

Table 2: BRICS actor groups

Actor type	Member/s	Climate posture	Key tension
The Structural Pivot	China	Net-zero 2060; world's largest renewable manufacturer and largest emitter simultaneously. First absolute emissions reduction target announced September 2025 (7–10% cut by 2035).	Leads clean technology supply chains but continues coal expansion. Structural power within BRICS creates dependency in partnerships.
The Normative Entrepreneur	South Africa, Brazil	Paris-aligned; pioneer of Just Energy Transition Partnership model (SA); COP30 host with near-term emissions focus (Brazil). Both frame climate action in justice	Credibility constrained by domestic fossil fuel dependence. Brazil joined OPEC+ as observer 2025. South Africa added 800MW of coal in 2024 despite JETP commitments.

		and development terms.	
The Swing States	India, Indonesia	Net-zero 2070 (India); growing renewable ambition (Indonesia). Active in G77 + China. Strong voices for development-centred transitions.	India's net-zero timelines are ambitious alongside key constraints. Indonesia's OPEC+ membership and coal exports create mixed signals.
The Incumbent Guardians	Russia, Iran, UAE	Formally support Paris Agreement (Iran has signed but not ratified). Substantively oriented toward maintaining hydrocarbon revenues and slowing binding decarbonisation commitments.	Use BRICS solidarity and sovereignty rhetoric to resist differentiated commitments. The UAE hosts COP28 and presents as a green investor while remaining OPEC+ anchor.
Adaptation-Centred Members	Egypt, Ethiopia	Highly climate vulnerable. Prioritise adaptation, access to finance and development-oriented climate governance. Ethiopia hosts COP32 in 2027.	Limited institutional leverage in BRICS; risk being marginalised by fossil fuel and industrial-power dynamics within the expanded bloc.

Source: Compiled by authors

Several patterns emerge from this grouping. First, BRICS contains both the world's largest enabler of the clean energy transition (China's manufacturing capacity) and some of its most powerful opponents (Russia, Iran, the UAE's hydrocarbon interests) within the same bloc. Second, the most influential normative voices for a just transition (South Africa, Brazil) are also the members whose domestic policies are most internally contradictory. Third, the adaptation-centred members (Egypt, Ethiopia), which have the most urgent climate vulnerabilities, have the least institutional leverage within BRICS. These asymmetries are core structural conditions that BRICS climate and energy strategies must work with.

1.3 Gaps in conventional policy analysis

Climate and energy challenges from finance to governance within the BRICS context stem from a complex interplay of systemic issues, sometimes divergent national priorities and a global financial architecture that is not fit for purpose. The path forward requires an approach that goes beyond conventional North–South financial flows.

Several BRICS stakeholders interviewed for this report observed that policymakers in their countries recognise the risk of being ‘left behind’ in important green technology industries if they do not embark on energy transitions. Energy transition efforts in BRICS are not informed solely by sustainability concerns; they are also shaped by geostrategic, economic and technological considerations. This complexity is often flattened in conventional policy analyses that treat BRICS climate and energy action as a single, coherent agenda. It is instead a battleground of competing interests, timelines and worldviews.

1.4 BRICS areas of convergence and divergence

Despite diverse positioning, BRICS countries share a set of foundational commitments that create genuine space for collective action on climate and energy. Members also diverge on issues that go to the core of transition politics. Table 3 distinguishes between principled convergence and tactical divergence.

Table 3: BRICS areas of convergence and divergence

Issue area	Where BRICS converges	Where BRICS diverges
Climate finance	All members demand enhanced climate finance from developed countries, technology transfer and fairer MDB architecture. Shared opposition to conditionality that restricts development choices.	China and the UAE are major climate finance providers themselves, creating complex donor–recipient dynamics. Russia and Iran are neither significant donors nor significant recipients.
Fossil fuel phaseout	Shared resistance to binding, externally imposed phaseout timelines. Collective position that energy security and development needs must be respected.	China, Brazil and South Africa are actively scaling renewables while simultaneously expanding fossil infrastructure. Russia, Iran and the UAE resist decarbonisation mandates substantively, not just rhetorically.
Trade and climate	Unanimous opposition to the EU's Carbon Border Adjustment Mechanism (CBAM) as protectionist and WTO-incompatible. Russia has formally filed a WTO dispute.	China and the UAE have significant green export interests that sometimes align more with CBAM logic than the bloc's stated position. Their opposition is strategic, not principled.

Net-zero ambition	All members (except Iran) have adopted net-zero targets or long-term low-emission strategies aligned with the Paris Agreement framework.	Targets range from 2050 (South Africa) to 2070 (India), with Iran having no ratified Paris commitment. The distance between declared ambition and current policy is extreme in several cases.
Just transition	Broad consensus that transitions must be 'development-friendly' and account for affected workers and communities. CBDR-RC principle consistently invoked.	South Africa and Brazil interpret a 'just transition' as requiring genuine redistributive change. Russia, Iran and UAE use 'just transition' language to justify continued fossil investment.

Source: Compiled by authors

The most important pattern across these five issue areas is that convergence on principles frequently masks divergence on substance. All BRICS countries support 'just transition', but this means fundamentally different things for each member. All oppose externally imposed fossil fuel phaseout timelines, yet some are genuinely scaling clean energy, while others are using sovereignty arguments to resist any binding commitment. Decision makers engaging with BRICS on climate need to read through the formal convergence to the substantive positions beneath it.

1.5 The finance dimension: Key developments 2024–2025

Climate finance is the issue on which BRICS convergence is most genuine and most consequential. All BRICS members agree that the current global financial architecture systematically underserves the transition needs of developing countries. The differences are in how this should be fixed and who should pay.

COP29's New Collective Quantified Goal (NCQG) of \$300 billion annually from developed countries by 2035, framed within a broader \$1.3 trillion target 'from all sources', was widely seen as inadequate by developing country members. The Baku to Belem Roadmap, published at COP30, outlined practical measures to scale financing in line with the NCQG, including a Country Platform Hub for technical assistance and finance coordination. At the G20, South Africa's presidency advanced technical work on climate-resilient debt clauses and MDB reform, although geopolitical tensions limited formal consensus outcomes.

The Sevilla Commitment, adopted at the Fourth International Conference on Financing for Development in 2025, included commitments to support developing countries in addressing barriers to clean technology investment and to strengthen the role of MDBs in supporting just and inclusive energy transitions. These developments collectively signal that the architecture for BRICS-relevant climate finance is being actively

contested and gradually reformed, but it remains structurally misaligned with what the transition actually requires.

Regarding the fossil fuel phaseout, the 2024–2025 period showed a regression. COP29 and COP30 excluded clear references to fossil fuel phaseout and did not follow up on the Just Transition Work Programme agreed at COP28. The G20 reiterated the call to triple renewable energy deployment while simultaneously emphasising 'energy security, affordability and access' and calling for a 'technologically neutral approach', language that creates space for continued fossil investment. The gap between the rhetoric of transition and the reality of continued fossil fuel expansion remains the central contradiction of the current period.

1.6 China and South Africa: The bloc's central contradiction in a microcosm

The complexity of the BRICS climate and energy landscape is most legible in the cases of China and South Africa. Together, they embody core tensions identified between scale and justice, ambition and implementation, and leadership and contradiction.

1.6.1 China: The pivot that cuts both ways

China is simultaneously the world's biggest emitter of greenhouse gases and the global leader in renewable energy manufacturing and deployment. In 2024, it reached its 1 200 gigawatt (GW) wind and solar target six years ahead of schedule.

Recent data shows China's non-fossil power generation reached about 42% in 2025, up from 39% in 2024, driven by massive wind and solar additions exceeding 430GW. Other reports indicate renewables accounted for around 40% of total power generation in the first three quarters of 2025.³ China's new energy vehicle (NEV) penetration rate (electric and plug-in hybrids) surpassed 50% in retail sales by March 2025, peaking at 79.6% in November, with full-year estimates at over 50%. H1 2025 NEV sales hit 50.2% of passenger vehicles.⁴ In September 2025, China announced its first absolute emissions reduction target: a 7–10% cut by 2035, marking a significant shift from its previous carbon-intensity framework.⁵

³ Lauri Myllyvirta and Belinda Schaepe, "[Analysis: Clean Energy Drove More Than a Third of China's GDP Growth in 2025](#)", *Carbon Brief*, February 4, 2026.

⁴ Jiri Opletal, "[China EV Market Situation in First Half of 2025](#)", *CarNewsChina*, July 21, 2025.

⁵ Seth Borenstein and Melina Walling, "[China Announces Landmark Pledge to Cut Carbon Emissions but Experts Say It Is 'Too Timid'](#)", *Euronews*, September 25, 2025.

Yet China continues to approve new coal power at scale. It approved over 100GW of new coal power in 2022 and 2023, accounting for more than 90% of new coal plants built worldwide.⁶ Emissions rose 3% in 2023.⁷ The structural reason is that China's climate targets have historically been framed around carbon intensity (emissions per unit of GDP) rather than absolute limits, meaning emissions can rise even as the economy decarbonises relative to growth.

China's position within BRICS is equally double-edged. Its manufacturing dominance creates both the technology that the transition needs and dependencies that other BRICS members must actively manage. Its Belt and Road investments shape infrastructure trajectories across the bloc. Its diplomatic positioning provides ideological cover for fossil fuel-dependent members (through CBDR-RC advocacy) while its domestic renewable deployment demonstrates transition feasibility. China established the AIIB as a development finance institution with strong climate ambitions, uniquely bridging the Global South and North.

The implication for BRICS climate strategy (and for decision makers) is that China's role must be engaged with directly and not assumed. Encouraging China to redirect manufacturing capacity, expand concessional climate finance and develop technology-sharing arrangements within BRICS is among the highest-leverage interventions available. It is also among the most politically complex.

1.6.2 South Africa: The normative leader constrained by its own grid

South Africa emits far less in aggregate than China, but on a per capita basis its emissions are among the highest in the world.⁸ It is also, paradoxically, one of the more credible voices for a just transition globally, as the first country to establish a Just Energy Transition Partnership (JETP), which has grown from an initial \$8.5 billion to \$12.8 billion (ZAR⁹ 222 billion) even after US withdrawal.¹⁰ The JET Investment Plan targets nearly \$85 billion (ZAR 1.5 trillion) over five years for the coal phaseout, electric vehicles and green hydrogen. As of March 2025, \$557 million in grants had been approved or disbursed.¹¹

South Africa passed its Climate Change Act in 2024, requiring sectoral emissions limits and carbon budgets for large polluting companies, which is a significant institutional step. From 2019 to 2023, wind and solar

⁶ Centre for Research on Energy and Clean Air and Global Energy Monitor, "[China's Coal Expansion: Over 100 Gigawatts Approved in 2022 and 2023](#)", Press Release, August 21, 2024.

⁷ Lauri Myllyvirta, "[Analysis: Record Drop in China's CO2 Emissions Needed to Meet 2025 Target](#)", Carbon Brief, February 22, 2024.

⁸ Roland Ngam, "[An Unjust Transition: South Africa's JETP Between Hope and Disappointment](#)", Rosa Luxemburg Stiftung, November 13, 2025.

⁹ Currency code for the South African rand.

¹⁰ European Commission, "[Joint Statement from the International Partners Group on the US Withdrawal from the Just Energy Transition Partnership in South Africa](#)", March 19, 2025.

¹¹ UK Government, "[South Africa Just Energy Transition Investment Plan: Joint Statement](#)", November 7, 2022.

more than doubled their share of the electricity mix.¹² Eskom, the public utility, is being restructured with state debt relief. The country's multilateral positioning in simultaneous memberships in BRICS, the G20, G77+China and the Africa Group of Negotiators gives it unusual leverage to bridge positions across forums.

Yet South Africa added 800MW of new coal power to the grid in 2024, is investing in new fossil gas capacity and lacks the sectoral implementation plans needed to make its 2050 net-zero target credible.¹³ Climate Action Tracker rates its national policies as 'Almost Sufficient' but its fair share contribution as 'Insufficient'.¹⁴ The ongoing electricity crisis, load reductions, grid instability and Eskom debt mean that energy security, not the just transition, dominates the domestic political agenda.¹⁵ This creates a consistent tension between South Africa's normative leadership internationally and its implementation record domestically.

