XIII Annual Conference on the Global Economy: BRICS and the Rethinking of the Global Economic Order

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Climate Change, BRICS and Just Green Transition

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Key Questions & Method Used

Questions:

1. What were the main outcomes of climate negotiations at Belem?
2. How do we understand just green transition?
3. What are the challenges and prospects of BRICS' green transition and cooperation?

Methods: Integrated Review:

- The study adopts an integrated review as method;
- Synthesize knowledge and assess both historical and institutional contexts of climate governance within UNFCCC and contextualize the BRICS.
- Reviewed a number of academic journals, authoritative reports from organizations such as the IEA,UNFCCC, World Bank, and other leading research institutions.
- However, this is not a systematic reviews but include a variety of sources for the analysis.

With the latest NDCs & current polices, temperature will be between 2.3 to 2.8°C- CODE RED

$ 300 Billion+ Climate Finance by 2035; New Fund for Tropical Forest Conservation

Little attention to Loss & Damage & halt to deforestation

Deep Divisions on Finance, Trade Measures, Mitigation Pathways & Other Areas Stalled the Progress

No Progress on Fossil Fuel Phase Out: Root Cause of Climate Crisis

Empty Deal?

Implementation COP: What the World Must Do? How to do? Actions?

COP-30 Belem [UNFCCC]:

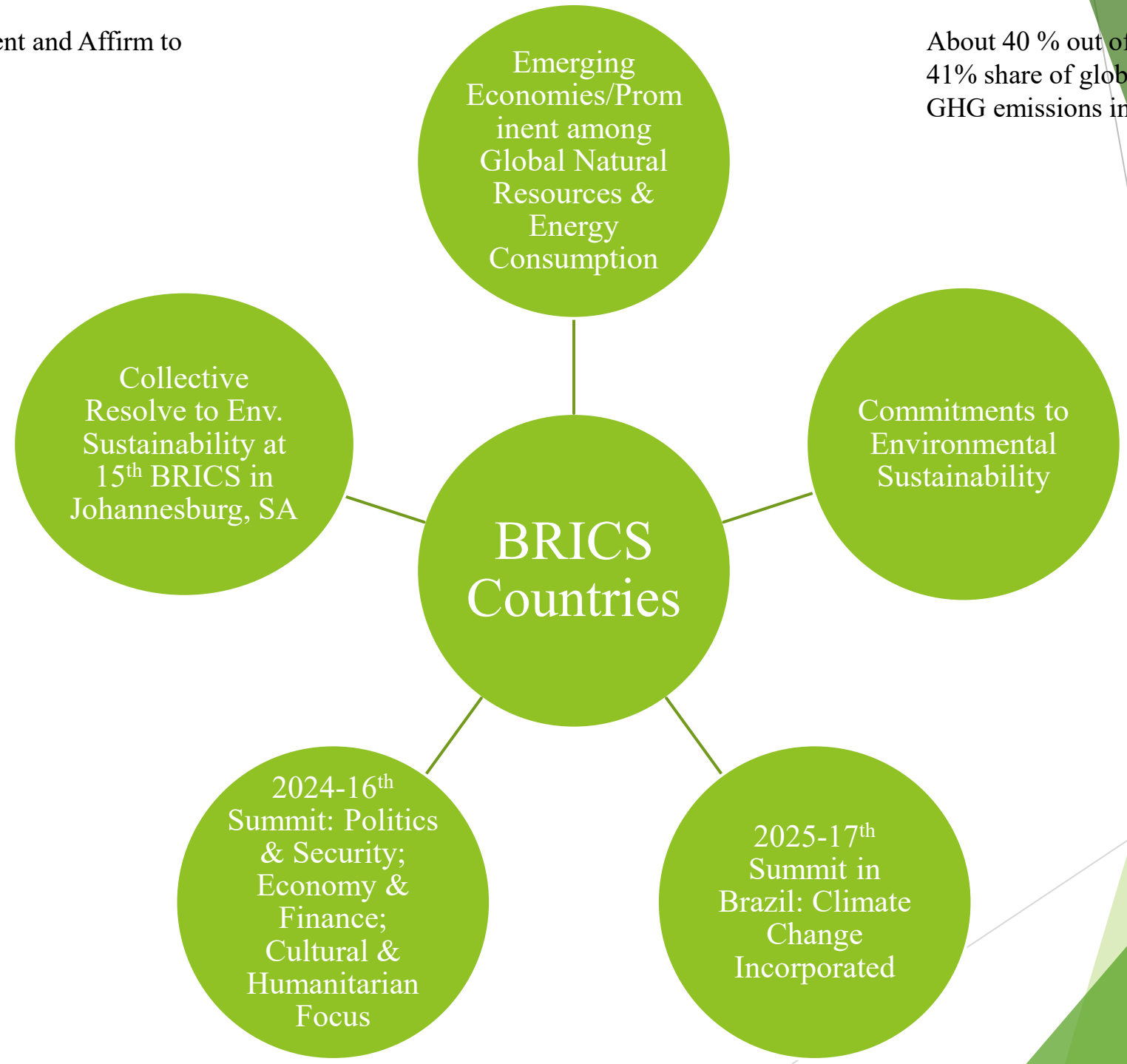
COP is over but work is not" UN Gen-Secretary

