CEBRI

BRICS DIALOGUES

POLICY INSIGHTS IN BRAZIL'S LEADERSHIP YEAR

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Executive Summary

This Executive Summary consolidates the main findings and recommendations from three thematic policy papers prepared under the BRICS Dialogues initiative, focusing on Energy Transitions, Food Security and Agriculture, and Digital Transformation and Artificial Intelligence (AI). The purpose of this compilation is to support the Brazilian BRICS presidency in 2025, by providing policymakers, business leaders, and other stakeholders with actionable policy options that reflect Global South perspectives and address pressing development challenges in a coordinated and pragmatic manner.

The initiative also aligns with the broader institutional mission of the Brazilian Center for International Relations (CEBRI) to foster public debate and policy innovation in Brazil's multilateral engagements, treating the BRICS platform as one of the key arenas where Brazilian diplomacy can advance national interests while promoting South-South cooperation.

Project Context

Amid an increasingly fragmented and contested global order, the Brazilian presidency of BRICS offers a window of opportunity to shape a forward-looking agenda for inclusive development, institutional reform, and strategic autonomy. In this context, CEBRI has supported the development of three detailed policy papers aimed at informing debates and influencing decision-making across BRICS mechanisms, including the New Development Bank (NDB), the BRICS Business Council, and sector-specific ministerial forums. The following sections synthesize the core policy recommendations of each paper.

Main Outcomes of the Three Policy Papers

Energy Transition and Climate Cooperation

The Energy Transition paper builds on the Brazil-China partnership on biofuels as a model for broader BRICS cooperation on low-carbon technologies. Recognizing the expanded BRICS membership, which now includes key energy producers and consumers like the United Arab Emirates (UAE) and Indonesia, the paper recommends:

- **The expansion of the Brazil-China collaboration model on biofuels** to include other BRICS countries and facilitate trilateral synergies in R&D, harmonized sustainability certification and joint deployment of infrastructure and capacity to attend energy transition needs in sectors such as aviation or maritime.
- **Establishing structured platforms and mechanisms** that institutionalize knowledge transfer, regional innovation clusters, and green finance instruments. Techno-economic assessments, robust traceability frameworks, and harmonized carbon intensity standards are essential to catalyze transnational investment flows, enable rural-based bioindustrial development, and scale the deployment of low-carbon liquid fuels in sectors with limited electrification potential across emerging economies.
- **Implementing clear regulatory frameworks and planning instruments** to guide land conversion in a way that safeguards environmental quality and supports socially inclusive outcomes

Food Security and Agriculture

The Food Security paper highlights the urgency of reconciling food security and climate resilience in light of rising geopolitical risks and environmental degradation. Key recommendations are divided between policymakers and business leaders:

Recommendations for Policymakers

- **Dynamic Sector Leadership** – Establish a flexible and decentralized framework for agricultural governance within BRICS, where member countries assume leadership in specific areas of cooperation according to their comparative expertise and domestic experience. For example, Brazil could champion initiatives on land restoration and climate-resilient agriculture, while India could take the lead on smallholder farming support or digital certification systems. This model of sector champions would encourage shared ownership, ensure relevance to national priorities, and foster peer-to-peer learning.
- **NDB Reform** – Expand the NDB's operational mandate and investment portfolio to explicitly include projects related to sustainable land use, agriculture, and nature-based solutions. This would allow the Bank to become a more effective financial instrument for addressing food security, land restoration, and climate resilience challenges. Dedicated financial windows or thematic funds could be created within the NDB to target smallholder agriculture, climate-smart technologies, and rural infrastructure, providing concessional finance and technical assistance to eligible projects.
- **Convergence on Carbon Markets** – Promote regulatory alignment among BRICS countries on carbon accounting and market design, building on the momentum generated by the May 2025 BRICS Principles on Carbon Accounting. A phased approach could start with the adoption of shared guidelines for product and facility carbon footprints, with the longer-term goal of developing interconnected or interoperable carbon markets across the BRICS space. This alignment could enhance market liquidity, lower transaction costs, and provide new revenue streams for climate-smart agricultural and land-use projects.
- **Knowledge Networks** – Strengthen and expand the BRICS Agricultural Research Platform (BARP) by creating thematic research communities focused on priority areas such as soil restoration, climate-resilient crops, digital agriculture, and sustainable water use. These networks should be complemented by targeted exchange fellowships, joint training programs, and the establishment of an Annual BRICS Agricultural Knowledge Forum. Partnerships with existing international platforms like the Food and Agriculture Organization (FAO) or Consultative Group on International Agricultural Research (CGIAR) can also enhance the reach and credibility of these initiatives.

Recommendations for Business Leaders

- **Technology Transfer Networks** – Foster cross-border technology partnerships by scaling up joint R&D projects within the BARP and under the BRICS Business Council frameworks. This should include co-investment in agricultural innovation hubs, biotechnology research, and climate-smart farming solutions. Private sector engagement in these networks will be critical to bridge the gap between laboratory research and field application, especially for small and medium agricultural enterprises in BRICS countries.
- **Optimized Financial Channels** – Strengthen and diversify financing instruments tailored to agricultural producers and agribusinesses across the BRICS. This includes expanding local-currency swap lines for trade in agricultural commodities, creating harvest-backed loan products that link credit to future yields, and integrating blockchain solutions into supply chain financing platforms to improve traceability and reduce transaction risks. Enhanced financial tools can help de-risk investments and improve market access for smallholder farmers and agricultural small and medium enterprises (SMEs).
- **Targeted Investment Vehicles** – Develop special-purpose investment vehicles designed to address specific infrastructure and service gaps in BRICS agricultural value chains. Rather than creating broad, unwieldy funds, these vehicles should focus on discrete needs such as rural logistics, cold chain storage, irrigation systems, or digital market access platforms. Such tailored instruments can attract blended finance, including private capital and NDB co-financing, while enabling faster deployment and higher developmental impact.
- **Cross-Border Value Chain Pilots** – Launch small-scale, low-risk cross-border pilot projects that leverage complementary strengths among BRICS members. These pilots could focus on specific segments such as fertilizer corridors, shared storage and distribution networks, or the co-development of sustainable certification standards. Utilizing existing infrastructure and promoting the use of local currencies for transactions can help reduce costs and build trust among stakeholders. Successful pilots could then serve as scalable models for broader regional cooperation.

Digital Transformation and and Artifical Intelligence (AI)

The Digital Transformation and AI paper recognizes the diversity in AI capabilities across BRICS countries and proposes scalable, South-South-led mechanisms to bridge technological asymmetries. The core recommendations are the following:

- **Establish the AI Safety and Opportunities Collaborative (AISO)** – Create a permanent, Global South-based scientific and policy panel on Artificial Intelligence, modeled after the Intergovernmental Panel on Climate Change (IPCC). AISO would serve as a multi-stakeholder platform to assess the risks, opportunities, and socio-economic impacts of AI across BRICS and other developing countries. Its mandate would include producing periodic assessment reports, offering evidence-based guidance for policymakers, and providing a forum where Global South voices can shape the global discourse on AI governance and ethics. This initiative would also help position BRICS as a proactive and credible actor in international AI standard-setting processes.
- **Create a BRICS AI Compute Hub** – Establish a shared, BRICS-funded infrastructure platform to enhance member countries' access to AI compute capacity, including high-performance computing resources and large-scale data storage. This Hub, with financing from member countries and the NDB, would enable collaborative development of AI models that are socially, linguistically, and culturally relevant to the diverse realities of BRICS and other Global South countries. The initiative would help reduce dependency on infrastructure concentrated in developed countries and address asymmetries in access to computational power that currently limit AI innovation in many BRICS members.
- **Advance a BRICS Framework for Safe, Ethical, and Sovereign AI Governance** – Launch a BRICS AI Safeguards Initiative to promote regulatory cooperation, develop shared principles for ethical AI deployment, and establish mechanisms for periodic review and adaptation in response to technological evolution. This framework should prioritize data sovereignty, transparency, accountability, and human rights protection, while also fostering innovation and economic growth. Establishing working groups with representatives from regulatory bodies, academia, and civil society can help ensure that the governance model is inclusive and responsive to diverse national contexts.