South Africa has actively engaged China for support in addressing its energy challenges, leveraging China's expertise and investment in clean technology. This relationship is both an opportunity and a risk: the opportunity for accelerated technology transfer and concessional finance; the risk of new forms of dependency if the terms of engagement are not carefully managed.

What these two cases mean for the sections that follow

China and South Africa are not exceptional cases; they are the BRICS energy and climate dynamic made visible. The structural tensions they embody (scale vs. justice; ambition vs. implementation; sovereignty vs. dependency; normative leadership vs. domestic constraint) run through every country in the bloc at different intensities.

The actor typology, niche analysis, narrative framework and strategic recommendations in Sections 3-8 are all built on the foundation laid in this section. The question they collectively answer is: given this arena, these actors, these fault lines and these flashpoints, where is the leverage for genuine change, and how should funders and decision makers deploy it?

¹² Anna Geddes and Max Schmidt, "[Blackouts and Backsliding: Energy Subsidies in South Africa 2023](#)", International Institute for Sustainable Development, January 2023.

¹³ Denzil de Klerk and Tammy-Lynne Bekker, "[Beyond Coal: South Africa's Roadmap to Net Zero 2050](#)", SDG Legal, February 24, 2026.

¹⁴ Carbon Action Tracker, "[South Africa](#)", November 2023.

¹⁵ Kimberley Kersten, "[South Africa's New Electricity Crisis](#)", Newsday, February 23, 2026.

Section 2: Power dynamics in BRICS climate and energy transitions

The BRICS climate and energy landscape is a system of power more than a collection of policies. Understanding the challenges of transitions, and where there are breakthroughs, requires examining points of control, identifying what keeps the current system in place despite mounting pressure and where structural leverage for change actually lies.

2.1 Five subsystems of the BRICS climate and just transition ecosystem

Five interconnected subsystems each serve a distinct function in how BRICS climate and energy decisions are made, financed and contested. Each contains a structural tension that shapes what any given intervention can and cannot achieve.

Table 4: The five subsystems of the BRICS climate and energy ecosystem

Subsystem	Core function	Key tension	Critical material
Energy–industrialisation nexus	Produces energy and manufactured goods. State-owned enterprises (SOEs) and national oil companies at the centre.	Fossil fuel lock-in vs. green industrialisation. China's manufacturing dominance is reshaping this subsystem across the bloc.	Coal plants and pipelines (incumbent) vs. solar/wind/battery manufacturing (emerging). Critical minerals bridge both.
Policy and governance architecture	Coordinates multilateral positions and harmonises standards across BRICS.	National sovereignty over energy choices vs. need for collective BRICS positioning. Consensus rules allow any member to block.	Nationally Determined Contributions (NDCs), BRICS declarations, JETP frameworks. Currently more rhetorical than operational.
Finance and investment ecosystem	Circulates capital and distributes risk. NDB, national development banks, sovereign wealth funds.	Concessional climate finance vs. market-rate returns. Dollar-denominated architecture vs. BRICS currency aspirations.	Green bonds, transition loans, NDB instruments. Constrained by Northern-designed risk frameworks.

Society and culture	Legitimises or contests transition pathways. Constructs narratives about what is politically possible.	Extractive development models vs. regenerative worldviews. Energy sovereignty vs. energy commons.	Traditional knowledge, community land rights, energy access entitlements. The most undervalued material in conventional transition analysis.
Markets and value chains	Exchanges goods, services and technologies. Sets terms of BRICS participation in global clean economy.	Global North (and China) value chain dominance vs. BRICS industrial sovereignty aspirations.	Critical mineral commodities, technology patents, carbon markets. The battleground for beneficiation politics.

Source: Compiled by authors

2.2 Who has power and why: Actor typology with research evidence

Power within the BRICS climate and just transition ecosystem BCJTE operates through multiple, often competing logics. The systems mapping identified six actor types that transcend individual organisations to capture functional positions within the system. What follows is not a neutral description but an analysis of who is blocking progress, who is enabling it and where the key leverage points lie.

Table 5: BRICS actor typology

Actor type	Members	How they exercise power and their transition role	What the research found
The Structural Pivot	China	Technological dominance: 80% of solar panel manufacturing, 60% of battery production, 50% of wind turbine components. Largest bilateral creditor to many BRICS members via Belt and Road. Diplomatic positioning: advocacy for CBDR-RC provides ideological cover for fossil-dependent members while domestic renewable deployment demonstrates feasibility.	'China is simultaneously the world's biggest emitter of greenhouse gases and a leader in renewable energy technology and green technology value chains.' Strategic interview, Brazil 'China's potential for global climate leadership remains limited by domestic public perception and

The Normative Entrepreneurs		Creates the technology the transition needs, while creating structural dependencies that other BRICS members must actively manage.	historical development priorities.' Strategic interview, China
	South Africa, Brazil	Shape discourse through multilateral bridge-building, policy experimentation (JETP model) and intellectual leadership on just transition frameworks. South Africa's simultaneous membership in BRICS, G20, G77+China and Africa Group of Negotiators gives it unusual cross-forum leverage. Credibility depends on whether they can close the gap between normative commitment and domestic implementation record.	'South Africa plays a significant role in global climate negotiations and is often seen as a leading voice within Africa and the broader Global South.' Strategic interview, South Africa 'South Africa's ongoing electricity shortages remain a pressing political priority' that can intensify social concerns. Policy Innovation Lab, 2025
The Swing States	India, Brazil, Indonesia	Large domestic markets and resource endowments create leverage. G77 and LMDC membership amplifies Global South positioning. Their direction of travel determines whether BRICS collectively accelerates or stalls the transition. Brazil's COP30 hosting and OPEC+ observer membership captures the contradiction.	'Diverse energy mix; working toward decarbonisation' while the 'net-zero target by 2070 reflects national circumstances'. Strategic interview, India
The Incumbent Guardians	Russia, Iran, UAE	OPEC+ production control; sovereign wealth fund deployment; strategic ambiguity – supporting BRICS climate declarations while ensuring they contain no binding operational content.	'Russia must define its role in the green transition, acknowledging its economic dependence on fossil fuels... unlikely to lead this transition, Russia must adapt to global

The Institutional Innovator		Strategy is delay and dilution, not outright obstruction. Use solidarity rhetoric to prevent differentiated commitments from taking hold.	climate trends to remain economically relevant.' Strategic interview, Russia
	New Development Bank	Mandate to direct 40% of investments to climate transition by 2026. Unique position as BRICS-controlled multilateral lender. Currently functions as a transition broker managing incremental change within existing financial logic. Its transformation into a structural enabler of systemic change is among the most important institutional challenges in BRICS climate governance.	'The NDB's potential to fund early-stage green industrialisation and support local research and development was highlighted... yet the NDB, while well-positioned, has not yet fulfilled its transformative potential.' Policy Innovation Lab, 2025
Emerging Challengers	Youth movements, cities, Indigenous communities	Legitimacy claims that challenge state-centric governance. Cities implement climate action that outpaces national governments. Indigenous communities resist extractive projects while offering alternative knowledge systems. Most important source of pressure for Horizon 3 transformation – currently with the least formal institutional power.	'Create a working group for Indigenous peoples and local communities, giving them a real decision-making voice, not just consultations.' Strategic interview, Brazil 'Civil society's diminishing influence over the energy agenda in some contexts raises concerns around democratic legitimacy and accountability.' Policy Innovation Lab, 2025

Source: Compiled by authors

A finding that cuts across all actor types is what the research terms 'role ambiguity'. The same actor often plays different roles simultaneously. China is both the dominant niche innovator (renewable manufacturing) and the most powerful regime maintainer (coal expansion, fossil finance). The NDB has a structural enabler mandate but currently functions as a transition broker. South Africa is a norm

entrepreneur internationally and a regime maintainer domestically. Brazil is simultaneously a normative leader on climate justice, a COP30 host and a new OPEC+ observer. These contradictions are not accidents; they are the political terrain. Any strategy that treats these actors as having coherent, single-direction positions will misread the system.

2.3 What holds the system in place and what is starting to crack

The incumbent energy system does not survive because it is optimal. It survives because it is materially embedded, cognitively naturalised and institutionally anchored at multiple levels simultaneously. Understanding where each layer is under genuine strain is the starting point for strategic intervention.

Table 6: Materials and cognitive lock-ins

Material layer	The incumbent advantage	The transition leverage point
Clean technology concentration	'Clean-tech value chains concentrated in China and the Global North' create strategic vulnerability for other BRICS members. Policy Innovation Lab, 2025 South Africa: 'The biggest tragedy would be if we unlock the grid issue, and we would need to import the balance of plant materials.'	China's manufacturing overcapacity is driving clean technology costs below fossil fuel economics faster than incumbents can adapt. Technology compacts, joint ventures with mandatory local content and open-source distributed energy designs can convert dependency into partnership.
Critical minerals	Most BRICS mineral reserves are exported as raw materials for processing in China or the Global North, converting natural resource advantage into a commodity supplier relationship. 'The clean energy conversation often neglects the extractive origins of technologies like solar and wind.' Strategic interview, Brazil	Brazil, Indonesia and South Africa hold reserves of lithium, nickel, cobalt and platinum-group metals essential for the clean energy transition. Beneficiation: retaining value through downstream processing and manufacturing is the industrial policy lever that converts resource possession into genuine sovereignty.
Grid and knowledge infrastructure	Grid architectures across BRICS privilege large-scale centralised generation over distributed	Distributed grid reform, regional power pools and subnational climate finance channels create

	resources, physically embedding the rule that 'bigger is better'.	physical infrastructure for the emerging regime.
	'The knowledge systems regarding higher education are in very different states in the BRICS bloc.' Policy Innovation Lab, 2025	The proposed BRICS Climate Knowledge Commons (Appendix B) addresses the knowledge asymmetry ensuring transition models reflect BRICS realities, not IEA or BP scenarios.

Source: Compiled by authors

These material and cognitive lock-ins reinforce regulative and normative rules that further stabilise the incumbent regime. Three cognitive rules are most consequential for transition: developmentalism (the belief that economic growth must precede environmental protection, which legitimates fossil investment as a 'temporary necessity'); national energy sovereignty (the belief that energy systems must be nationally controlled, which blocks regional integration and technology sharing); and technological optimism (faith that innovation will resolve political choices automatically, which obscures who decides what gets built and who owns it). Two normative shifts are underway that put these cognitive rules under pressure: justice and equity norms are gaining ground, making it harder to ignore the distributional consequences of transition; and Indigenous rights are moving from symbolic acknowledgement to substantive territorial authority in an increasing number of BRICS contexts.

2.4 The BRICS energy system: Three regimes in tension

The systems mapping identified three energy regimes currently operating simultaneously within BRICS, creating what the research calls a 'grey space' of hybrid compromise that is simultaneously the most likely near-term outcome and the most dangerous for long-term transition.

Table 7: Three regimes of the BRICS energy ecosystem

Regime	What it looks like	Where it is strongest
The incumbent fossil-industrial complex	State-owned utilities, national oil companies, incumbent power generators and the governments that depend on their revenues. Characterised by centralised control, export-oriented extraction and active resistance to transition finance that would shift ownership or governance	Russia, Iran, UAE, coal-dependent regions of South Africa, India and Indonesia

The emerging decentralised green regime	Community-owned renewables, distributed solar, green hydrogen pilots, critical mineral beneficiation and BRICS-specific finance instruments. Characterised by local ownership, circular value chains and pluralistic governance	Brazil's solar cooperatives, South Africa's JETP niches, China's manufacturing ecosystem, Indonesia's mineral sovereignty agenda
The transition 'grey space'	Hybrid compromises: green bond frameworks built on conventional lending logic; NDCs that are ambitious on paper but backed by continued fossil investment; 'blue hydrogen' produced from natural gas; transition finance that rebrands conventional lending with minor environmental conditions	Across all BRICS members this is the dominant current reality

Source: Compiled by authors

The research's core finding on regime dynamics is that the 'grey space' is not neutral. Without deliberate intervention, the incumbent regime will continue to incorporate niche innovations in ways that neutralise their transformative potential, absorbing community renewables into centralised utility models, capturing green hydrogen for fossil interests and rebranding transition finance without changing its structural logic.