Outside Formal Negotiations: New Pledges & Action Plans from Cities, and Private Sector

All sources finance target 1.3T by 2035, health and trade policies linked to climate action

BRICS support Paris Agreement and Affirm to its Principles

About 40 % out of the total global population, 41% share of global GDP (PPP) & 41% share of GHG emissions in 2024



BRICS, BASIC & G-77?

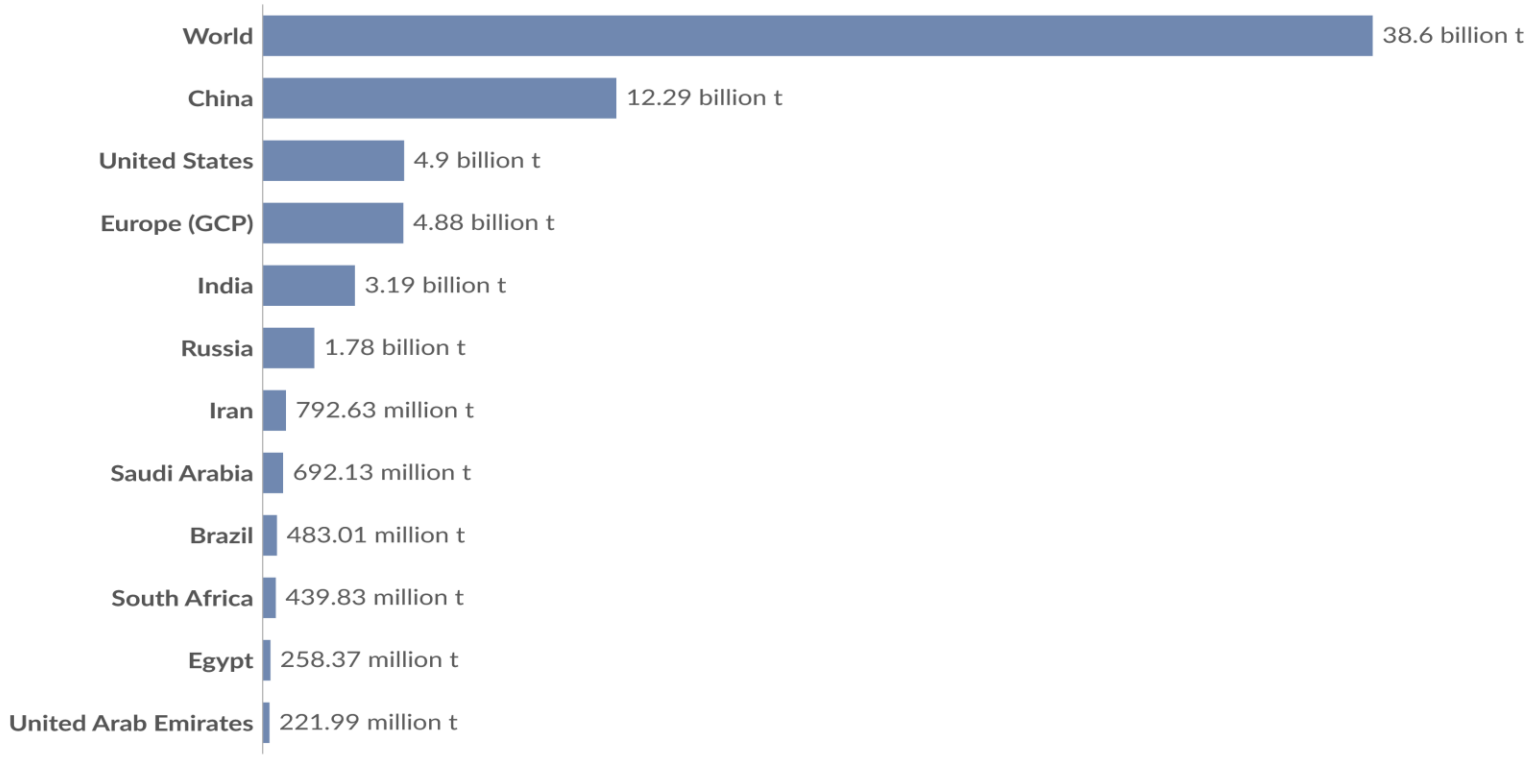
Indo-Pacific QUAD; BRI, National Interests?