Cross-Cutting Themes and Strategic Opportunities

Across the three areas — Energy Transition, Food Security, and Digital Transformation — common strategic threads emerge:

- **Leveraging the NDB as a Financial Engine for Development**, by expanding its mandate and portfolio towards green technologies, agriculture, and digital infrastructure, while promoting local currency lending and innovative finance instruments.
- **Building on Existing BRICS Frameworks**, rather than creating entirely new mechanisms, to increase efficiency, avoid duplication, and deliver measurable results. Over 180 cooperation mechanisms currently exist within BRICS, offering a strong institutional foundation.
- **Promoting South-South Knowledge Exchange and Technology Transfer**, by encouraging joint R&D, capacity-building programs, and flexible pilot initiatives that can scale over time.
- **Aligning with Global Agendas**, especially the Sustainable Development Goals and the COP30 outcomes, to reinforce BRICS relevance in shaping global governance frameworks in climate, technology, and food systems.

Conclusion

The convergence of challenges across energy, food, and digital domains requires integrated, innovative, and scalable solutions. The three policy papers presented under this initiative offer Brazil and its BRICS partners a coherent, pragmatic roadmap to translate political ambition into measurable outcomes.

By investing in practical mechanisms — backed by finance, technology, and governance reforms — BRICS can strengthen its collective voice, close key development gaps, and offer the Global South new models for inclusive, resilient, and sovereign development in the years ahead.

Chapter 1

Fueling the Future: Pathways for Low-Carbon Energy Cooperation in the BRICS Framework

A strategic analysis of Brazil-China cooperation on biofuels, emerging technologies, and financial and policy suggestions to support decarbonization efforts in BRICS countries

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* This paper reflects the personal research, analysis, and views of the authors and does not represent the position of the institution, its affiliates, or partners.

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BRICS DIALOGUES

Abstract

Synthesis of recommendations

The Brazil-China collaboration on biofuels highlights critical enablers for scaling sustainable bioeconomy solutions: robust policy frameworks, technology transfer mechanisms, and integrated biomass value chains. The challenges to scaling production include ensuring economic viability, access to financing and a sustainable use of land resources.

Joint advancements in feedstock optimization, second-generation biofuel production, and lifecycle carbon intensity metrics demonstrate the potential for replicable, science-based cooperation to address some of these challenges.

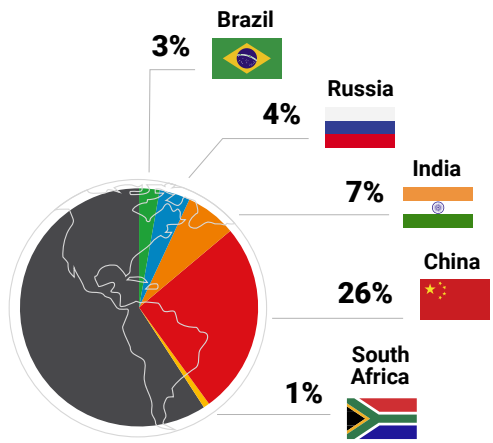
In light of this, this paper proposes:

- **The expansion of the Brazil-China collaboration model on biofuels to include other BRICS countries** and facilitate multilateral synergies in R&D, harmonized sustainability certification and joint deployment of infrastructure and capacity to attend energy transition needs in sectors such as aviation or maritime.
- **Establishing structured platforms and mechanisms that institutionalize knowledge transfer, regional innovation clusters, and green finance instruments.** Techno-economic assessments, robust traceability frameworks, and harmonized carbon intensity standards are essential to catalyze transnational investment flows, enable rural-based bioindustrial development, and scale the deployment of low-carbon liquid fuels in sectors with limited electrification potential across emerging economies.
- **Implementing clear regulatory frameworks and planning instruments** to guide land conversion in a way that safeguards environmental quality and supports socially inclusive outcomes.

1 Introduction and rationale

BRICS countries face a shared challenge in their energy transitions while maintaining energy security, socioeconomic stability and development. China, Russia, India, Brazil and South Africa together account for 45% of the world's CO_2 emissions, and the expanded BRICS are responsible for 43.6% of the global oil and almost 80% of the global mineral coal production.[1] They rely, to varying degrees, on fossil fuels for energy production, revenue and gross domestic product (GDP) growth, but also often depend on fossil fuel imports for their energy security. While wealthier nations are expected to undergo this transition at a faster pace, developing economies in the BRICS group require time and targeted support to avoid economic vulnerability and ensure a just, orderly and equitable transition, in the terms agreed upon at COP28.[2]

Figure 1: Share of emissions of BRICS countries, 2021

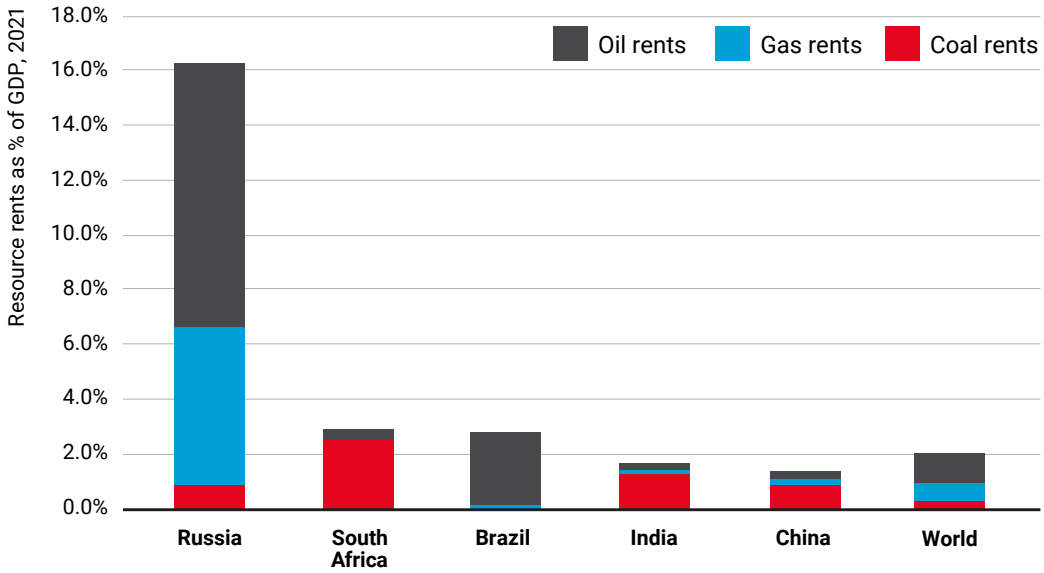


Source: Figure from BRICS Policy Center, data from ClimateWatch and SEEG

1. Source IEA, cited in https://brics.br/en/about-the-brics/brics-data

2. See figure 2. Projections based on the IEA's Sustainable Development Scenario (SDS; consistent with 2°C warming) indicate that direct public fossil fuel revenues could fall to around 35% of 2019 levels for Brazil, China, Indonesia, and Russia by 2050, while India's and South Africa's revenues could fall to around 65% of 2019 levels.

Figure 2: Fossil fuel rents as a % of GDP in BRICS (2021)



Source: CEBRI Project Coordination team, Data from the World Bank, 2021

By working together, the BRICS can leverage their collective influence to advocate for frameworks to support energy transition efforts in global negotiations. They can also collectively foster just and inclusive policies and instruments that promote energy access and security, green industrialization, and resilience in their respective countries. In May 2025, the BRICS Energy Ministers highlighted existing mechanisms such as the Energy Research Cooperation Platform (ERCP), endorsed a new Roadmap for Energy Cooperation 2025-2030, and encouraged joint work on issues such as sustainable fuels or access to energy services.