2.5 A regime held together by contradiction and strained by it

The most important structural insight from the systems mapping is that the BRICS energy system's stability is paradoxically maintained by its own contradictions. The coexistence of extractive, transitional and emerging green regimes allows different actors to pursue divergent strategies while maintaining formal commitment to shared goals. This 'structured incoherence' has four political functions:

Plausible deniability: BRICS can declare climate ambition while continuing fossil expansion, because different members are doing different things and the declarations are carefully worded to accommodate both.

Coalition maintenance: Diverse member interests can be accommodated without requiring consensus on contested issues. The grey space of hybrid compromise keeps the coalition together.

Option preservation: Flexibility to pivot between regimes as geopolitical and technological conditions evolve means no member is locked into a position that might prove costly.

Resource access: Multiple regimes provide diverse funding streams and partnership opportunities: green finance for some activities, fossil finance for others and transition finance as a bridge.

However, this structured incoherence is generating mounting dysfunctions that the grey space is struggling to contain. Four have direct implications for how funders and decision makers should think about intervention:

Implementation gaps: 'National-level climate finance policies often struggle to translate into effective action at the provincial and municipal levels due to lack of capacity, bureaucratic inertia and insufficient commitment from middle-government layers.' The distance between BRICS-level commitment and community-level action is the system's most consistent failure mode.

Technology dependencies: 'Clean-tech value chains concentrated in China and the Global North' create 'strategic vulnerability for many BRICS countries', meaning that rapid renewable deployment can deepen dependency rather than build sovereignty.

Financial inadequacy: 'Existing finance models for developing countries are proving insufficient' and 'simply transferring funds from developed to developing countries is an ineffective approach'. The architecture needs reforming, not just scaling.

Narrative fragmentation: 'The framing of renewable energy as an elite or foreign-led agenda can stifle public support and alienate key constituencies', meaning that technically sound projects can fail politically if they are not culturally grounded.

Transformation, when it comes, will not emerge from linear progression within this regime. It will emerge from the exploitation of contradictions: moments when the gap between rhetorical commitment and material reality becomes politically unsustainable, when niche innovations achieve sufficient scale to challenge incumbent structures or when landscape shocks disrupt established patterns. As one UAE respondent warned: 'If BRICS countries don't foster trust, cohesion and collaboration, we risk fragmentation and failure to address global climate threats.' The precarious equilibrium cannot hold indefinitely.

Section 3 maps where those contradictions are being exploited and what conditions would allow them to become genuinely transformative rather than merely disruptive.

Section 3: Where change is already happening: Niches, coalescence and the conditions for transformation

Within the BRICS energy system's contested terrain, niches are the protected spaces where alternative practices, technologies and social arrangements are developing outside the dominant regime. They are not marginal experiments but the seeds of the next energy regime. However, this is only possible if they receive the protection, investment and connection they need to avoid being absorbed into the incumbent system on the incumbent's terms.

3.1 Understanding where these niches fit in the transition

The research used a Three Horizons framework to map how current niches relate to the transition process. This framework helps decision makers understand not just what to fund, but also when and in what sequence.¹⁶

Table 8: Three niche horizons in BRICS

Horizon	What it describes	Examples from BRICS research
Horizon 1: The strained present	The current dominant system: fossil-industrial, centralised and under increasing stress from climate impacts, technology disruption and political pressure. The task in Horizon 1 is to stabilise what needs stabilising while identifying what is ready to be phased out	Fossil fuel subsidy reform; coal phase-out timelines; grid stabilisation while distributed systems scale up
Horizon 2: The transitional middle	The period of hybrid innovation, where new approaches are being tested and scaled but have not yet displaced the incumbent system. This is where most current BRICS energy policy lives and where the battle between genuine transformation	BRICS-specific credit rating systems; regional green infrastructure; green hydrogen pilots; NDB climate finance scaling

¹⁶ Andrew Curry and Anthony Hodgson, "[Seeing in Multiple Horizons: Connecting Futures to Strategy](#)", *Journal of Futures Studies* 13, no. 1 (2008): 67–74.

	and greenwashed incorporation is being fought	
Horizon 3: The transformed future	The long-term vision: reformed multilateral banks, community-owned energy infrastructure, circular economies and governance systems that are genuinely accountable to affected communities. This horizon is not a forecast; it is a direction of travel that should inform what gets funded and protected today	Community energy cooperatives at scale; AI-supported local governance; climate-aligned financial systems; genuine energy sovereignty

Source: Compiled by authors

3.2 Six high-potential niches and the incorporation risk

For each niche, the critical question for decision makers is not just 'Does this work?' but also 'Is it being incorporated or is it genuinely displacing incumbent logic?' The right column and the Horizon marker address this directly.

Table 9: Six high-potential niches

Niche	What it is and why it matters	Risk of incumbent incorporation	Horizon
Community-owned renewables	'Solar mamas' in Brazil and India, municipal microgrids in South Africa, off-grid cooperatives in Ethiopia. Treats energy as a public good. Builds local ownership, employment and governance capacity simultaneously. Challenges the assumption that electricity must come from large-scale state or private utilities.	Framed as 'complementary' to centralised utility models rather than an alternative. Once absorbed, community projects lose their governance innovation.	H2→H3
Green hydrogen industrialisation	South Africa and Brazil developing green hydrogen as an industrial transition pathway,	'Blue hydrogen' (from gas + carbon capture) is being promoted	H2

	anchoring manufacturing and export markets. Potential to retain more value from clean energy than simple renewable deployment.	as equivalent. This would lock in fossil gas infrastructure under a green label.	
Critical minerals beneficiation	Moving downstream from raw material export into processing and manufacturing. Would transform BRICS from raw material supplier to clean technology producer, but requires coordinated industrial policy across countries with divergent short-term interests.	Chinese processing dominance is the path of least resistance. Without active policy, raw material export continues by default.	H2→H3
Transition finance mechanisms	Blended finance, concessional loans and risk-sharing instruments for hard-to-abate sectors that conventional green finance excludes: steel, cement, fertilisers. Addresses the most stubborn part of the emissions problem.	'Transition finance' label applied to conventional lending with minor environmental conditions. Without clear standards, the niche is captured before it scales.	H1→H2
Indigenous and traditional knowledge	Knowledge about ecosystem management, climate resilience and sustainable land use with practical planning value. Requires decision-making authority, not consultation rights.	Consultation without authority – traditional knowledge extracted and repackaged by technical institutions rather than governed by communities themselves.	H2→H3
BRICS financial architecture reform	NDB reform; BRICS credit rating mechanisms; local currency settlement; community climate funds with direct access.	NDB remains a transition broker rather than a structural enabler, managing incremental	H2→H3

	The foundational niche. Without it, every other niche faces a systemic financing constraint.	change within existing financial logic rather than reforming the logic.	
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Source: Compiled by authors

H1 = addressing immediate system stress; H2 = scaling transitional innovation; H3 = building the conditions for full regime transformation. Most current BRICS climate investment is concentrated in H1 and H2. The consistent gap is in H3 – the governance structures, ownership models and narrative infrastructure that determine whether H2 innovations get absorbed or genuinely displace the incumbent.

3.3 Three coalescence pathways: How niches become powerful together

Individual niches remain vulnerable to incorporation by the incumbent regime. Systemic transformation requires their consolidation into mutually reinforcing networks. The research identified three natural coalescence pathways: clusters of niches that share logic, constituencies and institutional homes, and that are demonstrably stronger together than individually.

Table 10: How niches become powerful

Pathway	Niches it connects	What it would enable, and the key quote that captures it
Energy–democracy nexus	Community renewables + Indigenous knowledge + financial architecture reform	Community-controlled generation financed through BRICS mechanisms, with planning processes that integrate traditional knowledge alongside technical expertise. Challenges both state-centralised and market-privatised models, proposes polycentric governance where communities hold substantive authority, not just consultation rights. 'Communities having ownership of infrastructure and resources' with 'twinning across BRICS countries based on concrete demands'. Policy Innovation Lab, 2025
Green industrial sovereignty	Critical minerals + green hydrogen + transition finance	BRICS-coordinated value chains from mineral extraction through processing to manufactured products, financed by transition mechanisms and powered by renewable hydrogen. Challenges Global North supply chain dominance without reproducing extractive patterns.

Climate justice finance		'Self-sustaining transitions in the Global South, meeting energy needs, preserving ecosystems and creating green jobs without fostering new forms of dependency.' Strategic interview, Brazil
	Transition finance + architecture reform + Indigenous knowledge	BRICS institutions providing concessional, non-debt finance for transitions designed and implemented through participatory processes that centre affected communities. Challenges both the marketisation of climate finance and the technocratic exclusion of community voice. 'Achieving a just transition requires substantial financial transfers, not loans, from wealthy to developing nations' who bears the cost, who takes the loss, who holds responsibility? Strategic interview, China

Source: Compiled by authors

These three pathways are not separate programmes. They overlap and reinforce each other. A community renewable project designed under the energy–democracy nexus logic, financed through a climate justice finance mechanism and using locally processed critical minerals from a green industrial sovereignty supply chain embodies all three simultaneously. The power of the framework is in their integration – and this is precisely what the incumbent system's fragmentation strategy is designed to prevent.

3.4 Where different BRICS members stand on niche development

The distribution of niches is uneven across BRICS members. Table 11 focuses on the five countries with the most significant niche potential and complementarity and adds a summary row for the remaining five. The key insight is not individual country capability but the complementarities between them.

Table 11: Niche potential and complementarity

Country	Niche strengths	Consolidation potential	Key barrier	Complementarity with others
China	Renewable manufacturing dominance; financial resources; technological R&D	High, but constrained by coal lock-in and the fact that export orientation	Growth-first cognitive rule; geopolitical suspicion from	Manufacturing capacity for SA's distribution; finance for

		can deepen other countries' dependency rather than build their sovereignty	India and others	Brazil's social innovation
South Africa	Just transition policy frameworks; financial sophistication; civil society capacity; JETP institutional architecture	High for normative and governance innovation; moderate for implementation at scale	Energy crisis dominates domestic politics; implementation gaps between ambition and delivery	Governance models that China's tech can operationalise; normative leadership for the bloc
Brazil	Community energy cooperatives; biofuels and bioeconomy; critical minerals; diplomatic leadership	High for social and normative innovation; moderate for industrial scale	Political polarisation; OPEC+ observer membership sends contradictory signals	Social governance models for community energy; COP30 platform for niche agenda-setting
India	Distributed solar; social enterprise models (solar mamas); IT-enabled governance	Moderate-high, particularly for energy democracy models applicable across Global South	Coal political economy; implementation capacity constraints; social inequality	Distributed energy experience applicable to Indonesia's archipelagic context
Indonesia	Critical minerals (nickel, essential for battery supply chains); archipelagic distributed energy needs; forest carbon potential	Moderate, constrained by coal expansion and governance fragmentation	Coal expansion; deforestation pressures; governance fragmentation at subnational level	Nickel supply for regional green value chains; distributed energy model partner for India
Ethiopia, Egypt, UAE, Russia, Iran	Ethiopia: renewable-exclusive strategy, hydro/geothermal; Egypt: solar endowment,	Ethiopia: moderate (constrained by conflict); Egypt: moderate (finance-	Varies: Ethiopia (instability), Egypt (debt), UAE (fossil expansion), Russia	Ethiopia and Egypt bring climate vulnerability legitimacy to BRICS

	regional hub potential; UAE: financial resources, renewable investment ambition; Russia: nuclear, transition finance concepts; Iran: low potential	dependent); UAE: moderate for tech/finance, low for social transformation; Russia: moderate for tech niches; Iran: low across all dimensions	(isolation), Iran (sanctions)	positioning; UAE brings financial capacity; Russia and Iran are primarily veto risks rather than niche contributors
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Source: Compiled by authors

The most important complementarity in the bloc is between China's manufacturing capacity, Brazil's social governance innovation and South Africa's normative and financial sophistication. Together, they could create integrated value chains and governance models that are not Chinese-dependent, Northern-dominated or purely community-scale. The barrier is geopolitical: achieving this complementarity requires deliberate cooperation frameworks that the current BRICS architecture does not provide and that the Incumbent Guardians have an interest in preventing.