Year	Population% of the World	GDP [PPP] % of the World	Emissions % of the World [CO2 Territorial]
1990	44%	20%	28%
2000	44%	26%	32%
2010	43%	30%	35%
2020	41%	36%	40%
2024	40%	41%	41%

Sources: World Bank, Our World in Data; BRICS Population, GDP and Emissions since 1990

Annual CO_2 emissions, 2024

Carbon dioxide (CO_2) emissions from fossil fuels and industry[1]. Land-use change emissions[2] are not included.

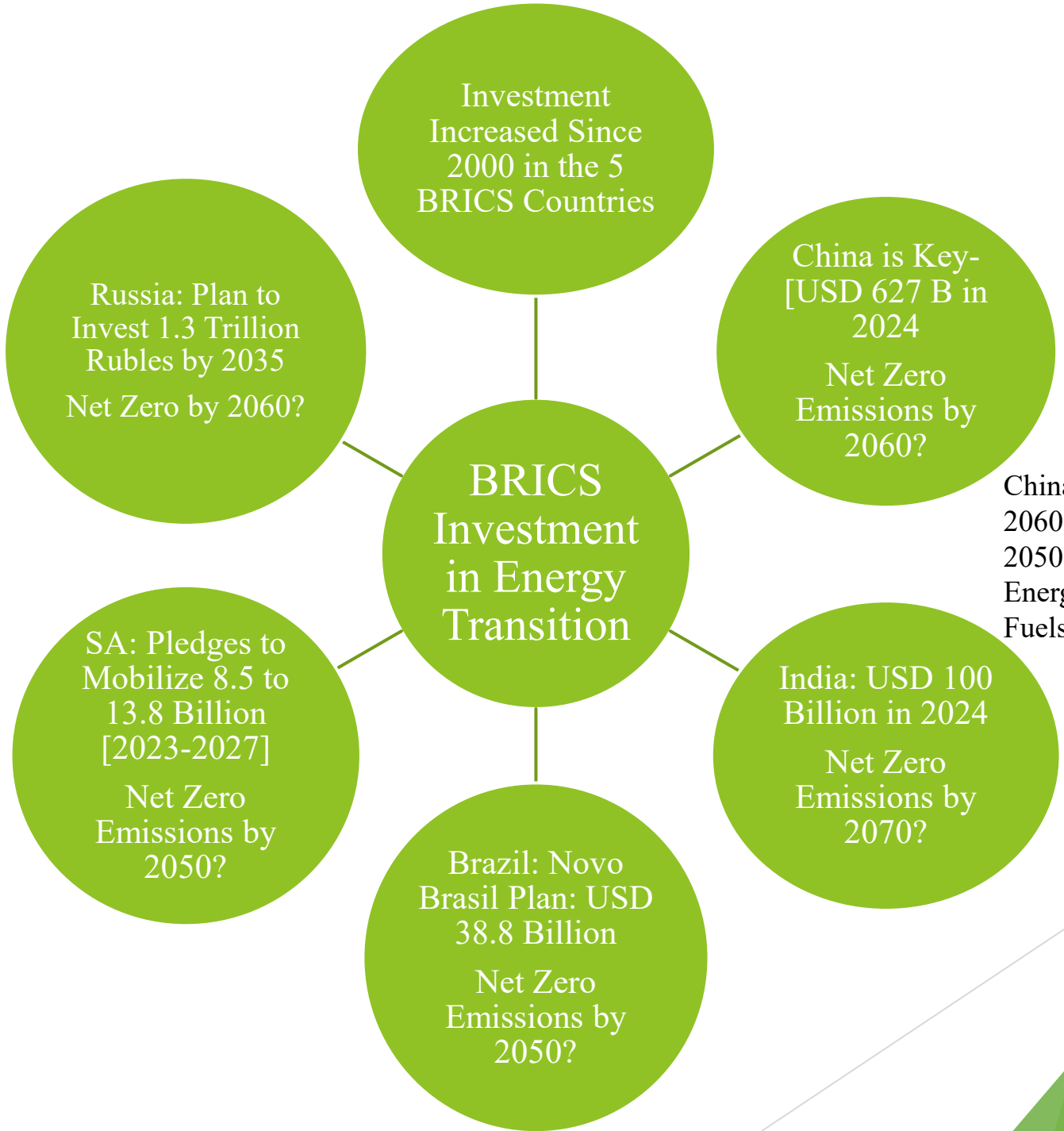


Data source: Global Carbon Budget (2025)

OurWorldinData.org/co2-and-greenhouse-gas-emissions | CC BY

1. Fossil CO_2 emissions This refers to the carbon dioxide released when burning fossil fuels or from certain industrial activities.
Burning fossil fuels — coal, oil, and gas — produces CO_2 during transport (cars, trucks, planes), electricity generation, heating, and energy use in industry. This also includes flaring, which is the burning of extra gas during oil and gas extraction.
Some industrial processes also release CO_2. This happens especially in cement and steel production, where chemical reactions (unrelated to burning fuel) produce carbon dioxide.
These figures don't include CO_2 emissions from changes in land use, like deforestation or reforestation.