Among the promising areas of cooperation, sustainable fuels is one that builds on common characteristics and challenges among BRICS countries, considering the current or potential capacity of some of these countries to play a significant role in production as well as the role of biofuels within the energy transition scenarios. The International Energy Agency (IEA) NetZero scenario forecasts that biofuels can respond to 8-12% of energy consumption in hard-to-abate sectors in 2030. To this end, a significant increase in biofuel production (including fuel from waste and residues and nonfood energy crops) is needed.[3]

3. According to the IEA, Biofuel production reaches over 10 EJ by 2030 in the NZE Scenario, requiring an average growth of around 11% per year — with a role for emerging economies such as Brazil, India and Indonesia in this growth. https://www.iea.org/energy-system/renewables/bioenergy

This paper draws on the case study of Brazil and China to outline some of the challenges in scaling up biofuel production.

It also highlights pathways for cooperation among BRICS countries, drawing on recommendations based on the lessons learned from Brazil-China cooperation on biofuels and on experiences from Indonesia and the UAE.

2 Problem analysis

The energy transition in emerging economies such as Brazil and China is constrained by persistent structural barriers to financing. Despite strong political signals and growing domestic and international commitments to decarbonization, the deployment of advanced low-carbon technologies — particularly biofuels — continues to face considerable financial and institutional challenges.

One of the central obstacles is the *limited availability of tailored financial instruments* that adequately reflect the risk-return profile of bioenergy projects.

While Brazil has made advances through programs such as RenovaBio, which introduced carbon intensity certification and biofuel credit markets, the scale of private investment remains insufficient.[5] Small and medium-sized projects, particularly in biodiesel and second-generation ethanol, often struggle to access long-term credit under favorable terms. High interest rates, lack of credit guarantees, and the absence of structured de-risking mechanisms reduce the attractiveness of these projects to institutional investors.

In China, although clean energy financing has grown rapidly — especially for solar, wind, and battery storage — biofuels still receive relatively limited financial prioritization. Many biofuel initiatives remain confined to pilot programs or

4. These examples aim to bring perspectives from other relevant BRICS countries, Indonesia being one of the major biofuel producers and the UAE being an important prospective investor in biofuels in Brazil.

5. The ICCT, for instance, states that "RenovaBio, as currently implemented, provides a weak incentive for non-food fuels and is likely insufficient to support the production of more sustainable but costly advanced fuels." https://theicct.org/wp-content/uploads/2021/06/ICCT_Brazil_lowcarbon_fuel_opp_20190726.pdf

regionally focused mandates. The sector's technological complexity, combined with uneven feedstock availability and operational cost volatility, contributes to investor hesitation. Moreover, biofuels in China have historically been treated more as an agricultural policy tool than a key pillar of climate mitigation, which limits their integration into national green finance taxonomies and eligibility for climate bonds.

A second key challenge lies in the *absence of mature, investment-ready project pipelines*.

Both countries face difficulties in aggregating, standardizing, and scaling bioeconomy projects with clear metrics on environmental performance and economic viability. This results in a lack of confidence among private and multilateral financiers. Furthermore, harmonized standards for lifecycle emissions, land-use sustainability, and traceability of biomass remain under development, reducing the compatibility of projects with international green finance criteria.

Another limitation is the *weak linkage between climate policy instruments and capital mobilization strategies*.

While both Brazil and China have articulated long-term climate goals — such as carbon neutrality and increased biofuel blending—there remains a disconnect between these targets and the fiscal, regulatory, and institutional tools necessary to mobilize investment. For instance, instruments such as green public procurement, tax incentives, or credit enhancement facilities are underutilized or inconsistently applied.

Finally, *multilateral coordination platforms capable of directing capital flows toward bioeconomy projects in the Global South remain fragmented*.

Although entities like the NDB have a mandate to support sustainable infrastructure, few mechanisms exist specifically for supporting biofuel deployment at scale. The absence of regional investment facilities, co-financing models, and shared risk assessment frameworks among BRICS countries hampers collective progress.

Overcoming these financial barriers requires integrated approaches that combine policy certainty, financial innovation, sustainability safeguards and institutional cooperation to unlock the full potential of biofuels within broader low-carbon development strategies.

The case of other BRICS countries: Indonesia & the UAE

Indonesia: a major biofuels player from which to draw policy examples and lessons for further synergy within the BRICS

Leveraging Indonesia's palm oil and waste-based biodiesel infrastructure would facilitate multilateral synergies in applied R&D, harmonized sustainability certification (e.g. LCA-based standards) and joint deployment of bio-refineries targeting aviation and maritime decarbonization.

Indonesia is the world's largest producer of palm oil, which is also the main source of its biofuel. It launched almost two decades ago the B5 program, which mandated a blend of 5% palm-based biodiesel with crude diesel. Policies have been met with success, leading to a significant increase in biodiesel usage, with a progressive increase in the blend, now at a B40 Mandate (40% of biodiesel in the mix). This has been proven beneficial to reduce the import of crude diesel oil, save national income and increase GDP. By maintaining price stability of the fresh fruit bunch (oil palm fruit), the program also has a direct socioeconomic impact for smallholders in rural areas in Indonesia.

A major challenge of Indonesia's biofuels program is to ensure protection against deforestation. To promote sustainable development, the Indonesian government and relevant associations are mandating the Indonesian Sustainable Palm Oil (ISPO) certification. By 2025, this certification is expected to cover more than 90% of smallholder farmers, helping them meet international standards for CO_2 emissions through the Biodiverse and Inclusive Palm Oil Supply Chain (BIPOSC) program.

Indonesia aims to increase palm oil production without expanding land use. At the same time, the government is raising the biodiesel blending ratio from B10 to B50, depending on funding from the Oil Palm Plantation Fund Management Board (BPDPKS). This fund also supports smallholder farmers with replanting, reducing fertilizer use, and improving agricultural skills.

BPDPKS's main financing source is a flexible special tax, designed to balance domestic and export markets, as well as the food and fuel sectors. The government is now advancing second-generation biofuels, based on waste from the complete palm oil value chain — while promoting Sustainable Aviation Fuel for air transportation.

The United Arab Emirates (UAE) as a bridge between fossil fuel producers and clean energy innovators

By advocating for a "realistic transition" that balances energy security, economic growth, and climate goals, the UAE offers an interesting case for analyzing the potential for expanded BRICS cooperation in the energy transition.

Despite being one of the Gulf's "oil monarchies" and among the world's highest per capita emitters, the UAE's leadership is seeking long-term changes in its national energy matrix, with significant investments in clean and renewable energy sources. Leveraging its solar and wind potential, it has set to reducing its carbon footprint from fossil fuel extraction and also led action-based policies at the regional and multilateral levels:

- **International Renewable Energy Agency (IRENA)** has been headquartered in Abu Dhabi since 2009;
- **Abu Dhabi Future Energy Company (MASDAR)**, the government-owned renewable energy enterprise, is a global leader investing in more than 40 countries with a capacity exceeding 30 GW.

The multilateral consensus reached in Dubai's COP28 reflects the UAE's efforts toward energy and climate cooperation. It called for a transition away from fossil fuels in "a just, orderly and equitable manner", offering a unique opportunity for BRICS cooperation initiatives aligned with this decision. Brazil has partnered with the UAE through the COP Troika, ensuring continuity through COP30.

The UAE may collaborate in this collective effort by leveraging technical capacity and financial ecosystems, through its technical and project management expertise (e.g., MASDAR's investments and developments in solar, wind and waste-to-energy projects across Asia, Africa and Europe). As a major sovereign investor and financial hub, the country may catalyze climate finance alternatives through sovereign wealth funds and state-backed entities, while also helping shape green finance ecosystems in partnership with the New Development Bank and other multilateral financial institutions.

Concrete examples of this contribution are emerging in the biofuels sector: one the UAE's most important sovereign funds, Mubadala Capital, is developing via its Brazilian subsidiary Acelen a large-scale biofuel refinery in Bahia.

These examples of cooperation, investments and partnerships can inspire initiatives involving other BRICS countries, adding value to prospective BRICS collaborations and bridging the gap between fossil-fuel dependence and net-zero ambitions.