3.5 Five conditions for niche consolidation

For any niche or network of niches to achieve systemic impact rather than being absorbed, five conditions must align. These are not sequential phases; they are simultaneous requirements. Most current BRICS niche interventions address one or two while leaving the others unaddressed, which is why promising innovations keep being incorporated rather than becoming transformative.

Table 6: Five conditions for niche consolidation

Condition	What it requires	Who needs to act – and what grant funders can support
Protection from incorporation	Dedicated BRICS funding windows for community energy Intellectual property (IP) compacts enabling intra-BRICS technology sharing Policy mandates reserving market share for local beneficiation 'Community benefit agreement' standards with independent enforcement	NDB and national development banks (funding windows) BRICS institutions (IP compact) National governments (market protection policy) Civil society (monitoring and enforcement of community benefit agreements)

Transnational network formation	'Establish energy, water, digital, logistics commons infrastructure' and 'compact around IP amongst BRICS countries'. Policy Innovation Lab, 2025	
	A BRICS climate and energy fellowship programme linking practitioners across member countries	BRICS institutions (fellowship programme)
	Virtual collaboration platforms and visa facilitation for researchers and practitioners	National governments (visa facilitation)
	Peer learning networks that go beyond policy exchange to co-create new institutional practices	The BRICS Climate Knowledge Commons (Appendix B) is the institutional vehicle for this condition
	'A BRICS fellowship programme that really ties in various leaders to help actors who can really progress cooperation.' Policy Innovation Lab, 2025	
Landscape pressure leverage	Strategic use of climate litigation, shareholder activism and consumer pressure to increase costs of fossil fuel lock-in	Youth movements and climate litigation organisations (legal strategy)
	International partnerships that provide resources and legitimacy without reproducing Northern dependency patterns	Institutional investors (shareholder activism)
	Timing investments to coincide with political windows (Brazil's COP30 presidency; South Africa's G20 presidency are examples now closing)	Research institutions (evidence base)
Cognitive reframing	Challenging the myths that coal is development, that bigger is better, that the Global North has the answers	Funders can amplify by resourcing these actors during political windows
	Scaling culturally grounded alternatives: Eco-Ubuntu, energy	Storytellers, artists, educators and civic platforms (narrative production)
		BRICS diplomatic channels (coordinated messaging)

	sovereignty, ecological civilisation, bioeconomy 'Decolonise thinking – challenge the mindset that sees the Global North as the natural problem-solver and the South as passive recipients.' Strategic interview, Russia	Youth movements (intergenerational dialogue) This is the Horizon 3 investment that funders most consistently underfund
Institutional anchoring	NDB reform to prioritise community-owned and hard-to-abate-sector projects BRICS standards bodies certifying sustainable supply chains Dispute resolution mechanisms protecting Indigenous territorial rights 'Multilateral development banks reformed to focus on SDGs and the Paris Agreement goals, integrating green taxonomies and sustainability standards.' Policy Innovation Lab, 2025	NDB Board (institutional reform, the 40% climate target by 2026 is the accountability hook) BRICS member governments (standards bodies) G20 (MDB reform advocacy, South Africa's 2025 presidency began this work) International legal frameworks (Indigenous rights dispute resolution)

Source: Compiled by authors

The pathway to consolidation is not linear but involves iterative cycles of experimentation, learning and scaling. What the Policy Innovation Labs call 'prefigurative practice' – acting in the present as if desired futures already exist – is how capabilities and relationships get built before the political window opens. Such actions represent 'pockets of the future in the present' and are essential for navigating the turbulence of our time.

3.6 The critical juncture: Why the 2025–2027 window matters

The research identifies the current period as a critical juncture where accumulated landscape pressures and niche development could precipitate rapid regime transformation, but where the incumbent system is also actively mobilising to prevent it. Four factors make this window distinctive:

- Political concentration: Brazil's COP30 presidency, South Africa's 2025 G20 presidency and the Russian BRICS presidency created an unusual clustering of agenda-setting moments. The Roadmap for BRICS Energy Cooperation 2025–2030 and the Leaders' Framework Declaration on Climate Finance are direct outputs now requiring implementation.

- Technology economics: Declining clean energy costs are approaching thresholds where incumbent fossil infrastructure faces economic stranding, especially as China's manufacturing overcapacity continues to drive prices below fossil fuel economics in most BRICS contexts.
- Financial stress: Debt sustainability pressures across multiple BRICS members could disrupt fossil fuel investment cycles and create openings for transition finance conditionality if the right instruments are in place when the window opens.
- Social mobilisation: Youth movements, Indigenous rights campaigns and labour transition demands are generating political pressure that incumbent regimes find increasingly difficult to accommodate through co-optation alone.

Critical junctures are contingent and reversible. The grey space of hybrid compromise could persist indefinitely, absorbing reform energies without systemic change. Whether this window leads to genuine transformation depends on whether the niches, coalescence pathways and consolidation conditions in this section receive the protection, investment and connection they need before the window closes.

Section 4: The narrative battle: Why stories matter as much as policy

The BRICS energy system is not merely a domain of material interests and institutional arrangements. It is also a contest over stories, about what development means, what energy is for, who has the right to make decisions and what kind of future is imaginable. Understanding this narrative dimension is essential for anyone seeking to influence what is politically possible.

The research revealed that the most persistent barriers to transition are not technical or financial; they are narrative. In several BRICS contexts, coal remains a symbol of national development and sovereignty. In some circles, renewable energy is perceived as a foreign, elite-led agenda. These worldviews act as 'narrative lock-ins' that make it harder to mobilise public and political support for change, even when the economics are increasingly favourable.

4.1 Five narratives structuring the BRICS climate debate

The research identified five dominant narratives that co-exist in tension across the BRICS bloc. Effective engagement requires understanding which narrative is in play in any given context and how they interact.

Table 7: Five narratives structuring the BRICS climate debate

Narrative	What it says, who uses it and what it enables or forecloses
1. Climate justice and historical responsibility	Frames climate change as a historical injustice: industrialised Northern countries accumulated emissions and owe financial and technological support to the Global South. This narrative provides moral authority for BRICS climate finance demands and underpins the CBDR-RC principle. Its weakness: as China and other BRICS members become major emitters in their own right, the North–South divide it depends on is increasingly contested from within.
2. Developmental sovereignty	Asserts that developing countries must prioritise economic growth and poverty eradication, with climate action subordinate to these imperatives. Legitimises continued fossil investment and resists externally imposed decarbonisation timelines. This narrative is especially powerful in fossil-dependent economies and for constituencies that have not yet experienced reliable energy access. It is increasingly contested by younger generations and climate-vulnerable communities.

3. Technological transformation and green industrialisation	Frames climate action as an economic opportunity for renewable deployment, clean technology manufacturing and competitive positioning in green markets. China exemplifies this narrative's power: its domestic renewable deployment and manufacturing dominance are presented as evidence that climate action and economic growth are compatible. This is the most accessible narrative for technology funders and industrial policy actors.
4. Just transition as distributive justice	Centres the social distribution of transition costs and benefits, prioritising workers, communities and marginalised groups. South Africa has been particularly influential in developing this framing, especially through the JETP model. It creates space for social protection, community ownership models and feminist energy policy. Its challenge is that 'just transition' is now widely used as a label without substantive content by actors who do not share its redistributive commitments.
5. Multipolar climate governance	Asserts that global climate governance should reflect the multipolar world, with BRICS countries as architects of global norms rather than Northern-defined frameworks. This narrative underpins BRICS positions in multilateral forums and is gaining traction as the limitations of existing governance structures become more apparent. It is the ideological basis for the Compass framework described in Section 6.

Source: Compiled by authors

Key thematic commitments:

- research and capacity-building cooperation on energy access, sustainable agriculture and climate resilience;
- technology development and deployment cooperation, including BRICS Partnership on New Industrial Revolution;
- long-term low-emission development strategies;
- green infrastructure and low-carbon technology investments; and
- reform of global financial architecture to better serve developing countries.

4.1.1 Intersections and tensions

These narratives are not mutually exclusive but empower different actors in different contexts. Climate justice and multipolar governance narratives align in demanding financial reform, while developmental sovereignty and technological transformation narratives justify continued fossil investment during industrial upgrading. Just transition and developmental sovereignty narratives contest whether social protection or aggregate growth should predominate.

These underlying themes provide concrete institutional anchoring for these narratives, from NDB financing mechanisms to NDC commitments to rural energy access programmes. Understanding their interconnections is essential for navigating the complexities of BRICS climate governance.

4.2 Narrative sovereignty: The BRICS case for telling its own story

A central finding of the Policy Innovation Labs is the importance of what participants called 'narrative sovereignty', the right and capacity of BRICS countries to define their own development story, rather than receiving and adapting Northern frameworks.

Two culturally grounded narrative frames emerged from the research as particularly powerful for BRICS contexts.

Eco-Ubuntu: An African frame for interconnected wellbeing

When Ubuntu, the Southern African philosophical concept of shared humanity and collective wellbeing, is extended to the ecological domain, it provides a compelling frame for energy justice that resonates with community values across the continent and beyond. 'I am because we are' becomes 'We are because the ecosystem sustains us.' This framing connects individual energy access to community resilience and ecological health in a way that neither purely technical nor purely economic narratives can.

Energy sovereignty: Local control as development

Energy sovereignty, or the right of communities to control their own energy systems, reframes the transition not as a burden imposed from outside (by either the climate or Northern funders) but as an opportunity for communities to build genuine autonomy. This narrative connects to existing traditions of cooperative economics, community land rights and Indigenous governance across BRICS countries in ways that generic 'clean energy' messaging does not.

4.3 What this means for decision makers

The practical implication is not that funders should become communications agencies, but that every technical and financial intervention in BRICS energy systems will either reinforce or challenge the existing narrative architecture, and that this dimension of impact deserves deliberate attention. A community solar project that is designed, owned and governed by the community it serves does something different to public discourse about what energy is for than the same number of panels installed by a state utility. Both may count as 'renewable capacity'. Only one builds narrative sovereignty.

Section 5: Six insights for decision makers

These six insights emerged directly from the participatory research process, from the systems mapping, the Policy Innovation Labs and the strategic interviews. They are sequenced from:

- governance (the enabling conditions); to
- justice (the distributional challenge); to
- innovation (the institutional opportunity); to
- narrative (the cultural foundation); to
- time (the strategic horizon); to
- leadership (the geopolitical opportunity).

Insight 1: Fix the governance architecture before adding more programmes

The problem: Governance fragmentation is the most urgent barrier to effective climate and energy transition across BRICS. Current structures are centralised, opaque and poorly coordinated across sectors and scales. There is a persistent gap between public institutions and private sector actors, producing misaligned incentives and unaccountable decision-making.

What the research found: Participants in the Policy Innovation Labs consistently identified governance fragmentation, not finance scarcity, as the primary reason that well-designed programmes fail at scale. Coordination problems, siloed ministries and the absence of accountability mechanisms between government, business and communities are the structural bottlenecks.

The recommendation: BRICS needs cooperative governance frameworks that embrace both decentralisation and integration, including regional planning platforms, a BRICS climate and energy fellowship programme and interoperable regulatory frameworks. Horizontal peer learning networks among BRICS institutions (not just policy exchange, but co-creation of new institutional practices) are as important as new funding mechanisms.

For funders: Investments that build governance capacity, facilitate peer learning and create accountability mechanisms between government and communities deliver more durable impact than additional programme funding without these foundations.

Insight 2: The difference between energy substitution and energy justice is the difference between a green transition and a just one

The problem: Many BRICS countries have made significant investments in renewable energy. But simply replacing fossil fuels with solar and wind, without changing who

owns the energy, who benefits from it and who has a say in governance, reproduces existing inequalities in a new technological form.