2. Land-use change emissions Land-use change emissions are the carbon dioxide (CO_2) released or removed when land use changes.
They mostly come from deforestation, forest degradation, turning forests or other ecosystems into cropland or pasture, and draining peatlands.
When vegetation is cleared or burned, the carbon stored in plants and soil is released as CO_2.
Land-use change can also remove CO_2 from the atmosphere when vegetation grows back, for example, when forests regrow. This can lead to negative emissions in the data.
In scientific and policy discussions, these emissions are sometimes grouped under the broader term "LULUCF" (land use, land-use change, and forestry).
These estimates are uncertain because they depend on limited data and assumptions about land cover, how much carbon is stored in ecosystems, and how land is managed.
They are separate from fossil CO_2 emissions from burning fossil fuels and certain industrial processes.



Russia: Overall energy Consumption: 91% fossil fuels [53% gas, 23% oil, 15 % coal] & 9% [7% nuclear, 2% renewable]—[US-EIA, 2025]

China: Overall energy consumption: 82% Fossil fuels & 18 % Non fossil [Renewable + Nuclear]- 2023—[Government of China, 2024]

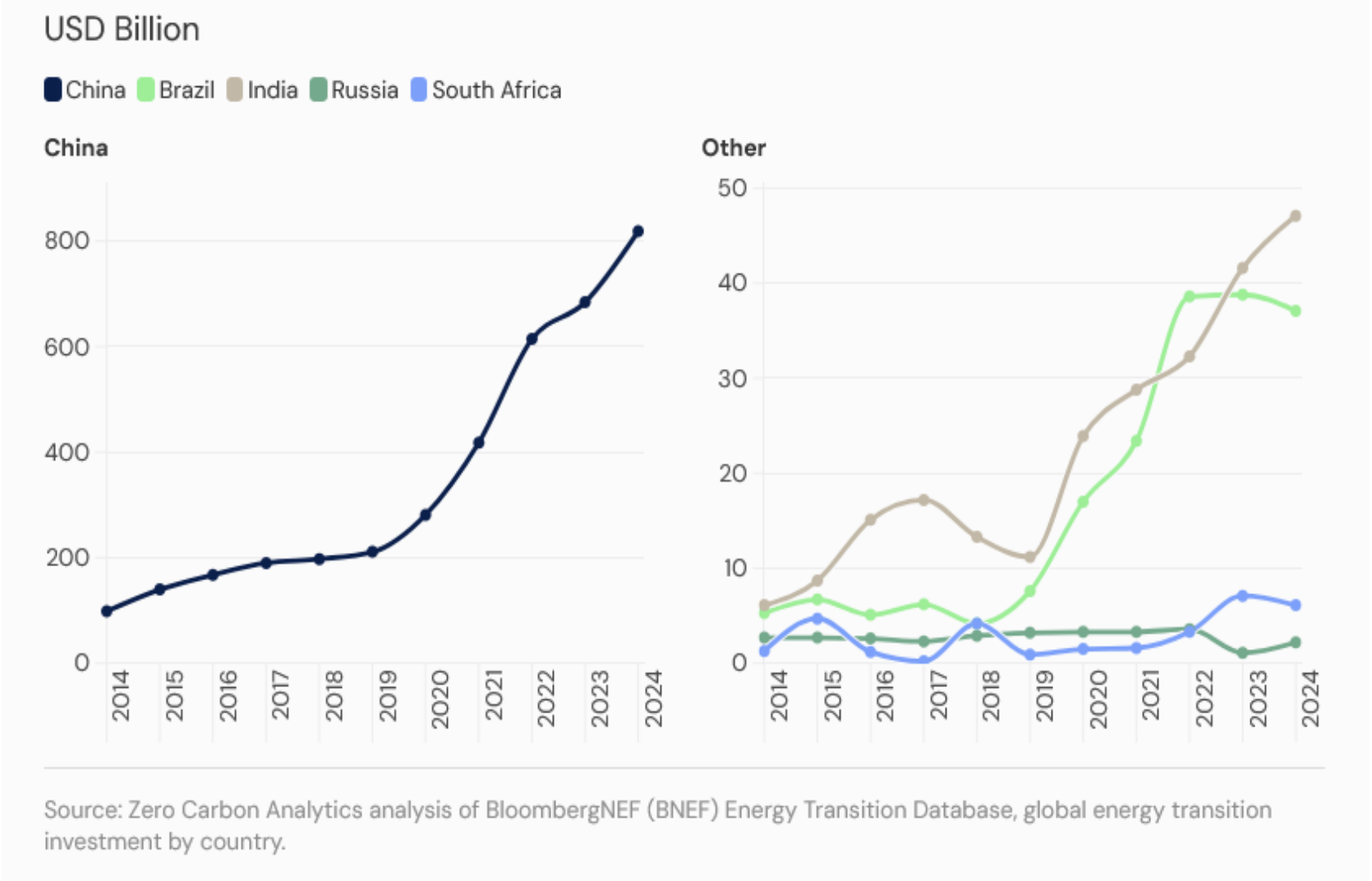
China &Russian Carbon Neutrality by 2060; India 2070 & Brazil and SA by 2050? How: Ecological Modernization and Energy Efficiency, Renewables or Fossil Fuels? All-Climate Capitalism?