3 Policy recommendations

i. Recommendations for Policymakers

- **Develop and coordinate mechanisms within the BRICS to support low-carbon projects and the deployment of green technologies.** In order to ensure that energy and climate transitions are also vectors for regional economic development, policymakers should develop actions and collaborate on mechanisms that can ensure support for low carbon projects and green technology, through special finance, key talent capacity-building, the promotion of reasonable standards, and suitable mechanisms of carbon credit trading, that draw on best practices across BRICS countries.
    - » As an example, BRICS countries could cooperate, through the New Development Bank, on the development of a BRICS-specific carbon credit trading system. The proceeds could be channeled into low-carbon projects fostering local economic development, including technologies to convert agricultural waste into energy, with standards developed by a BRICS Technology Bank and credits, taking the form of a digital currency ("Carbon Coin") issued by the NDB. This idea would require further testing and validation to assess its viability, effectiveness, and scalability.
- **Implement specific partnership initiatives on bioenergy.** There is room to strengthen the strategic, multilateral partnership to develop bioenergy, especially the use of biofuel. Countries such as China, Brazil or Indonesia share the characteristics of being important biofuel producers (canola, soybean, palm) — which can also be an important source of Sustainable Aviation Fuel (SAF). It is essential to draw on this potential and further knowledge, technology and information sharing.

- **Identify existing platforms on which to build these new mechanisms.** Cooperation mechanisms require a new approach, but one that builds upon existing platforms to be implemented. Below, the authors present a concrete example of such a mechanism that could be developed in a BRICS context — aimed at creating favorable conditions for mutual investments and, therefore, reinforcing one of the main objectives of the new Roadmap for BRICS Energy Cooperation 2025-2030.

- **Ensure a sustainable use of land resources and address land-use concerns through regulation and planning.** A critical dimension to be addressed in this agenda is the issue of land-use sustainability, to ensure that biofuel production aligns with broader environmental priorities and contributes effectively to the achievement of climate mitigation goals. In both Brazil and China, advancing biofuel production requires careful governance of land resources.

    - » In Brazil, the availability of extensive areas of degraded pastureland presents a strategic opportunity to scale bioenergy without expanding into native vegetation or high-biodiversity ecosystems such as the Amazon and the Cerrado. The productive recovery of these lands and the development of techniques such as Integrated Crop-Livestock-Forestry Systems (ICLF) that improve productivity and resource efficiency not only mitigates the risk of indirect land-use change, but also generates positive socioeconomic impacts — such as job creation, infrastructure development, and income diversification — in regions marked by low investment and limited economic opportunities.

    - » In China, where land competition is more acute, efforts to cultivate non-food energy crops on marginal or low-productivity soils can expand energy supply without compromising food security.

In both contexts, clear regulatory frameworks and planning instruments are needed to guide land conversion in a way that safeguards environmental quality and supports socially inclusive outcomes. To achieve this, BRICS countries should implement integrated land-use planning frameworks that prioritize low-carbon, low-conflict land allocations. Tools such as geospatial zoning, lifecycle greenhouse gas metrics, and enforceable sustainability safeguards should be embedded into national certification schemes. Aligning these instruments with international standards will reinforce environmental integrity, facilitate access to climate finance, and ensure that biofuel strategies contribute meaningfully to national decarbonization goals and sustainable land use.

ii. Recommendations for Business Leaders

- Business leaders should be engaged to recognize that the energy transition is an opportunity for business development. This includes promoting investment, encouraging innovation, supporting product and system upgrades, expanding participation in CO_2 trading markets, in Engineering, Procurement and Construction (EPC), Build-Operate-Transfer (BOT), and Public-Private Partnership (PPP) models.
- Co-investment models are necessary to deepen cooperation and push the energy and climate transition. Investment should mean not only financial capital, but also contributions of technology, expertise, resources, and services. These contributions can be developed into project shares, leading to equitable participation and benefit-sharing.
- Governments and industry associations should promote the development of inclusive, sustainable supply chains that enable diverse partners to share in the benefits of the energy and climate transition. Policies that encourage cooperation and competition will lead to resilience and innovation across supply chains.
- Governments, businesses, universities, and civil society organizations must collaborate closely to achieve the objectives of the energy and climate transition.
- Support and incentivize collaborative research initiatives with teams from universities of different countries. Such co-research can accelerate commercialization, disseminate best practices and overall benefit the different members of the BRICS bloc.
- Business leaders, with the support of policymakers, should initiate and promote the creation of cross-border industry associations that connect key stakeholders — such as policymakers, financial institutions, technology providers, and government agencies.

Author Biographies

Rejane Rocha is a Brazilian Chemical Engineer, graduated from the Federal University of Rio de Janeiro (UFRJ), with over 20 years of experience in biofuels, sustainable energy innovation, and international cooperation. She works as a senior researcher at COPPE/UFRJ and currently serve as the Executive Secretary of the China-Brazil Center for Climate Change and Technology Innovation, a partnership between COPPE/UFRJ and Tsinghua University. Focused on biofuels development, especially second-generation biofuels and their blends, regulatory innovation, and technology transfer through applied research. She has been managing strategic projects on fuel quality control, Sustainable Aviation Fuel (SAF), and the decarbonization of industrial sectors, including maritime transport. She fosters Brazil-China collaboration and building bridges between academia, government, and industry, and seeks to strengthen the connection between academic research and industrial application to promote effective technology transfer aimed at supporting Brazil's sustainable development and climate change mitigation efforts.

Liu Dehua, professor, obtained his phD in Chemical Engineering from Tsinghua University in Beijing, China, between 1986 and 1991, after completing his degree in Applied Chemistry at the same institution from 1981 to 1986. He is currently the director of the Sino-Brazilian Centre for Climate Change and Technological Innovation in Energy, a collaboration between Tsinghua University and the Federal University of Rio de Janeiro (UFRJ), a position he has held since 2010. He is also a professor and director of the Institute of Applied Chemistry in the Department of Chemical Engineering at Tsinghua University, where he has worked since 1999. Professor Liu has been a member of Coca-Cola's PlantBottle Technical Advisory Board since 2014 and was a consultant for DuPont from 2008 to 2011. Prior to this, he served as a professor at the Institute of Process Engineering of the Chinese Academy of Sciences from 1997 to 1999 and as an associate professor from 1993 to 1997. During 1994 and 1995, he was a visiting researcher at Purdue University's Renewable Resources Engineering Laboratory in the United States, and between 1991 and 1993, he was a post-doctoral research assistant at the same institution.

Leandro Vieira Silva holds a law degree (Federal University of Minas Gerais, 1998), a master's degree *cum laude* in public international law (Leiden University, 2001) and a master's degree in diplomacy (Rio Branco Institute, 2010). A career diplomat since 2007, his positions in Brasília have included heading the West and Central Africa Division (2018) and the Levant Countries Division (2018 to 2021). Abroad, he has served at the Embassy in São Tomé and Príncipe (2009 to 2011), in the Permanent Mission of Brazil to the United Nations (2011 to 2014) and in the Brazilian Representative Office in Ramallah (2014 to 2018). He has been the Deputy Head of Mission at the Embassy in Abu Dhabi since 2021.

Djono Albar Burhan is the Head of International Relations at the Indonesian Palm Oil Smallholder's Association. Committed to promoting sustainable practices, he also serves as the National Secretary of the Sawit Setara Cooperative. In addition, he is the Director of both Oil Palm Organic Fertiliser Setara and the BK Group. Djono has been a guest speaker at various national and international events focused on palm oil production. In 2023, he was elected International Young Elaeis Ambassador by the Council of Palm Oil Producing Countries (CPOPC). He holds a Bachelor's degree in Information Systems from Maranatha Christian University and a Master's degree in Management (International Business) from the University of Auckland and currently is taking Doctor's degree in Environmental Science in Riau University.