What the research found: The solar mamas of Brazil and India (women-led, self-financing solar cooperatives) were repeatedly cited by participants as the model that aligns with genuine transition values – community empowerment, sustainable livelihoods and technological autonomy. The contrast with utility-scale renewables that transfer no ownership, skills or governance capacity to local communities is stark.

The recommendation: A just transition must centre equity in energy access, ownership, employment and decision-making. Energy policy must shift from a narrow focus on technology adoption to a broader lens of justice, dignity and local development. This means designing projects for community ownership from the outset, not as an add-on or a consultation requirement.

For funders: The framing question for any energy investment should not only be 'Does this reduce emissions?' but also 'Does this change who owns and governs the energy system?'

Insight 3: Innovation needs institutional support, not just funding

The problem: BRICS countries often rely on reactive policies that respond to crises rather than shaping preferred futures. Venture capital ecosystems are underdeveloped, regulatory frameworks are often outdated and innovation remains fragmented across countries and sectors.

What the research found: The NDB's potential to fund early-stage green industrialisation in areas like battery storage, circular economy solutions and just transition infrastructure was highlighted repeatedly by research participants. So was the gap between that potential and current practice. The creation of distributed value chains and intra-BRICS supply networks was identified as the mechanisms that would allow member states to build technological sovereignty rather than deepen dependency.

The recommendation: A stronger innovation ecosystem within BRICS requires risk-sharing mechanisms, de-risked finance for green start-ups and strategic coordination through the NDB. Regulatory reform should create space for community ownership models, energy cooperatives and distributed value chains, removing the institutional friction that currently blocks small-scale and community-led projects.

For funders: Early-stage and institutional support (incubation, regulatory reform advocacy and peer learning) is often more impactful per dollar than direct project finance for proven technologies.

Insight 4: Changing the story is not soft, it is structural

The problem: Deep-seated cultural narratives about coal as development, renewable energy as foreign imposition and growth as the only legitimate goal are acting as 'narrative lock-ins' that make it harder to build political support for transition; even when the economics are increasingly favourable.

What the research found: The Causal Layered Analysis revealed that surface-level policy changes (new regulations, new subsidies) fail to produce durable transition because they do not address the worldviews and cultural stories that make the incumbent system feel natural and inevitable. Concepts like 'Eco-Ubuntu' and 'energy sovereignty' surfaced in the research as culturally grounded frames that connect energy justice to existing values in ways that generic green messaging does not.

The recommendation: Reframe public narratives using culturally grounded metaphors and values. Support local storytellers, artists, educators and civic platforms as part of the transition agenda – not as a communications strategy, but as a systems change. Youth participation and intergenerational dialogue are key mechanisms for shifting collective imaginaries about what development looks like.

For funders: Communications and narrative work should be funded as a core programme activity, not as a reporting or dissemination add-on.

Insight 5: Think in all three time horizons simultaneously

The problem: BRICS governments and funders tend to invest heavily in immediate stabilisation (Horizon 1) and in transitional scaling of proven technologies (Horizon 2), but rarely in the Horizon 3 conditions (governance reform, narrative change, community ownership) that determine whether transitional innovations get absorbed into the old system or genuinely replace it.

What the research found: The theory of change from the Futures Literacy Labs emphasises strategic sequencing and coherence across time horizons. In Horizon 1, the priority is stabilising current systems while phasing out the most outdated elements. In Horizon 2, transitional innovations (BRICS credit rating systems, regional green infrastructure, AI for governance) should be scaled. In Horizon 3, the target is full transformation: reformed multilateral banks, shared commons infrastructure and climate-aligned political systems. Aligning investment across all three horizons simultaneously, not as sequential phases, is the key.

The recommendation: Governments and funders should invest in 'institutional reflexivity' – the capacity to experiment, learn and recalibrate as new signals emerge. Futures literacy should be built into government planning and finance ministry processes, not just into research institutions.

For funders: Portfolio design should explicitly track investment across all three horizons, and should protect Horizon 3 investments from being deprioritised when short-term pressures mount.

Insight 6: BRICS has the standing to lead global climate governance, but only if it acts collectively

The problem: BRICS is currently positioned as a reluctant follower in global climate diplomacy, reactive to Northern frameworks rather than proactive in shaping its own. This undersells both the bloc's significance (it represents the majority of global emissions, resources and population) and its potential.

What the research found: A major finding of the Policy Innovation Labs is that BRICS has a genuine opportunity, and arguably a responsibility, to reclaim climate leadership from a Global South perspective. This means not just advocating for fairer international rules (on finance, technology access and intellectual property) but also developing a shared BRICS vision of what inclusive, resilient green development looks like on its own terms.

The recommendation: BRICS should act collectively to shape global energy norms, developing a shared green industrial strategy and coordinating positions at multilateral forums. The Compass framework in Section 7 provides the starting point. If BRICS countries align around a vision of inclusive, resilient green development, they can reframe climate leadership not as a burden imposed by others, but as a shared opportunity to reimagine prosperity on their own terms.

For funders: Investments that build BRICS collective capacity joint research, shared platforms and coordinated advocacy that deliver returns beyond any individual country or project.

Section 6: The BRICS Climate and Energy Compass

The BRICS Climate and Energy Compass is a strategic framework for sovereign, just and resilient energy transitions, developed through the consultations and workshops conducted during this research. It is not a blueprint – it is a navigation tool. It identifies five interconnected axes that shape how BRICS countries plan their energy and climate strategies, how funders prioritise their support and how multilateral processes are designed.

The Compass integrates three complementary frameworks developed through this research:

- the Five Transformative Pillars (the structural foundation);
- the Five Governance Principles (the operational DNA); and
- the Five Strategic Imperatives (the implementation battlefield).

Together, they provide the ‘what’ (transformative structural change), the ‘how’ (governance mechanisms) and the ‘when’ (urgent strategic priorities) for BRICS energy transition.

6.1 The Five Transformative Pillars: Structural foundations of the new regime

The Compass rests on five pillars that collectively invert the logic of the incumbent global energy regime. Each pillar reconfigures relationships between the economy, society and environment, moving from extractive, centralised and externally dependent systems to regenerative, distributed and sovereign ones.

Table 8: The Five Transformative Pillars

Pillar	Incumbent regime logic	New regime logic	Material expression	Compass axis connection
Pillar 1: Distributed energy sovereignty	Centralised generation controlled by state utilities or private corporations; national grids excluding remote communities	Community-owned renewable systems, municipal utilities, cooperative generation; energy as commons not commodity	Distributed solar/wind, microgrids, multi-scale battery storage, peer-to-peer trading	Axis 1: Sovereign energy transitions

Pillar	Incumbent regime logic	New regime logic	Material expression	Compass axis connection
Pillar 2: Circular industrial metabolism	Linear extract-produce-dispose; raw material export to Global North	Closed-loop material flows; regional beneficiation; designed for disassembly	Critical mineral value chains, green hydrogen feedstock, industrial symbiosis networks, bio-based materials	Axis 2: Just socio-ecological development
Pillar 3: Regenerative finance architecture	Northern-dominated, dollar-denominated, market-return conditioned	Value retained within BRICS; concessional for transformation; de-risked community projects	Local currency settlement, expanded NDB/AIIB with revised risk frameworks, green bonds in local currencies, patient capital community funds	Axis 3: Strategic foresight and risk navigation
Pillar 4: Polycentric climate governance	Concentrated in national capitals and international negotiations; exclusion of subnational and civil society	Coordination without centralisation; devolved implementation; civil society in accountability	Subnational climate funds with direct access, community benefit agreements with enforcement, citizen assemblies with deliberative authority, Indigenous territorial governance	Axis 4: Multipolar cooperation and regional integration
Pillar 5: pluralistic knowledge systems	Northern scientific expertise privileged; Global South as application sites	Diverse epistemologies; solutions grounded in local contexts; technology assessment includes social dimensions	BRICS research networks with equitable funding, traditional knowledge registries with community control, participatory technology assessment, open-source adaptation platforms	Axis 5: Narrative sovereignty

Source: Compiled by authors

Practical foundations: These pillars are grounded in existing BRICS capacities and experiences – South Africa's load shedding demonstrates centralised system vulnerability; China's manufacturing capacity could redirect from exports to BRICS distributed deployment; JETP scaffolding could reorient from utility-scale to distributed sovereignty; the NDB's 40% climate finance commitment by 2026 could fund circular industrial infrastructure; South Africa's constitutional environmental rights and Brazil's participatory budgeting provide polycentric precedents.

6.2 Five Governance Principles: The DNA of the Compass

The pillars require operational principles that determine how decisions are made among actors with divergent interests. These five principles provide the integrated governance DNA of the framework, ensuring that structural transformation occurs through legitimate, equitable and effective processes.

Table 15: Principles for operationalisation

Principle	Operationalisation	Institutional expression	Pillar alignment
1. CBDR-BRICS: Common but differentiated responsibilities based on global position, historical emissions, capacity	China/Russia: greater finance/technology transfer responsibility; South Africa/Brazil: implementation innovation and normative leadership; Egypt/Ethiopia/others: adaptation/resilience modelling	Differentiated NDC expectations with ratcheting ambition; NDB concessional terms weighted by capacity/vulnerability; transparent reporting tracking aggregate and distributional progress	Applies across all pillars, particularly Pillar 3 (finance) and Pillar 5 (knowledge)
2. Subsidiarity with solidarity: Decisions at lowest effective level; higher levels provide support not direction	Communities/local governments design implementation; national governments provide regulatory frameworks and redistributive finance; BRICS institutions coordinate learning and mobilise collective resources	NDB redefined from project financier to capacity builder and risk sharer; solidarity mechanisms prevent subsidiarity becoming neglect	Core to Pillar 1 (distributed sovereignty) and Pillar 4 (polycentric governance)
3. Precaution with participation: Action despite uncertainty;	Every climate intervention includes distributional impact assessment; veto power for affected	JETP model generalised with binding community benefit agreements and independent monitoring	Central to Pillar 4 (polycentric governance) and Pillar 5

Principle	Operationalisation	Institutional expression	Pillar alignment
inclusive decision-making ensures legitimacy	communities; compensation for unavoidable losses		(pluralistic knowledge)
4. Circularity with sovereignty: Regional value chain integration without sacrificing national autonomy or community resource control	Chinese investment in BRICS beneficiation with local equity participation, technology transfer, exit strategies preventing permanent dependency	Voluntary negotiated circularity; no conditionality imposition	Defines Pillar 2 (circular metabolism) and reinforces Pillar 1 (sovereignty)
5. Transparency with trust: Accessible information plus relationship-building through reciprocity and shared experience	Open data platforms and independent evaluation complemented by deliberative processes building interpersonal and institutional trust	Recognition that BRICS cooperation occurs among states with divergent interests and mutual suspicions	Enables all pillars, especially Pillar 4 (governance) and Pillar 5 (knowledge)

Source: Compiled by authors

6.3 Five Strategic Imperatives: The battlefield for regime shift

Principles and pillars remain theoretical without concurrent pressure on the lock-in mechanisms of the incumbent regime. These five imperatives are not sequential phases but rather simultaneous battles on different fronts, each applying targeted pressure to flip the current system toward the new regime defined by the pillars.