South Africa: Overall energy consumption: Coal 71%, Oil 20%, Natural gas 2.5%, renewable 4.4.%, nuclear 2%

India: Overall energy consumption: 60.21% Coal, 29.83% Petroleum, 6.99% Natural Gas [Government of India, 2024].

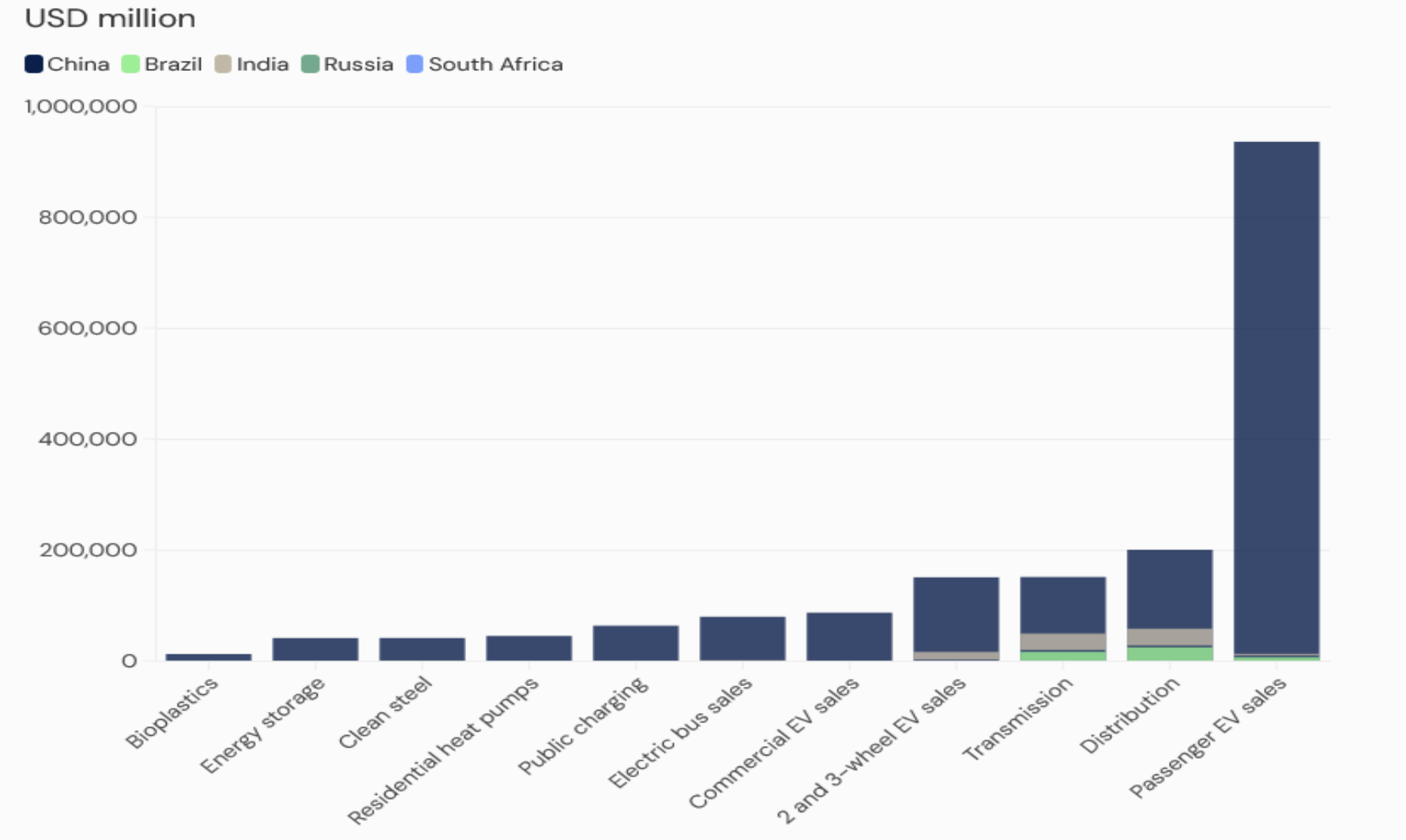
Brazil: Overall energy consumption: 49.1% renewable & 50.1% non renewable.

BRICS Countries' Investments in the Energy Transition, 2004-2024



Source: Zero Carbon Analytics analysis of BloombergNEF (BNEF) Energy Transition Database, global energy transition investment by country.