Léa Reichert, Deputy Director at the Brazilian Center for International Relations (CEBRI), is responsible for the Energy Transition Program, contributing to the implementation of landmark projects on NetZero Roadmaps for Brazil, Critical Minerals for the Transition and investment flows. She has ten years of experience in project management and public policy making, with a focus on policies related to the energy transition, sustainability and geopolitics. At CEBRI, she was previously in charge of supervising the activities of CEBRI's Projects Department and coordinating the Asia, Energy, Infrastructure and Agribusiness programs. Previously, she worked as a senior public-sector consultant at KPMG Paris, for the Political Section of the European Union Delegation in Brazil, and for a Research Center at Antonio Ruiz de Montoya University in Lima, Peru. She holds a Master's degree in International Public Management from SciencesPo Paris and a BA in Political Science and International Relations from McGill University.

Beatriz Pfeifer is a Projects Manager at the Brazilian Center for International Relations (CEBRI), where she focuses on navigating and fostering impact within multilateral forums. She actively collaborates with both public and private sectors to organize high-level dialogues and advocacy efforts. Committed to inclusive development, Beatriz explores the roots of global inequalities and the opportunities for international collaboration and cooperation. She holds an undergraduate degree in Political Science from the State University of Milan.

Chapter 2

Harvesting Cooperation: Translating BRICS Agricultural Ambitions into Measurable Outcomes

A strategic assessment of BRICS agricultural cooperation under Brazil's 2025 presidency, focusing on proposals to reconcile food security and climate resilience

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Abstract

Synthesis of recommendations

Recommendations for Policymakers

- **Dynamic Sector Leadership** — Flexible framework for agricultural governance within the BRICS, with member countries leading specific cooperation initiatives according to expertise
- **New Development Bank (NDB) Reform** — Expansion of the NDB's portfolio to encompass sustainable land use projects and nature-based solutions
- **Convergence on Carbon Markets** — Advance regulatory alignment on carbon accounting, building on the May 2025 BRICS Principles to integrate carbon markets in BRICS countries
- **Knowledge Networks** — Build on the BRICS Agricultural Research Platform (BARP) through thematic research communities, exchange fellowships, and annual forums linked to existing international platforms

Recommendations for Business Leaders

- **Technology Transfer Networks** — Joint R&D projects through BARP and BRICS Business Council frameworks
- **Optimised Financial Channels** — Extend local-currency swaps, harvest-backed loans, and blockchain integration on existing platforms
- **Targeted Investment Vehicles** — Focused special-purpose vehicles tailored for specific infrastructure needs rather than significant unified funds
- **Cross-Border Value Chain Pilots** — Small-scale pilots leveraging complementary strengths and using existing infrastructure and local currencies to reduce costs

1 Introduction and rationale

Brazil's 2025 BRICS presidency has underscored the significance of food security, agriculture, and land use in promoting "inclusive and sustainable development" throughout the Global South. The bloc's agricultural significance — controlling one-third of global farmland, producing 75% of global agricultural output, and representing over 50% of the world's population[6] — has an unprecedented capacity to shape not only the governance but also the future of climate-resilient, nature-positive food production. Yet this potential confronts stark realities: rising hunger, human-induced land degradation compromising millions of hectares, and volatile commodity markets, as well as fragile multilateral cooperation structures, that further exposes developing nations to external shocks in food supply chains.

Brazil's 2025 presidency has catalyzed collective BRICS innovations, including the 2025-2028 Agricultural Action Plan and the BRICS Partnership for Land Restoration, focusing on promoting climate-resilient farming methods and restoring degraded ecosystems. These efforts, linked with the Global Alliance Against Hunger and Poverty, launched during the 2024 Brazilian presidency of the G20,[7] specifically aim to combat food insecurity and promote inclusive development across BRICS nations.

The April 2025 Joint Declaration of the BRICS Ministers of Agriculture established frameworks for emergency food cooperation, electronic food certification systems, and support for family farmers through coordinated commitments among member states.[8] These initiatives emerge amid geopolitical tensions that have exacerbated vulnerabilities in food systems, with the Russia-Ukraine war demonstrating how supply disruptions disproportionately affect developing countries.

This policy paper argues that Brazil's efforts represent a systematic attempt

6. BRICS Agriculture Working Group (AWG), 'Joint Declaration of the 15th Meeting of BRICS Ministers of Agriculture' (Brasília, Federal District, Brazil, 17 April 2025), https://brics.br/en/news/brics-countries-approve-joint-declaration-with-focus-on-food-security.

7. Global Alliance Against Hunger and Poverty, 'Foundational Documents: Inception Document, Statements of Commitment, Terms of Reference and Governance Framework' (Rio de Janeiro, Brazil, 24 July 2024), https://globalallianceagainsthungerandpoverty.org/wp-content/uploads/2024/10/Global-Alliance-Foundational-Documents.pdf

8. BRICS Agriculture Working Group (AWG).

to coordinate BRICS agricultural governance, creating significant opportunities despite persistent structural constraints, such as institutional fragmentation, conflicting economic priorities, external dependencies and inadequate financing mechanisms for sustainable agricultural transformation. With increasing food prices and environmental factors impacting agricultural yield, the urgent need to reconcile food security and climate resilience becomes evident. Success depends on overcoming three fundamental challenges within the BRICS: reconciling divergent national policies, operationalizing ambitious commitments through practical mechanisms, and balancing inward cooperation with external influence in volatile markets. The proposed BRICS Grain Exchange and emergency food reserves, for example, could reduce dependency on Western-dominated institutions. They would, however, require immediate and careful coordination to prevent fragmentation of global markets. This paper examines these challenges and provides targeted recommendations for translating political commitments into measurable outcomes through flexible sector leadership, bilateral emergency response pilots, tiered digital frameworks, targeted financial vehicles, and phased cross-border value chain initiatives that build institutional capacity while demonstrating early wins.

2 Problem analysis

The 2025 BRICS agricultural agenda centers on three interconnected priorities: ensuring food security through emergency cooperation mechanisms, promoting sustainable land use via coordinated restoration efforts, and facilitating agricultural trade through digital certification. The BRICS Grain Exchange, first proposed by Russia in March 2024 and endorsed in the October 2024 Kazan Declaration,[9] aims to reduce dependency on Western-dominated commodity markets through local currency settlements.

9. Zongyuan Zoe Liu and Nadia Clark, 'Why Expanded BRICS Is Backing a Russia-Initiated Grain Exchange', Council on Foreign Relations, *Asia Unbound* (blog), 31 October 2024, https://www.cfr.org/blog/why-expanded-brics-backing-russia-initiated-grain-exchange.

The BRICS Partnership for Land Restoration was launched during the April 2025 Joint Declaration, targeting millions of hectares of degraded farmland in alignment with the United Nations Convention to Combat Desertification (UNCCD).[10] This initiative emphasizes supporting 550 million family farms across BRICS territories, recognizing that small farmers who produce much of the world's food often remain food-insecure themselves.

These initiatives integrate with Brazil's Global Alliance Against Hunger and Poverty, first proposed during Brazil's G20 presidency in July 2024 and officially launched at the November 2024 G20 Summit with 148 founding members.[11] However, translating ambitious political commitments into operational mechanisms faces three fundamental implementation challenges.

Challenge 1: Reconciling Divergent National Policies Among Members

Despite sharing common rhetoric, BRICS members pursue fundamentally different approaches to agricultural development. Trade policy represents the starkest divergence: Brazil and Russia favor open markets to maximize export opportunities, while India periodically imposes export bans to protect domestic consumers, and China maintains import quotas for food security.[12] These conflicting strategies complicate consensus-building around emergency cooperation mechanisms.

Technology adoption varies dramatically across the expanded membership, reflecting the different historical trajectories, including different land reform legacies, population scales, geographic conditions, and climate contexts. These have shaped each member's agricultural realities and development challenges. Brazil and South Africa emphasize large-scale agribusiness with advanced technologies, while India prioritizes supporting 119 million smallholder farms. However, these differences also present complementary opportunities: South Africa and India's experience with drought-prone agriculture could inform climate adaptation strategies, while Brazil's expertise in forest restoration could address deforestation challenges across the bloc. New members further complicate coordination. Indonesia pursues "Food Estate" mega-plantations, the UAE invests

10. 'BRICS Launches "Partnership for Land Restoration"', *Manorama Yearbook,* accessed 26 May 2025, https://www.manoramayearbook.in/current-affairs/world/2025/04/21/brics-partnership-for-land-restoration.html.