Table 16: Five Strategic Imperatives to flip the current regime

Imperative	Diagnostic foundation	Specific actions	Primary pillars engaged	Governance principles applied
1. Disrupt fossil fuel lock-in	Continued fossil investment despite commitments: South Africa JETP with coal expansion; Brazil OPEC+ membership with COP30 hosting; China renewable manufacturing with coal plant construction	Moratoria on new fossil exploration/ infrastructure with China/financiers redirecting; accelerated coal phaseout in South Africa/India with international support; managed demand reduction in Russia/Gulf states through diversification; BRICS transition funds internalising social costs of fossil dependence	Pillar 1 (shifting from centralised fossil to distributed renewables), Pillar 3 (redirecting finance)	CBDR-BRICS (differentiated phaseout responsibilities), precaution with participation (just transition safeguards)
2. Democratise technology access	Clean tech value chains concentrated in China and Global North; dependency risks for other BRICS members	BRICS technology compacts pooling patents; joint ventures with mandatory local content and knowledge transfer; open-source designs for distributed renewable systems; NDB financing conditioned on technology sharing	Pillar 1 (distributed systems), Pillar 2 (regional beneficiation), Pillar 5 (knowledge sharing)	Circularity with sovereignty (technology transfer with local control), CBDR-BRICS (China/Russia leadership in sharing)
3. Reform financial architecture	Dollar dependency, risk-averse lending, inadequate concessional finance; systemic reform of global and BRICS-internal architecture needed	NDB/AIIB capitalisation expansion with revised risk frameworks; BRICS climate fund with grant/highly concessional components; local	Pillar 3 (regenerative finance), Pillar 1 (de-risked community projects)	Subsidiarity with solidarity (NDB as capacity builder), transparency with trust (reformed risk assessment)

Imperative	Diagnostic foundation	Specific actions	Primary pillars engaged	Governance principles applied
		currency settlement mechanisms; credit rating reform recognising sustainable development performance; collective BRICS advocacy for IMF/World Bank governance reform		
4. Build subnational capacity	National climate policies fail without provincial/municipal implementation capacity; 'national-level climate finance policies often struggle to translate into effective action at provincial and municipal levels'	Dedicated funding windows for municipal/community projects; BRICS fellowship programmes for local government officials; peer learning networks among BRICS cities/regions; legal frameworks enabling community ownership and energy cooperatives; BRICS Climate Knowledge Commons	Pillar 4 (polycentric governance), Pillar 1 (distributed sovereignty)	Subsidiarity with solidarity (devolution with support), precaution with participation (community veto power)
5. Narrative transformation	Cognitive and normative rules of incumbent regime must be challenged; 'narrative sovereignty' and 'narrative dimension of systemic responses' essential	BRICS-wide media/education campaigns centring just transition stories; support for cultural production imagining sustainable futures; climate/energy integration into school curricula with BRICS-specific content; diplomatic messaging framing BRICS leadership as global	Pillar 5 (pluralistic knowledge), all pillars (legitimacy and meaning)	Transparency with trust (building shared understanding), CBDR-BRICS (respecting diverse contexts)

Imperative	Diagnostic foundation	Specific actions	Primary pillars engaged	Governance principles applied
		public goods contribution		

Source: Compiled by authors

6.4 The BRICS Compass: Axes as navigation tools

The Five Transformative Pillars, Governance Principles and Strategic Imperatives converge in five navigation axes that guide practical decision-making. Each axis translates structural transformation into actionable direction.

Table 17: The BRICS Climate and Energy Compass

Compass axis	Core function	Supporting pillars	Guiding principles	Strategic imperatives
Axis 1: Sovereign energy transitions	Taking greater control over national energy systems – investing in local clean technology manufacturing, protecting critical mineral assets and energy data, maintaining public ownership at the centre of energy infrastructure	Pillar 1 (Distributed energy sovereignty): Moving from centralised generation to community-owned renewables, municipal utilities, cooperative generation where energy is a commons	Principle 4 (Circularity with sovereignty): Regional integration without sacrificing autonomy; local equity participation, technology transfer, exit strategies preventing dependency	Imperative 2 (Democratise technology access): BRICS technology compacts, mandatory local content; Imperative 3 (Reform financial architecture): Local currency settlement, NDB capitalisation
Axis 2: Just socio-ecological development	Energy transitions must improve lives, not just cut carbon. Energy as public good with universal access;	Pillar 2 (Circular Industrial Metabolism): Moving from linear extract-produce-dispose to closed-loop flows, regional	Principle 3 (Precaution with participation): Distributional impact assessment; community veto power;	Imperative 1 (Disrupt fossil fuel lock-in): Just transition safeguards; internalising social costs; Imperative 5 (Narrative transformation):

Compass axis	Core function	Supporting pillars	Guiding principles	Strategic imperatives
	Indigenous knowledge leading inclusive development	beneficiation, design for disassembly	compensation for losses	Centring just transition stories
Axis 3: Strategic foresight and risk navigation	Anticipating disruptions from climate, economic shocks, geopolitical conflict through foresight labs, scenario planning, adaptive regulation	Pillar 3 (Regenerative finance architecture): Moving from dollar-denominated, market-return finance to value retained within BRICS, concessional transformation finance, de-risked community projects	Principle 2 (Subsidiarity with solidarity): NDB as capacity builder and risk sharer; solidarity preventing subsidiarity becoming neglect	Imperative 3 (Reform financial architecture): Revised risk frameworks; credit rating reform; Imperative 4 (Build subnational capacity): Peer learning networks, BRICS Climate Knowledge Commons
Axis 4: Multipolar cooperation and regional integration	Strengthening BRICS alliances through joint R&D, shared infrastructure, financial independence via local currencies	Pillar 4 (Polycentric climate governance): Moving from concentrated national/international governance to coordination without centralisation, devolved implementation, civil society accountability	Principle 5 (Transparency with trust): Open data plus deliberative processes building interpersonal/ institutional trust among states with divergent interests	Imperative 4 (Build subnational capacity): Dedicated municipal funding windows, fellowship programmes, legal frameworks for community ownership
Axis 5: Narrative sovereignty (centre of Compass)	BRICS defining own goals based on cultural values and histories, shifting from growth-at-all-costs to repair, care, long-term resilience	Pillar 5 (Pluralistic knowledge systems): Moving from Northern scientific expertise as default to diverse epistemologies, locally grounded solutions, participatory	Principle 1 (CBDR-BRICS): Differentiated responsibilities respecting diverse capacities and contexts; preventing equal treatment of unequal members	Imperative 5 (Narrative transformation): BRICS-wide campaigns, cultural production, curriculum integration, diplomatic messaging

Compass axis	Core function	Supporting pillars	Guiding principles	Strategic imperatives
		technology assessment		

Source: Compiled by authors

6.5 Implementation logic: How the framework operates

The integrated Compass operates through three interconnected cycles:

1. **Structural transformation (Pillars)** provides the destination – the material and institutional configuration of the new regime. Without this, governance principles become proceduralism and strategic imperatives become tactical manoeuvres without direction.
2. **Governance legitimisation (Principles)** provides the pathway – ensuring that transformation occurs through processes recognised as fair, legitimate and trustworthy. Without this, pillars remain utopian and imperatives generate resistance.
3. **Strategic pressure (Imperatives)** provides the momentum – applying concurrent pressure on multiple lock-in mechanisms to create space for transformation. Without this, pillars and principles remain theoretical.

Feedback loops: The Compass is designed for adaptive learning. Subnational capacity building (Imperative 4) generates practical knowledge for pluralistic knowledge systems (Pillar 5). Narrative transformation (Imperative 5) builds the trust necessary for transparency (Principle 5). Financial architecture reform (Imperative 3) funds distributed energy sovereignty (Pillar 1). Each element reinforces others, creating momentum for regime shift rather than isolated interventions.

This framework ensures that the BRICS Climate and Energy Compass is simultaneously visionary and practical, structurally transformative and procedurally legitimate, strategically urgent and sustainably implemented.

Section 7: Strategic priorities and recommendations

Climate finance is the strategic fulcrum for advancing shared BRICS climate action and just energy transitions. It is critical to developing and scaling BRICS initiatives, realising strategic objectives and safeguarding long-term security and prosperity for BRICS countries. The three priorities below address the most critical financial challenges and systems blockages identified through the research, operationalised through a concrete action plan with clear accountability mechanisms and transformation metrics.

7.1 Priority 1: Systemic reform of global and BRICS-internal financial architecture for just transitions

The current global financial architecture is not designed to deliver just transitions at the scale and pace required. Dollar-denominated, market-rate-return-conditioned and risk-averse, it systematically underweights the concessional and long-term finance that the BRICS transition requires. Reform is essential at both the global level (MDBs, UNFCCC finance architecture) and within BRICS (NDB, regional development banks).

Table 18: Systemic reform activities and implementation

Activity	What it involves	Key actors	Accountability mechanism	Regime flip metric target (2030)
MDB reform advocacy	Lobby for changes in MDBs and international financial institutions to provide more accessible, affordable and long-term climate finance. Includes advocating for increased grant components and debt sustainability protections in concessional financing	BRICS governments (finance, foreign affairs, environment ministries)	National climate commissions monitor advocacy positions; BRICS Climate and Just Transition Review Mechanism tracks collective positions in global forums	Concessional finance as % BRICS climate finance flows: from ~15–20% to 40% (60% by 2035)
NDB enhancement	Enhance the NDB's role as key	NDB; central banks;	NDB Board accountability to	Local currency denomination of

Activity	What it involves	Key actors	Accountability mechanism	Regime flip metric target (2030)
	coordinator and funder of sustainable development and climate projects. Explore new BRICS-specific financial instruments and mechanisms for internal resource mobilisation	national financial regulatory bodies	BRICS Finance Ministers and Central Bank Governors Meeting; annual independent audit of climate finance concessionality	BRICS climate bonds and loans: from minimal to majority (>50%) of new issuance
Alternative revenue models	Support research and policy innovation to create alternative, sustainable revenue models for financing energy transition – green bonds, carbon pricing, innovative domestic financing strategies reducing reliance on shrinking fiscal spaces or fossil fuel revenues	Think tanks and research institutions (BRICS-based)	BRICS Ombudsperson for Climate Justice reviews revenue model equity impacts; national climate commissions track fiscal transition away from fossil dependence	Fossil fuel subsidies as % GDP: 50% reduction from 2025 baseline (90% by 2035)

Source: Compiled by authors

7.2 Priority 2: Catalysing investment in hard-to-abate sectors

Conventional green finance reaches solar panels and wind farms. It does not reach the steel mills, cement plants and fertiliser producers that account for the most stubborn portion of BRICS emissions. Dedicated transition finance mechanisms are required to close this gap – not rebranded conventional lending, but instruments specifically designed for the timeline and risk profile of heavy industry decarbonisation.

Table 19: Hard-to-abate sector transformation

Activity	What it involves	Key actors	Accountability mechanism	Regime flip metric target (2030)
Transition finance mechanisms	Design and implement dedicated financial instruments (blended finance facilities, concessional loans, risk-sharing mechanisms) for heavy industry decarbonisation (fertilisers, steel, cement), acknowledging the long-term nature of these transitions	BRICS governments (industry, energy, commerce, environment, finance ministries)	National climate commissions monitor sectoral transition plans; BRICS Climate and Just Transition Review Mechanism assesses cross-border coordination; community benefit agreements required for all projects	Critical minerals benefited within BRICS: from ~20–30% to 60% (80% by 2035)
Intra-BRICS green value chains	Facilitate trade and investment flows within BRICS for green technologies, materials and services, especially those resulting from joint R&D. Includes strategic cooperation on critical minerals	Private sector (banks, investment funds, industry associations, large corporations); MDBs, including NDB	Binding technology transfer clauses in all NDB-financed joint ventures; local equity participation requirements; exit strategies preventing permanent dependency	Local currency settlement mechanisms for intra-BRICS climate trade: from minimal to operational for 50% of transactions
Technology sovereignty compacts	Develop BRICS technology-sharing agreements that pool patents, create joint ventures with mandatory local content and knowledge transfer and develop open-source designs for distributed renewable systems	NDB; BRICS governments; technology institutions	Independent verification of knowledge transfer and local content compliance; BRICS Ombudsperson investigates technology access complaints	Representation of women, youth, Indigenous persons in BRICS climate governance: from current levels to parity

Source: Compiled by authors

7.3 Priority 3: Localising climate finance and building subnational capacity for just implementation

National climate policies fail without the capacity for provincial and municipal implementation. Direct local access to finance, bypassing national intermediaries that absorb resources and add delay, is one of the highest-leverage interventions available. The research found that the absence of local climate finance channels is one of the most consistent barriers to community-scale project development across all BRICS contexts.