Top Sectors for BRICS Energy Transition Investment 2004-2024

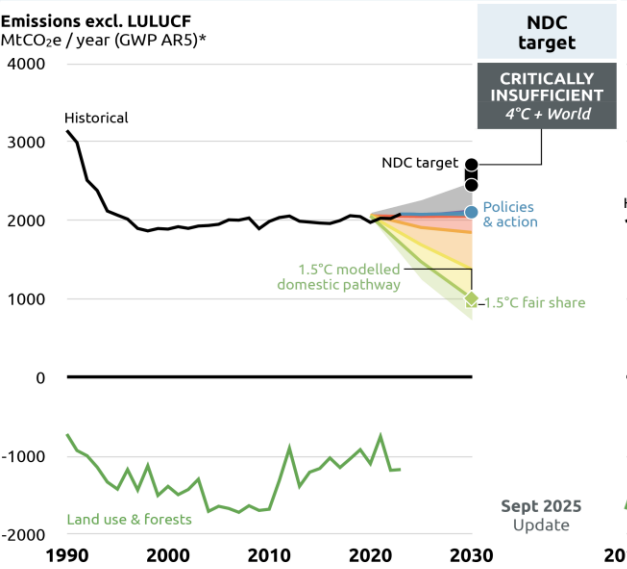


Source: Zero Carbon Analytics, 2025

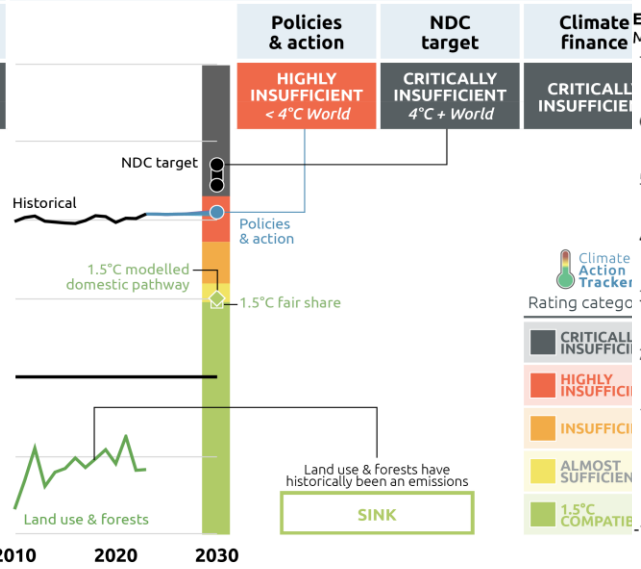
RUSSIAN FEDERATION OVERALL RATING

CRITICALLY INSUFFICIENT

BASED ON MODELLED DOMESTIC PATHWAYS✣



BASED ON FAIR SHARE



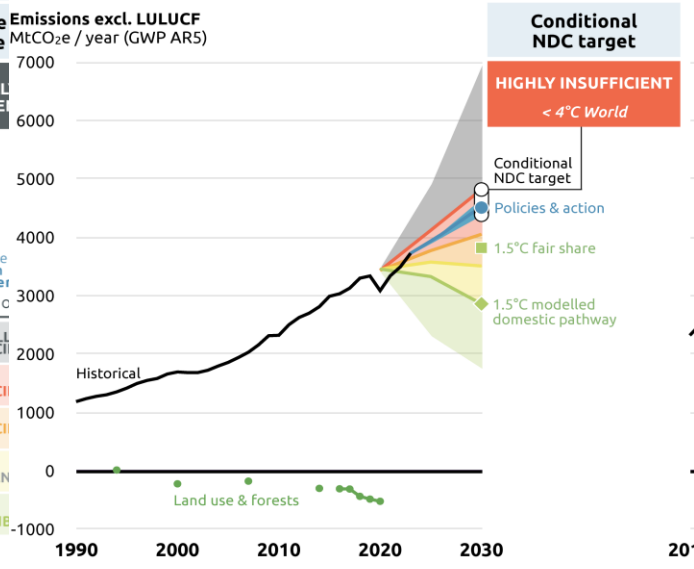
✣ Modelled domestic pathways reflects a global economic efficiency perspective with pathways for different temperature ranges derived from global least-cost models

* Greenhouse gas emissions are calculated using global warming potential values from the IPCC Fifth Assessment Report (GWP AR5)