11. 'Brazil's President Lula Launches the Global Alliance Against Hunger and Poverty alongside 148 Members, Including 82 Countries', Planalto: Brazilian Republic Presidency, G20, 18 November 2024, https://www.gov.br/planalto/en/latest-news/2024/11/brazil2019s-president-lula-launches-the-global-alliance-against-hunger-and-poverty-alongside-148-members-including-82-countries.

12. Liu and Clark, 'Why Expanded BRICS Is Backing a Russia-Initiated Grain Exchange'.

in desert hydroponics, and Ethiopia advances shock-responsive safety nets. The absence of cross-border early warning systems for climate risks represents a significant coordination gap, particularly given that drought, flooding, and extreme weather events increasingly affect multiple BRICS territories simultaneously.

These technological disparities reflect deeper productivity gaps that could become strategic advantages through coordinated development efforts. India's focus on smallholder farmer upliftment and South Africa's dual agricultural system — combining large-scale commercial operations with emerging farmer support programmes — offer valuable lessons in resilience and inclusive growth. By contrast, Russia's vast grain production and Brazil's dominance in soybeans generate substantial export revenues while creating vulnerabilities through market volatility, uneven domestic distribution, and over-reliance on monocultures. Shared innovation platforms and increased joint R&D investment could bridge these productivity gaps, enabling export-oriented producers to learn from the resilience strategies of smallholders. At the same time, smallholder-focused systems benefit from advanced agricultural technologies and innovations in market access.

The 2025 Ministers of Agriculture Declaration's emphasis on family farming represents common ground. However, without effective enforcement mechanisms, the implementation of its decisions relies on voluntary compliance. This creates challenges for coordinating electronic certification systems and standardizing emergency food protocols across fundamentally different agricultural governance models. Increased dialogue can promote further exchanges on public policies, stakeholder engagement and results-oriented best practices.

Challenge 2: Operationalizing Ambitious Commitments Through Practical Implementation Mechanisms

The gap between political commitments and operational implementation represents the most critical challenge requiring systemic institutional development of the BRICS. The proposed emergency food reserve network lacks specific protocols for stock allocation, trigger conditions, or crisis decision-making procedures, demanding formal Memoranda of Understanding with explicit burden-sharing formulas. This coordination deficit reflects broader policy fragmentation and weak regional cooperation, as there is no unified food security strategy, and policies remain largely nationalistic, even though vulnerabilities are shared across the bloc.

These implementation gaps are compounded by systematic under-financing across all proposed initiatives, with the current BRICS financial architecture inadequate to support the scale of agricultural transformation envisaged. The combined financing needs for emergency reserves, digital infrastructure, and climate adaptation measures require innovative funding mechanisms that extend beyond traditional development bank lending; yet, no comprehensive financing strategy has emerged to bridge this resource gap.

The Partnership for Land Restoration faces significant financing gaps, despite its ambitious goal of targeting millions of hectares across diverse ecological contexts, ranging from the Brazilian Cerrado to the Ethiopian highlands. The New Development Bank's (NDB) infrastructure-focused mandate is insufficient to fund restoration activities at required scales, which means that the Partnership will have to anchor innovative financing mechanisms, including public-private partnerships and blended finance approaches.

Electronic certification systems face technological and regulatory disparities across different countries, which limit their effective implementation. Technical cooperation, capacity building, and investment in digital infrastructure are required to promote regulatory convergence and ensure interoperability between national certification platforms. There is still no consensus among BRICS countries on sanitary and phytosanitary measures for agricultural and livestock production, which would enable the integration of national certification systems, let alone the potential creation of a supply-chain-wide traceability mechanism with embedded sustainability standards.

Challenge 3: Balancing Inward Cooperation with External Influence in Volatile Global Markets

BRICS initiatives unfold amid turbulent markets, where food price volatility remains one of the most significant challenges, particularly due to acute price fluctuations and abrupt supply crises resulting from extreme weather events, conflicts, and public health emergencies. The Russia-Ukraine war's grain price spikes have exposed the vulnerability of developing countries, motivating them to build autonomous capabilities through strategic reserves and emergency protocols.

The proposed Grain Exchange risks fragmenting global markets by creating parallel trading systems that could divert commodity flows from established exchanges and generate divergent pricing mechanisms. Despite these risks, the Declaration

commits to strengthening mutual agricultural trade and ensuring transparent payments among producers, exporters, and importers. The Declaration's emphasis on promoting rules-based trade in agriculture and fertilizers, while simultaneously developing alternative platforms, reflects a fundamental contradiction: supporting existing multilateral frameworks while building autonomous systems designed to reduce dependence on those same institutions.

This strategic dilemma intensifies when considering external partnerships that are necessary for successful implementation. The 2025 Agricultural Ministerial Declaration encourages the NDB and the International Fund for Agricultural Development (IFAD) to engage with members willing to implement Global Alliance policy instruments. However, achieving BRICS autonomy objectives while integrating existing international frameworks requires careful coordination to avoid undermining broader multilateral cooperation on global food security.

3 Policy recommendations

The three implementation challenges facing BRICS agricultural cooperation require strategic interventions that transcend traditional multilateral approaches, harnessing agricultural diversity as a competitive advantage rather than an obstacle. These recommendations prioritize practical mechanisms for institutional development, recognizing that expanded membership necessitates innovative governance that balances sovereignty with collective action through simultaneous engagement of both the governmental and private sectors. Rather than pursuing immediate comprehensive integration, the focus should be on creating measurable outcomes through time-bound initiatives that demonstrate early wins, build momentum for long-term cooperation, and establish foundation mechanisms that can evolve with institutional learning and changing geopolitical circumstances.

i. Recommendations for Policymakers

- **Flexible Sector Champion Network for Scalable BRICS Agricultural Leadership:** BRICS could explore dynamic sector leadership where members champion specific domains according to expertise, moving beyond rigid hierarchies towards flexible specialization. Champion Leadership would enable transformation — e.g., Brazil piloting regenerative agriculture in two partner countries with NDB funding, and China rolling out digital certification at three BRICS ports. Co-Champion Partnerships would enable joint leadership, for instance, through potential collaboration between South Africa and Ethiopia in managing livestock demonstrations. Active participation could involve selective engagement through the BRICS Agricultural Research Platform (BARP), while Observer Status would maintain connectivity through the Basic Agricultural Information System (BAIES). Annual peer-review workshops rotating among capitals would assess results and unlock follow-on financing.

- **Graduated Implementation Through Pilot Initiatives:** Rather than pursuing full-bloc rollouts, BRICS could systematically pilot initiatives among smaller groups of willing members before expanding to comprehensive frameworks. Emergency response mechanisms could begin with bilateral or trilateral arrangements — Brazil and Ethiopia sharing stock-level data and release protocols, while India and South Africa focus on rapid smallholder support through seed and fertiliser vouchers, for example. Similarly, digital certification could progress incrementally, starting with basic electronic certificates between two countries before advancing to blockchain tracking and the integration of automated systems across multiple members. Temporary committees with rotating leadership and modest NDB funding would enable each pilot to experiment with different approaches — testing trigger conditions for food releases, allocation formulas for emergency support, and technical standards for digital platforms. This approach builds institutional familiarity and mutual trust, identifies promising elements for scaling, and allows members to participate according to their capacity and readiness.

- **Expanding the NDB's Mandate to Finance and De-risk Projects Related to Sustainable Land Use, Agriculture and Nature-based Solutions:** BRICS countries have long called for an expansion of the NDB's portfolio beyond infrastructure projects. The recent expansion of NDB membership to include new shareholders such as the UAE, Egypt, Algeria, Uruguay, and Bangladesh,

alongside Ethiopia's ongoing accession process, creates fresh opportunities to broaden the Bank's development focus. While some of these new NDB members are also part of the expanded BRICS grouping, others represent the Bank's growing appeal beyond the bloc itself, bringing diverse financial capabilities and development priorities. This membership expansion provides an opportune moment for BRICS to champion a redefinition of the NDB's role, expanding its portfolio to encompass land use, agriculture, bioeconomy, restoration and other projects focused on nature-based solutions. The promotion of greater integration with National and Regional Development Banks, including through strengthening the NDB's existing efforts to increase local currency lending, can significantly enhance the Bank's capacity to finance smallholders and small and medium agribusinesses.