Table 20: Localisation and capacity building

Activity	What it involves	Key actors	Accountability mechanism	Regime flip metric target (2030)
Direct local finance access	Establish dedicated funding windows within national climate funds or through development banks for subnational governments, local communities and grassroots organisations. Focus on small-scale, decentralised projects addressing energy security and resilience	National governments (energy, local government, environment ministries)	Community benefit agreements with binding enforcement on all BRICS-funded projects by 2028; subnational entities can appeal to national climate commissions and BRICS Ombudsperson	Climate finance flowing directly to subnational/ community entities: from 5–10% to 30% (50% by 2035)
Capacity building	Implement comprehensive training for provincial/municipal officials, community leaders and local businesses on project development, financial management, climate risk assessment and funding opportunities	Provincial and municipal governments; CSOs and NGOs; academic institutions	BRICS fellowship programmes for local government officials; peer learning networks; independent assessment of subnational capacity development	Energy access gap closure with quality standards: from ~100 million without access to universal access
Community-led project ownership	Promote models where local communities have	Development finance institutions	Veto power for affected communities	Just transition fund disbursement to affected

Activity	What it involves	Key actors	Accountability mechanism	Regime flip metric target (2030)
	significant ownership and decision-making power over energy projects, ensuring equitable benefit distribution and local contextualisation	(DFIs) and local banks; CSOs; national governments	over projects imposing costs; compensation for unavoidable losses; independent monitoring of community benefit distribution	workers/communities as % total climate finance: from minimal to 20%

Source: Compiled by authors

7.4 Strategic priority action plan: From priorities to implementation

The three priorities are operationalised through a coordinated action plan with clear champions, supporting entities and monitoring approaches. This plan ensures that strategic intent translates into accountable action.

Table 21: Integrated strategic priority action plan

Strategic priority	Action	Champion	Supporting entities	Monitoring approach	Timeline
Systemic reform of global and BRICS financial architecture for just transitions	Advocate MDB reform; enhance NDB coordination role; develop new revenue models	BRICS governments (ministries of finance, foreign affairs, environment)	NDB; central banks; national financial regulatory bodies; think tanks and research institutions	Track financial system alignment with just transition goals; annual concessionality review; reform implementation tracking through BRICS Climate and Just Transition Review Mechanism	2025–2030 (annual milestones)
Catalysing investment in	Establish transition finance	BRICS governments (ministries of	Private sector (banks, investment	Monitor investment flows, emissions	2025–2030 (sectoral transition

Strategic priority	Action	Champion	Supporting entities	Monitoring approach	Timeline
hard-to-abate sectors	mechanisms; foster intra-BRICS green value chains	industry, energy, commerce, environment, finance)	funds, industry associations, large corporations); MDBs, including NDB	reduction, technology adoption in heavy industry sectors; track local content and technology transfer compliance	plans by 2026)
Localising climate finance and building subnational capacity for just implementation	Create direct local access funding windows; implement capacity-building programmes; promote community-led ownership	National governments (relevant line ministries: energy, local government, environment)	Provincial and municipal governments; CSOs and NGOs; DFIs and local banks; academic institutions	Monitor fund distribution and use focusing on equity, local capacity, community inclusion; track subnational project pipeline development; community satisfaction surveys	2025–2030 (local access windows operational by 2027)

Source: Compiled by authors

7.5 Accountability framework: Ensuring regime flip, not rhetoric

Without robust accountability, strategic priorities become performative. The following multi-tier framework ensures that commitments translate into transformation, with enforcement mechanisms that escalate from national to BRICS to international levels.

Table 22: Multi-tier accountability framework

Tier	Mechanism	Function	Enforcement	Connection to action plan
National	Independent climate commissions with constitutional/statutory mandate (South Africa's Presidential Climate	Monitor implementation of Priority 3 (localisation) and Priority 1 (national	Judicial review of commission findings; fiscal penalties for	Oversee local access funding windows; monitor just transition fund

Tier	Mechanism	Function	Enforcement	Connection to action plan
	Commission as model, strengthened)	revenue models); investigate complaints from communities and subnational entities; recommend corrective action to governments	non-compliance; early election triggers in extreme cases of government failure	disbursement; validate community benefit agreements
BRICS	Climate and Just Transition Review Mechanism	Peer review of member state progress on all three priorities; public reporting on regime flip metrics; recommendations for collective response to systemic blockages	Suspension of voting rights in BRICS institutions for non-compliance; restricted access to collective financing; authorised cross-border civil society monitoring	Annual review of action plan implementation; assess NDB enhancement progress; evaluate intra-BRICS value chain development
International	Enhanced NDCs; transparent Paris Agreement reporting; global stocktake contributions	Collective BRICS accountability for ambition advancing Global South interests; demonstrate regime flip metrics as evidence of transformation	Collective BRICS positions in other forums conditioned on member state compliance with BRICS priorities	Position MDB reform advocacy within broader Global South climate finance demands

Source: Compiled by authors

Redress mechanism: BRICS Ombudsperson for Climate Justice, independent mandate to investigate systemic violations of community rights, recommend policy changes to address structural barriers and facilitate mediation between affected communities and implementing agencies (NDB, national governments, private sector). The Ombudsperson reports annually to the BRICS Climate and Just Transition Review Mechanism and can trigger priority reviews.

7.6 Regime flip metrics: Measuring transformation, not just activity

The monitoring system tracks underlying regime transformation, the shift from centralised, extractive, externally dependent systems to distributed, circular, sovereign ones, not merely discrete projects or quantitative targets. These metrics align with the Five Transformative Pillars (Section 6) and provide the evidence base for the Accountability Framework.

Table 23: Governance transformation indicators

Indicator	Baseline (2025)	Target (2030)	Data Source	Accountability Actor
Climate finance flowing directly to subnational/community entities	5–10% (highly variable, mostly through central ministries)	30% (50% by 2035)	NDB disbursement tracking; national climate fund reports; independent financial flow assessments	BRICS Climate and Just Transition Review Mechanism; national climate commissions
Community benefit agreements with binding enforcement on BRICS-funded projects	Limited pilots (South Africa JETP, Brazil, India); no systematic tracking	Universal coverage for all BRICS-funded projects by 2028	Project documentation; legal registries; community monitoring reports; independent verification	National climate commissions with community complaint mechanisms; BRICS Ombudsperson for Climate Justice
Local currency settlement mechanisms for intra-BRICS climate trade	Minimal beyond bilateral rouble-yuan; no dedicated climate trade mechanisms	Operational for 50% of intra-BRICS climate-related transactions	Central bank settlement data; trade finance records; NDB transaction reports	BRICS Finance Ministers and Central Bank Governors Meeting; national monetary authorities
Representation of women, youth, Indigenous persons in BRICS climate governance	Women: ~25–30% senior positions; youth: minimal	Parity (50% women, meaningful youth quotas,	BRICS institutional records; national delegation compositions;	BRICS Sherpas with inclusive representation mandate; national

Indicator	Baseline (2025)	Target (2030)	Data Source	Accountability Actor
	formal; indigenous: negligible	indigenous representation)	independent diversity audits	appointment authorities

Source: Compiled by authors

Table 24: Material, social and financial transformation indicators

Domain	Indicator	Baseline (2025)	Target (2030)	Connection to priorities
Material	Ratio distributed: centralised renewable capacity added annually	~1:4 (distributed minority)	Distributed majority (>50% of annual additions)	Priority 3 (localisation); Priority 2 (technology sovereignty)
	Critical minerals beneficiated within BRICS	~20–30% (majority exported raw)	60% (80% by 2035)	Priority 2 (green value chains)
	Fossil fuel subsidies as % GDP	Variable: Russia ~2.5%, India ~1.5%, China ~0.5% direct, South Africa ~0.3%	50% reduction from 2025 baseline (90% by 2035)	Priority 1 (alternative revenue models)
Social	Energy access gap closure with quality standards	~100 million without access; many more with unreliable/unaffordable supply	Universal access with quality standards	Priority 3 (community-led ownership)
	Just transition fund disbursement to affected workers/communities as % total climate finance	Minimal dedicated funding; not systematically tracked	20% of total BRICS climate finance flows	Priority 1 (concessional finance); Priority 3 (localisation)

Domain	Indicator	Baseline (2025)	Target (2030)	Connection to priorities
Financial	Concessional finance as % BRICS climate finance flows	~15–20% (predominantly loan finance at near-market rates)	40% (60% by 2035)	Priority 1 (MDB reform; NDB enhancement)
	Local currency denomination of BRICS climate bonds and loans	Minimal (predominantly dollar-denominated)	Majority (>50%) of new issuance	Priority 1 (NDB enhancement; alternative revenue)

Source: Compiled by authors

Reporting protocol: Annual reporting through the BRICS Climate and Just Transition Review Mechanism, with independent verification by accredited civil society organisations and academic institutions, and full public disclosure of all metrics and review findings.

Section 8: What happens next: Pathways to impact

The research presented in this report is not an endpoint. It is a foundation for action. The findings, recommendations, action plan and accountability framework are designed to serve as a practical guide for BRICS governments, development finance institutions, civil society coalitions and funders on where and how to intervene in the BRICS energy and climate transition. This section operationalises the Strategic Priority Action Plan into concrete pathways with specific timelines, responsible actors and measurable milestones.

8.1 Immediate priorities (0–12 months): Laying the foundation

These actions establish the institutional infrastructure for the regime flip, creating the enabling conditions for medium and long-term transformation.

Table 25: Immediate priorities (0–12 months)

Priority	Description	Owner	Deliverable	Accountability check
1. Establish national climate commissions	Operationalise independent climate commissions in all BRICS members (building on South Africa's PCC model), with statutory mandate, funding and community complaint mechanisms	National governments (environment/climate ministries)	Commission legislation/enabling regulations enacted; commissioners appointed; first annual work plans approved	Verified by BRICS Climate and Just Transition Review Mechanism; non-compliance triggers peer review
2. Launch BRICS Climate and Just Transition Review Mechanism	Establish peer review body with mandate to monitor Strategic Priority Action Plan, assess regime flip metrics and	BRICS Sherpas; NDB	Terms of reference agreed; secretariat established; first review cycle scheduled	Inaugural review report published; civil society observers accredited

Priority	Description	Owner	Deliverable	Accountability check
	authorise cross-border civil society monitoring			
3. Operationalise NDB 40% climate commitment	Redirect NDB portfolio toward Priority 2 (hard-to-abate sectors) and Priority 3 (subnational access), with revised risk frameworks enabling concessional terms and local currency lending	NDB Board; BRICS finance ministers	New lending guidelines approved; first local-currency climate bonds issued; subnational funding window established	Regime flip metric: local currency issuance tracked; concessionality ratio reported
4. Dissemination and stakeholder engagement	Present findings to key BRICS policymakers, NDB staff and development finance institutions. Identify which insights resonate most strongly to prioritise follow-on work	Research Consortium; BRICS Academic Forum	Policy briefs in all five BRICS languages; ministerial briefings conducted; stakeholder feedback incorporated into action plan refinement	Feedback documented; priority adjustments published

Source: Compiled by authors

8.2 Medium-term actions (1–3 years): Building transformation momentum

These actions deepen the regime flip by operationalising the Strategic Priorities at scale, with explicit connections to accountability mechanisms and metrics.

Table 26: Medium-term actions (1–3 years)

Priority	Description	Institutional process	Accountability mechanism	Regime flip milestone (2028)
1. MDB reform advocacy campaign	Coordinate BRICS positions in global forums (G20, IMF/World Bank meetings, UNFCCC) for MDB governance reform, increased grant components and debt sustainability	BRICS Finance Ministers and Central Bank Governors Meeting; coordinated through BRICS Climate and Just Transition Review Mechanism	Annual assessment of BRICS collective advocacy impact; adjustment of positions based on results	Concessional finance ratio increased to 30%; MDB reform commitments secured
2. Niche protection and connection	Support the six innovation niches (Section 4) through targeted funding, policy advocacy and cross-niche connection. Immediate focus: community-owned renewables and BRICS financial architecture reform	NDB; national climate funds; CSO networks	NDB annual report on niche project financing; independent evaluation of community ownership outcomes	Distributed renewable capacity ratio reaches 1:2; community benefit agreements cover 50% of BRICS-funded projects
3. BRICS climate knowledge commons	Develop governance architecture for institutional vehicle sharing research, building capacity and facilitating peer learning. Focus on subnational capacity building (Priority 3)	Academic Institutions; BRICS Think Tanks Council; NDB Knowledge Hub	Commons charter adopted; national nodes established; first fellowship cohorts deployed	500 subnational officials trained through BRICS fellowship programmes; peer learning networks operational in all members

Priority	Description	Institutional process	Accountability mechanism	Regime flip milestone (2028)
4. Hard-to-abate sector transition facilities	Establish blended finance facilities for steel, cement, fertiliser decarbonisation with mandatory technology transfer and local content	NDB; national development banks; private sector partnerships	Facility structures approved; first projects financed; technology transfer agreements signed	\$10 billion transition finance deployed; 40% local content achieved in funded projects
5. Local access funding windows	Make operational direct funding windows for municipalities, communities and grassroots organisations in all BRICS members, with simplified application and community veto provisions	National climate funds; NDB; local banks	Windows launched; first disbursements made; community complaint mechanisms tested	15% of climate finance flowing directly to subnational entities; universal community benefit agreement coverage

Source: Compiled by authors

8.3 Longer-term structural changes (3–5 years): Consolidating the new regime

These actions ensure that the regime flip is irreversible, embedding the Five Transformative Pillars into the institutional DNA of BRICS climate governance.