INDIA OVERALL RATING

HIGHLY INSUFFICIENT

BASED ON MODELLED DOMESTIC PATHWAYS✣



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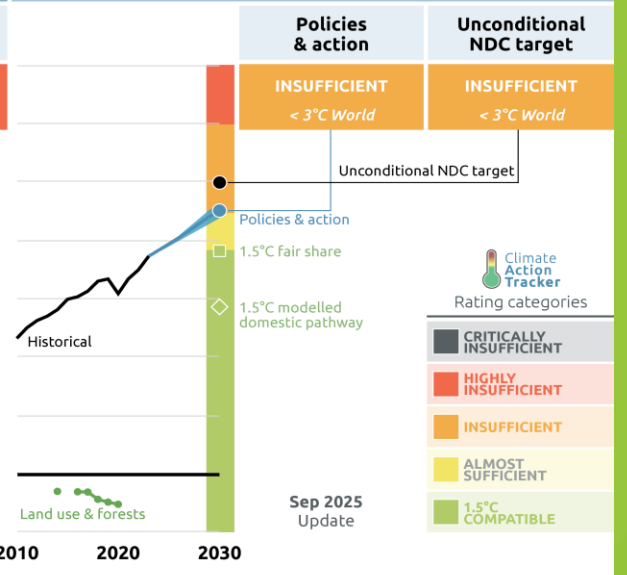
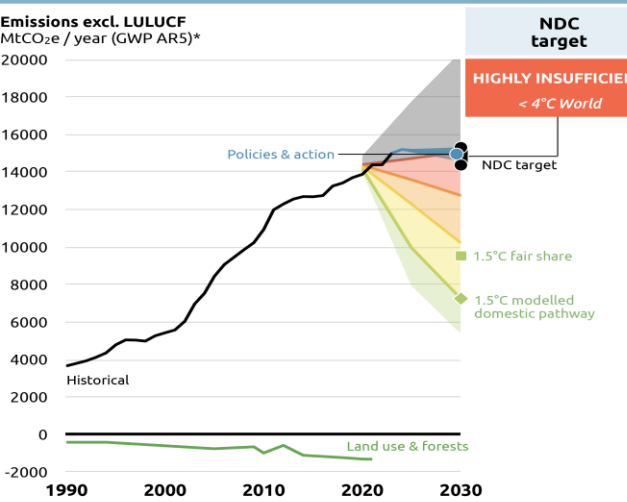


CHINA OVERALL RATING

HIGHLY INSUFFICIENT

BASED ON MODELLED DOMESTIC PATHWAYS✣



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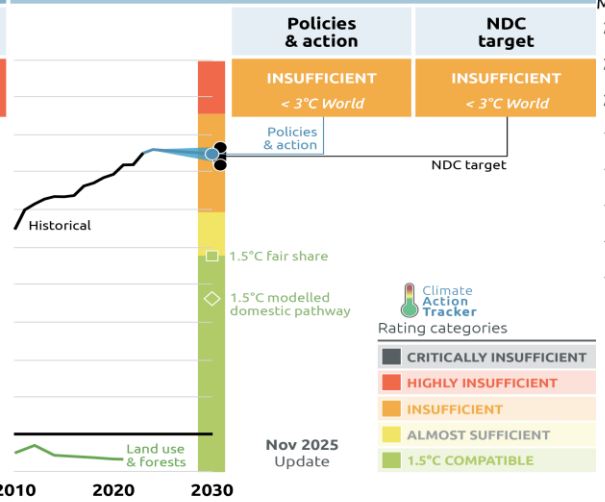


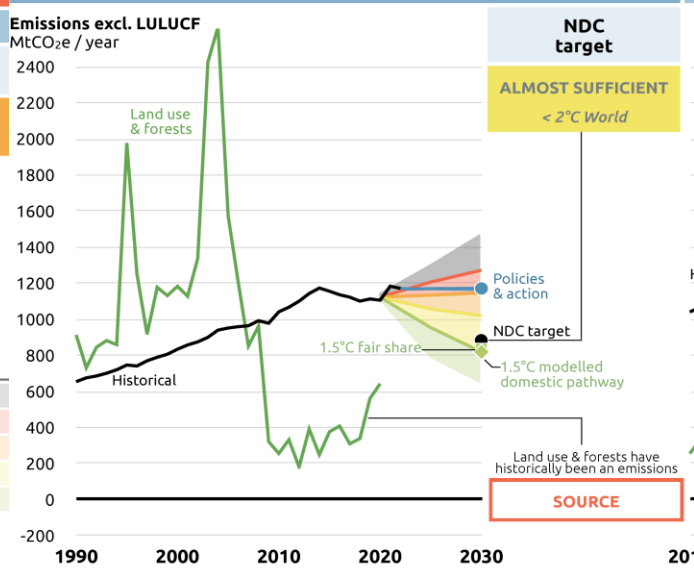
✣ Modelled domestic pathways reflects a global economic efficiency perspective with pathways for different temperature ranges derived from global least-cost models

* Greenhouse gas emissions are calculated using global warming potential values from the IPCC Fifth Assessment Report (GWP AR5)