- **Promoting Regulatory Convergence on Carbon Markets:** The May 2025 BRICS Principles for Fair, Inclusive and Transparent Carbon Accounting in Product and Facility Footprints is possibly one of the most significant concrete advances of the 2025 Brazilian BRICS presidency on the road to COP30.[13] These high-level principles should serve as a first step toward regulatory convergence and the establishment of monitoring mechanisms necessary to integrate carbon markets across different BRICS countries effectively. This integration would include carbon markets as part of the diverse financial mechanisms required to fund ecological and productive restoration projects within the BRICS Partnership for Land Restoration.

- **Building on BARP and Fostering Incremental Knowledge Networks:** Rather than creating new bodies, BRICS could build thematic research communities, spawning exchange fellowships and joint certification programmes in specialized agricultural techniques. An annual Knowledge Exchange Forum, linked to the Food and Agriculture Organization (FAO) or the Consultative Group on International Agricultural Research events, would showcase progress, with modest NDB grants funding meetings and virtual platforms. The BARP should serve as a framework to enhance cooperation among agricultural research institutes of member countries for the BRICS Land Restoration Partnership, and to coordinate the participation of BRICS countries in technology transfer and capacity-building programs linked to the Global Alliance.

13. BRICS. Principles for Fair, Inclusive and Transparent Carbon Accounting in Product and Facility Footprints. BRICS Climate Leadership Agenda. May 2025. https://brics.br/en/documents/environment-climate-energy-and-disaster-risk-reduction/250528_brics_climate-leadership-agenda_principles-fair-inclusive-transparent-carbon-accounting.pdf

ii. Recommendations for Business Leaders

- **Incremental Technology Transfer Networks:** Agribusinesses interested in funding genetic research can also leverage BARP and the BRICS Business Council for joint R&D efforts, rather than forming new consortia. Working within these existing frameworks can facilitate the collaborative development of solutions among different BRICS countries, creating innovative arrangements for co-financing projects and contributing to the mitigation of legal uncertainties associated with intellectual property rights. Biotechnology firms might co-fund trials pairing labs with field stations, while equipment makers could integrate components across markets using local assembly to reduce costs.

- **Optimizing Existing Financial Channels:** Agricultural traders and banks might extend local-currency swap lines to agri-commodities rather than building new systems. Regional consortia could pilot rupee-denominated credit or rand-settled letters of credit, while input suppliers could develop "harvest-backed" loans through warehouse receipt programmes. Local banks can mitigate lending risks to smallholder farmers by entering into guaranteed purchase agreements with agricultural traders from BRICS countries, thereby ensuring farmers have secure markets for their produce. This approach could be facilitated and standardised through established cooperation frameworks, such as the BRICS Partnership for Land Restoration. Logistics platforms could layer blockchain tracking onto existing tools, linked to invoice-discounting services for early farmer payments.

- **Modular Investment Vehicles for BRICS Agri-Infrastructure:** Investors might pilot targeted vehicles aligned with specific needs rather than launching large-scale, centralised investment funds that require lengthy fundraising periods and impose rigid allocation mechanisms across broad mandates. Small consortia could co-finance irrigation improvements using special-purpose vehicles with NDB seed financing, while efficient cold-chain operators could upgrade storage in one African market before expanding regionally. Investors could back precision-agriculture start-ups with proven solutions and support their adaptation for different contexts. Structuring vehicles around discrete, bankable projects with clear exit strategies enables capital flow without the overcommitment and inflexibility that characterises traditional mega-funds, which are designed for institutional investors with predetermined geographic and sectoral allocations.

- **Innovative Business Models for Phased Cross-Border Agri-Value Chain Pilots:** Businesses can explore small-scale pilots that leverage complementary strengths, prioritizing resource efficiency and reduced carbon intensity, before scaling up to full value chains. Companies can leverage existing relationships to form strategic partnerships that replicate and scale best practices in low-carbon agriculture techniques and certification standards across regions. A consortium might consider trialling a Russian-China-India fertilizer corridor, shipping potash from Russia to Chinese processors for distribution through India's rural networks, provided that transport routes demonstrate environmental advantages over existing supply chains. These pilots should incorporate innovative technologies and carbon footprint assessments to ensure sustainability gains alongside resource security benefits. Collaborations between insurers and agri-tech firms, for example, could develop weather index insurance using satellite monitoring, while on-the-ground pilots validate business models through established channels. These initiatives can require limited upfront investment, utilizing existing infrastructure and local currencies to manage foreign exchange risks while refining logistics and financing arrangements.

Conclusion

BRICS agricultural cooperation stands at a critical juncture where institutional ambition must yield tangible results. The group's success will ultimately be measured not by the scope of its declarations, but by its innovations and capacity to deliver concrete improvements in food security for the 3.2 billion people it represents. As climate pressures intensify and geopolitical tensions reshape global food systems, the window for demonstrating effective coordination is narrowing.

The analysis reveals that strengthening agricultural trade among member states requires moving beyond aspirational cooperation towards operational mechanisms that address both traditional trade barriers and emerging green protectionism. Rather than succumbing to what most of its members would consider punitive external regulations, such as the EU Deforestation Regulation, which impose narrow compliance frameworks, BRICS has the opportunity to pioneer constructive sustainability approaches that integrate environmental protection with development sovereignty. Success hinges on transforming political commitments into practical solutions that respect national legislation while promoting regional food system resilience and global supply chain transparency.

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Chapter 3

Bridging the AI Divide: A BRICS Strategy for Inclusive Innovation, Sovereignty, and Capacity Building

A vision for BRICS cooperation on digital transformation and artificial intelligence, emphasizing inclusive innovation, ethical governance, and capacity building through Global South-led frameworks and investment

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* This paper reflects the personal research, analysis, and views of the authors and does not represent the position of the institution, its affiliates, or partners.

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BRICS DIALOGUES

Abstract

Synthesis of recommendations

- **Establish the AI Safety and Opportunities Collaborative (AISO), a Global Scientific Panel on Artificial Intelligence Based in the Global South** – Create a permanent multilateral body, similar in structure to the Intergovernmental Panel on Climate Change (IPCC), to assess the risks, opportunities, and impacts of AI globally, with a focus on Global South perspectives.

- **Institutionalize a BRICS Platform for Technical Cooperation, Joint Research, Development, and Innovation in AI** – A BRICS AI Compute Hub, for example, can promote the joint development of AI models and applications tailored to the socio-economic, linguistic, and cultural realities of BRICS and Global South countries. Financed by member countries and the New Development Bank, this platform can foster horizontal technical cooperation among BRICS countries — particularly among Brazil, India, South Africa, and new members such as Egypt, Ethiopia, and the UAE — to jointly develop AI applications and foundational models that reflect the realities and priorities of the Global South.

- **Advance a Shared BRICS Framework for Safe, Ethical, and Sovereign AI Governance** – Develop joint regulatory principles and cooperative mechanisms, such as a BRICS AI Safeguards Initiative that promote innovation while safeguarding public interest and national sovereignty.

1 Introduction and rationale

As artificial intelligence (AI) becomes a key enabler of economic and social transformation, the BRICS grouping — comprising both emerging and influential economies — has a unique opportunity to shape the trajectory of AI development through a Global South lens. The strategic relevance of this agenda stems from the pressing need to ensure that digital transformation contributes to inclusive development, reduces technological asymmetries, and supports national sovereignty in the digital domain.

Brazil's presidency of BRICS in 2025 is poised to elevate digital transformation and AI governance to the top of the multilateral agenda. Building on the Kazan Declaration[14] and the Chair's Statement from the most recent BRICS Foreign Ministers' Meeting in April 2025, there is growing momentum around cooperation in AI capacity building, ethical design, and the promotion of socio-economic development through technology.