Table 27: Longer-term structural changes (3–5 years)

Priority	Structural change	Theory of change connection	Accountability verification	Regime flip target (2030)
1. NDB Transformation	NDB fulfils 40% climate finance commitment through instruments that genuinely reach hard-to-abate sectors and	Demonstrates that BRICS-internal reform can precede and pressure global reform; builds track	Independent evaluation: 50% of climate portfolio in hard-to-abate sectors; 30% in subnational/ community	Regime flip metrics: 40% concessional finance; >50% local currency; 30% direct

Priority	Structural change	Theory of change connection	Accountability verification	Regime flip target (2030)
	community-scale projects, not just utility-scale renewables. Becomes model for MDB reform advocacy	record for legitimacy in external advocacy	projects; majority local currency	subnational flows
2. Narrative sovereignty infrastructure	Build long-term institutional infrastructure for BRICS narrative sovereignty; research networks, civic education programmes, cultural production centres that centre Global South-led visions of just energy futures	Shifts cognitive rules of global climate governance; creates epistemic community for alternative development pathways; enables Principle 5 (Pluralistic knowledge systems)	Assessment of BRICS media/ education campaigns; curriculum integration in all members; cultural production metrics	Regime flip metric: parity representation achieved; traditional knowledge registries established; open-source adaptation platforms operational
3. Circular industrial metabolism	Establish regional value chains for critical minerals, green hydrogen and industrial symbiosis with binding local beneficiation, technology transfer and exit strategies	Realises Pillar 2 (Circular industrial metabolism) and Priority 2 (Intra-BRICS green value chains); demonstrates circularity with sovereignty principle	Trade data: 60% intra-BRICS beneficiation; technology transfer compliance audits; community equity participation verified	Regime flip metrics: 60% minerals benefited within BRICS; 50% local currency settlement; binding community agreements universal
4. Polycentric governance institutionalisation	Subnational climate funds with direct access, citizen assemblies with deliberative	Embeds Pillar 4 (Polycentric climate governance) and Priority 3	Legal framework analysis; fund flow verification; assembly deliberation	Regime flip metrics: 30% direct subnational finance;

Priority	Structural change	Theory of change connection	Accountability verification	Regime flip target (2030)
	authority and Indigenous territorial governance recognised in national law across BRICS	(Localisation); prevents recentralisation after initial devolution	records; Indigenous authority recognition	community veto power operational; representation parity achieved
5. BRICS Ombudsperson institutionalisation	BRICS Ombudsperson for Climate Justice becomes permanent institution with investigative powers, policy recommendation authority and mediation capacity	Provides redress mechanism for accountability gaps; ensures that subsidiarity with solidarity does not become neglect; enables Precaution With Participation	Caseload data; policy change recommendations adopted; community satisfaction with mediation; annual report to Review Mechanism	Operational redress mechanism; systemic violation investigations concluded; policy changes implemented

Source: Compiled by authors

8.4 Critical success factors and risk mitigation

Table 28: Critical success factors and risk mitigation

Risk	Mitigation strategy	Accountability safeguard
National governments resist independent climate commissions	BRICS Climate and Just Transition Review Mechanism authorises cross-border civil society monitoring; peer pressure through public reporting	Suspension of voting rights in BRICS institutions
NDB reverts to conventional lending patterns	Revised risk frameworks with mandatory concessionality ratios; annual independent audit; Board accountability to finance ministers	Restricted access to collective BRICS financing

Risk	Mitigation strategy	Accountability safeguard
Technology transfer promises remain unfulfilled	Binding local content requirements in all NDB-financed projects; independent verification; community complaint mechanisms	BRICS Ombudsperson investigation; project suspension
Subnational capacity building fails to translate to project pipeline	Fellowship programmes linked to mandatory project development; peer learning networks with performance metrics; direct access windows with technical assistance	National climate commission review; fund reallocation
Fossil fuel lock-in persists despite transition finance	Managed demand reduction strategies; diversification funds for fossil-dependent regions; just transition fund disbursement tracked	Early election triggers in extreme cases; fiscal penalties

Source: Compiled by authors

8.5 From navigation to transformation

The BRICS Climate and Energy Compass (Section 6), strategic priorities and action plan (Section 7) and pathways to impact (Section 8) constitute an integrated regime-shift strategy. The Five Transformative Pillars define the destination. The Five Governance Principles ensure legitimate passage. The Five Strategic Imperatives apply pressure on lock-in mechanisms. The accountability framework ensures that rhetoric becomes reality. The regime flip metrics verify transformation.

This is not a blueprint to be implemented uniformly. It is a navigation tool for diverse BRICS contexts – China's manufacturing capacity, South Africa's just transition imperative, Brazil's bioeconomy potential, India's distributed energy needs, Russia's diversification challenge and the aspirations of new members. The Compass orients; the action plan mobilises; the accountability framework disciplines; the metrics illuminate.

What happens next depends on the political will to begin. The immediate priorities (0–12 months) require no new institutions, only the decision to use existing ones differently. The medium-term actions (1–3 years) build the architecture for transformation. The longer-term structural changes (3–5 years) consolidate a new regime that inverts the logic of the old – distributed, not centralised; circular, not linear; sovereign, not dependent; polycentric, not concentrated; pluralistic, not hegemonic. The research ends here. The work begins.

Appendix A: Research methodology

This research combined four complementary methods, each designed to reveal a different dimension of the BRICS energy and climate challenge. The results are not the research team's opinions; they emerged from a rigorous, participatory process involving policymakers, finance practitioners, community leaders and civil society voices from across the BRICS bloc. A participatory, multi-phase methodology was used to analyse climate and energy transitions and develop recommendations. The methodology was designed to enable evidence-based analysis while incorporating diverse stakeholder perspectives.

The research was conducted across 10 BRICS member states, with particular depth in China and South Africa. It included over 40 strategic interviews with senior policymakers, finance practitioners, civil society leaders and researchers, as well as multi-country Policy Innovation Labs bringing together diverse BRICS stakeholders in structured dialogue.

Phase 1: Context analysis

The research began with a review of BRICS declarations, multilateral forum outcomes and academic literature on climate and energy governance. This established the baseline understanding of BRICS climate positions, areas of convergence and divergence and the key multilateral forums where BRICS countries engage on climate issues.

Phase 2: Systems mapping

Primary research was conducted through over 40 strategic interviews with senior representatives from government, civil society, academia and the private sector in BRICS countries. Interview findings were synthesised through systems mapping analysis, identifying key actors, rules, materials and their interrelationships. This produced the actor typology and regime analysis presented in Section 2.

Phase 3: Policy Innovation Labs

Multi-stakeholder Policy Innovation Labs brought together representatives from BRICS countries to apply futures literacy methodologies, including the Three Horizons Framework and Causal Layered Analysis, to identify systemic leverage points and develop transformative strategies. The Labs produced the insights in Section 6 and the strategic framework in Section 7.

Phase 4: Synthesis and validation

Findings were synthesised and validated through peer review and stakeholder feedback. The research team worked with SALLA colleagues and external reviewers to ensure analytical rigour and practical relevance.

Systems mapping: What it means in practice

We mapped the full network of actors, rules, resources and relationships that shape BRICS energy and climate decisions. Think of it as drawing a wiring diagram of a very complex political and economic system, showing not just who the players are but also how they influence each other, where power is concentrated and where the key pressure points for change are located.

What this produced: A clear picture of who is blocking progress, who is enabling it and which relationships – if strengthened or shifted – would produce the most impact. The actor typology in Section 3 (China as Structural Pivot, South Africa as Normative Entrepreneur, etc.) came directly from this mapping work.

Multi-Level Perspective: What it means in practice

MLP is a framework for understanding why large systems, like energy, are so hard to change. It identifies three levels: the dominant system in place today (the regime – in our case the fossil-industrial complex); the emerging alternatives trying to break through (niches – like community renewables or green hydrogen); and the big external forces creating pressure for change (the landscape – like climate impacts, geopolitical shifts or falling clean technology costs).

What this produced: A strategic map of where the transition is most likely to accelerate, where it is likely to stall and which niches deserve investment because they have the best chance of challenging the incumbent system. This is the basis for the niche analysis in Section 4 and the priority recommendations in Section 7.

Futures Literacy Labs: What it means in practice

We brought together policymakers, researchers, civil society leaders and community voices from across BRICS countries to do structured collective thinking about the future. Futures Literacy Labs help participants question their assumptions about how change works, imagine genuinely different futures and identify what they would need to do differently to achieve them, rather than simply extending current trends.

What this produced: The six key insights in Section 6 of this report emerged directly from these participatory processes, making them more legitimate, more practically grounded and more likely to be acted on by the people who participated in developing them.

Causal Layered Analysis: What it means in practice

CLA is a tool for understanding why problems keep recurring even when people try to fix them. It looks beyond visible symptoms (energy poverty, slow investment, policy failure) to the systemic causes, then to the worldviews that produce those causes and finally to the deep cultural stories and values that make those worldviews feel natural and inevitable.

What this produced: An explanation of why technical solutions alone keep failing and what kinds of narrative and cultural change need to accompany policy reform. The finding in Section 5 that coal remains a symbol of development identity in some BRICS contexts is a CLA-derived insight with direct implications for communication strategy and stakeholder engagement.

Appendix B: BRICS Climate Knowledge Commons institutional design

The BRICS Climate Knowledge Commons (CKC) is a proposed institutional architecture for collaborative knowledge production, capacity building and peer learning across the BRICS bloc. It emerged from the Policy Innovation Labs as a concrete institutional response to the governance fragmentation identified in Insight 1 of Section 6.

What the BRICS CKC would do

- facilitate the systematic sharing of research, data and practical experience on climate and energy transitions across BRICS member states;
- build technical capacity at subnational and community levels, addressing the implementation gap between national policy and local action;
- create a peer learning network among BRICS institutions, not for policy exchange, but for the co-creation of new institutional practices grounded in BRICS realities; and
- develop and maintain BRICS-specific climate data and knowledge tools, reducing dependency on Northern knowledge-production systems.

Governance structure

The CKC would operate as a light-touch coordinating body, not a new bureaucracy. It would be embedded within the existing BRICS institutional architecture while maintaining independence from the national governments that fund it. Key governance principles include:

- equitable representation of all BRICS members, including smaller and more vulnerable members;
- independent evaluation and open data publication;
- direct accountability to civil society and community participants, not only to government funders; and
- deliberative processes for developing shared standards and learning priorities.

Relationship to existing BRICS institutions

The CKC would complement rather than duplicate the NDB, BRICS think tank networks and existing bilateral research cooperation. Its distinctive contribution is the facilitation of systematic, multi-directional learning, as opposed to the current pattern where knowledge flows primarily from more to less powerful members and where practical community-level innovation is rarely systematised and shared.

Funding approach

The CKC would be funded through a combination of BRICS government contributions, DFI grants and international philanthropy. A sliding-scale contribution model based on GDP and emissions levels would operationalise the CBDR-BRICS principle. The CKC's establishment phase would be a high-leverage investment, creating an institutional vehicle that multiplies the impact of all other BRICS climate investments.

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