At the same time, AI investment, innovation and adoption vary across BRICS members and partner countries. China stands as a global leader in the design, development, and deployment of AI technologies. Brazil, Russia, India and South Africa possess robust domestic capabilities and dynamic public-private innovation ecosystems enabling the creation of tailored AI solutions. Saudi Arabia and the United Arab Emirates are making substantial investments in data infrastructure and computing capacity to position themselves as future AI hubs. Meanwhile, countries such as Egypt, Ethiopia, Iran, and Indonesia have comprehensive policy frameworks aimed at promoting the integration of AI into both public administration and private sector applications.

Within BRICS, this diversity of approaches and capacities presents both challenges and opportunities for cooperation. As a forum, BRICS can reinforce the need to balance regulation of AI while also leveraging it to promote socio-

14. Please find the BRICS Leaders' Declarations here: https://brics.br/pt-br/documentos/acervo-de-presidencias-anteriores/leaders-declarations

economic development and inclusive growth through public and private sector innovation. It can also articulate a shared vision and approach on AI regulation, data sovereignty and capacity building recognizing that member countries will have their own viewpoints and priorities.

This paper will provide recommendations for both policymakers and the private sector of BRICS countries to identify areas of convergence, alignment of priorities and creation of innovation ecosystems while ensuring AI adoption in a safe, secure and ethical manner.

2 Problem analysis

As governments and corporations increasingly regard AI as a foundational technology that will shape the future, they are investing in AI policies, tools and applications that will increase productivity and competitiveness as well as address societal challenges. With national priorities taking precedence, it is difficult to arrive at a cooperative framework for AI governance and its appropriate use. This is further compounded by the rapid advances in AI and the divergent views on its impact on the economy and society, ranging from utopian to dystopian.

In this scenario, there is a significant opportunity for BRICS to refocus the discourse on AI and anchor it on four core objectives:

(i) use AI to address socio-economic challenges both at a national and global scale;

(ii) create AI models to reflect the diversity and needs of the Global South while respecting data sovereignty;

(iii) improve access to AI infrastructure, especially compute power, and skills across BRICS and the Global South; and

(iv) promote sharing of knowledge, good practices and applications, both for public and private uses.

Despite the varying levels of technological advancement across BRICS members and partner countries, each demonstrates a strategic commitment to leveraging AI in alignment with their socio-economic development priorities, capabilities and competitive advantages. As a pioneer in climate action and green technology, Brazil's emphasis is on the use of AI to tackle climate change and make renewable energy grids more efficient. India's national AI strategy mentions education, health, agriculture and urban development as focus areas. Similarly, Indonesia's AI strategy mentions public service delivery and urban mobility as key priorities, while China's ambition is to attain world-leading levels in all AI theories, technologies and applications by 2030.

This diversity of approaches reflects the potential for broader South-South cooperation to support the "twin transitions" (digital and energy) in BRICS countries and beyond. The key objective is to leverage the power of AI to accelerate progress towards the Sustainable Development Goals, especially ones that have regressed since the global pandemic. AI tools are already being embedded in health, education, urban development and access to energy — all of which remain priorities for the Global South. AI can also play an important role in making complex logistics and supply chains more efficient and improve delivery of public services, especially those at the risk of natural disasters due to a changing climate. All these are potential applications that have practical benefits for countries of the Global South, including BRICS members and partners.

While the potential for AI for socio-economic development is becoming evident, so are the downside risks and the need for guardrails to protect data sovereignty and individual privacy. As AI models are trained on increasingly large datasets, they are likely to encroach on both. While global frameworks like UNESCO's Recommendations on the Ethics of Artificial Intelligence underlines the importance of anchoring AI systems on universal values and trust, its rapid evolution makes it challenging for regulation to keep up with technological innovation. While it is difficult to achieve consensus on AI regulation, Brazil's presidency can build on the Kazan Declaration to propose a task force within BRICS to address this challenge. With India hosting the next BRICS presidency as well as the Global AI Action Summit in 2026, there is an opportunity to ensure policy continuity in this area.

The most promising area for BRICS cooperation is likely to be in augmenting the capacity of countries to build skills, access infrastructure and crowd-in financing

from public and private sources to build an innovation ecosystem to support adoption of AI at scale. The UN Resolution A/RES/78/311 provides a guiding framework cited in the Kazan Declaration. It calls upon "developed countries and those developing countries in a position to do so, to increase capacity-building cooperation, including policy exchanges, knowledge sharing activities, the transfer of technology and to hold training courses, seminars and workshops, among others for sharing experiences and best practices". This fits well with existing BRICS initiatives and needs to be strengthened further.

Two other areas merit attention. The first is the high cost of AI infrastructure, especially investment in data centers to power AI applications at scale. While many governments in the Global South (both within and outside BRICS) have committed significant resources, there is a need to collectively reduce the cost of access, with the private sector playing an important role.

Second, greater attention to AI might divert resources from the need to upgrade basic connectivity and bridge digital divides, which remains a challenge in much of the Global South. Greater cooperation in building digital public infrastructure (DPI) could achieve both goals — creating an inclusive digital ecosystem built on open-source solutions implemented at scale that can democratize the access and use of AI for both public and private sectors.[15] With more countries adopting a DPI approach to address socio-economic challenges such as food security, improving health and education outcomes and accelerating the clean energy transition, there is an opportunity for BRICS to outline an agenda for action, both for governments and the private sector.

We offer specific recommendations for policymakers and the private sector below.

15. Nagar, Sarosh, and David Eaves. 2024. "Interactions Between Artificial Intelligence and Digital Public Infrastructure: Concepts, Benefits, and Challenges." arXiv, December 7, 2024. https://arxiv.org/abs/2412.05761.

3 Policy recommendations

i. Recommendations for Policymakers

- **Establish the AI Safety and Opportunities Collaborative (AISO).** As a global scientific panel based in the Global South, AISO will act as a consultative forum, offering insights into the risks, opportunities and impacts of AI to governments and industry relying on technical credibility to influence public policy. With a focus on Global South perspectives, it will be a network of leading national institutions and individuals working at the interface of AI policy, regulation and technology.

- **Create a BRICS AI Compute Hub, with financing from member countries and the New Development Bank.** The idea would be to share AI compute resources to train and test AI models and applications that are inclusive – tailored to the socio-economic, linguistic, and cultural realities of BRICS and Global South countries – and not addressed by existing commercial models (voice-enabled AI assistants in non-traditional languages, for example). This instance would promote more equitable access to computing power and data center infrastructure among BRICS members to enable all countries to participate meaningfully in AI development and deployment.

- **Propose a BRICS AI Safeguards Initiative with the goal of protecting data sovereignty and individual privacy.** The Initiative will review current AI regulation in member and partner countries, develop guidelines on the principles, governance and adoption of AI tools through Working Groups, and periodically update the framework to reflect the evolution of AI models and their uses.

ii. Recommendations for Business Leaders

- **Leverage the BRICS Business Council Working Group on Digital Economy and Artificial Intelligence to propose practical guidelines on data protection and digital sovereignty in AI.** The BRICS Business Council should set up an Ethics and Safety in AI oversight body to ensure compliance with the guidelines as well as engage with global initiatives for AI regulation.

- **Strengthen the BRICS Startup Forum as a dynamic engagement platform to bridge the gap between startups, investors, and stakeholders, unlocking opportunities for collaboration and growth within the private sector.** Given the growing adoption of AI tools for socio-economic development, skill building and improving productivity especially in the small and medium enterprises (SMEs), the 2026 Startup Forum could focus on these themes.

- **Facilitate a structured dialogue with governments at the highest level to balance regulation and innovation, possibly through a BRICS AI Roundtable.** This could be started as a Track 1.5 initiative spearheaded by the BRICS Business Council to provide inputs into the deliberations of the Leader's Summit reflecting the collective views of the private sector across BRICS countries. The outcome documents could also be tabled at multilateral initiatives on AI such as the G20, AI Action Summit and others.

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