BRAZIL OVERALL RATING

INSUFFICIENT

BASED ON MODELLED DOMESTIC PATHWAYS✣



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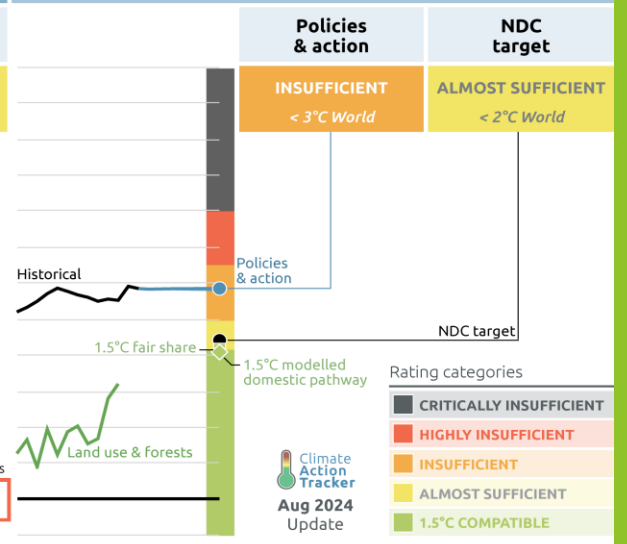

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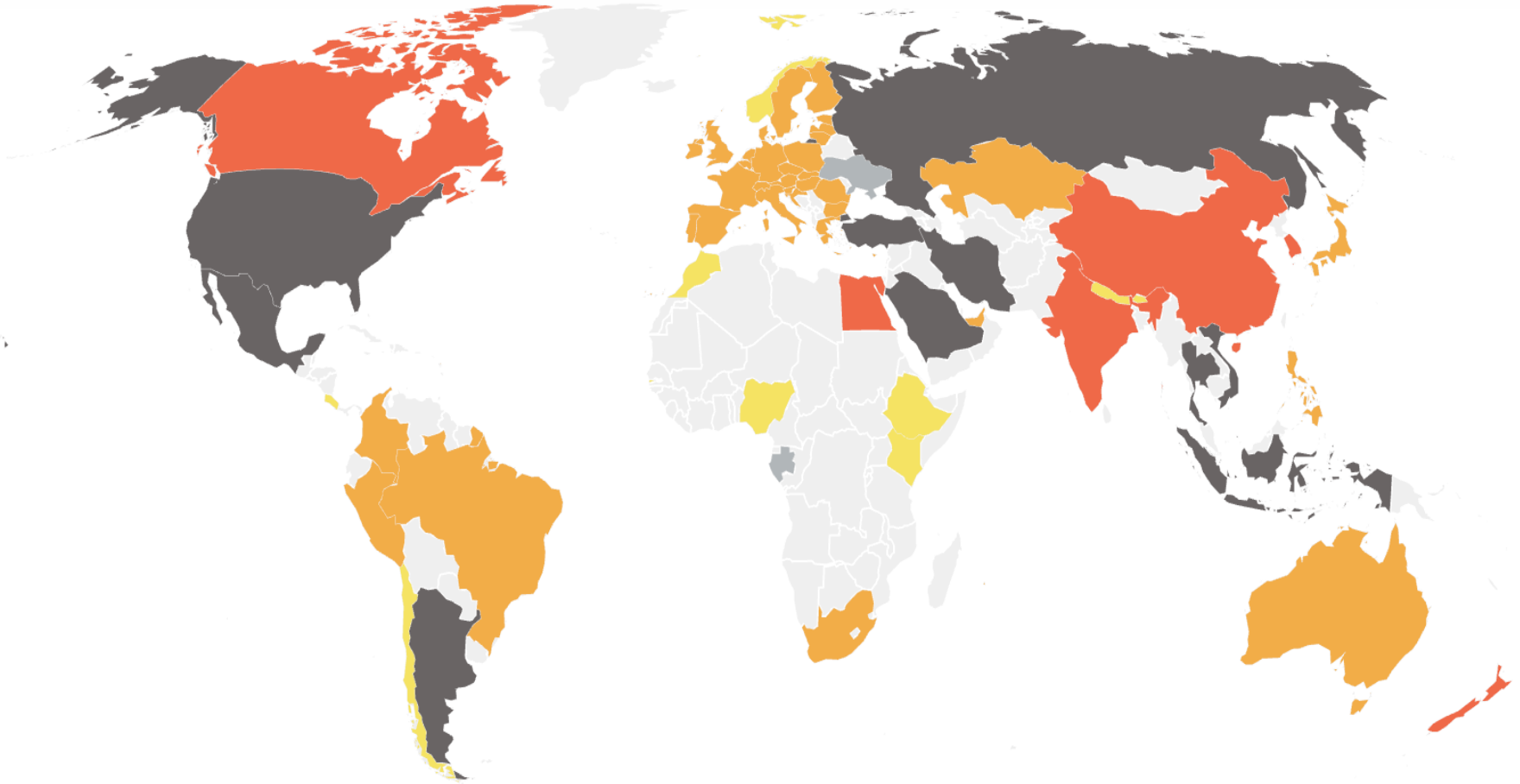


Assessments of:

AVIATION
Find out more

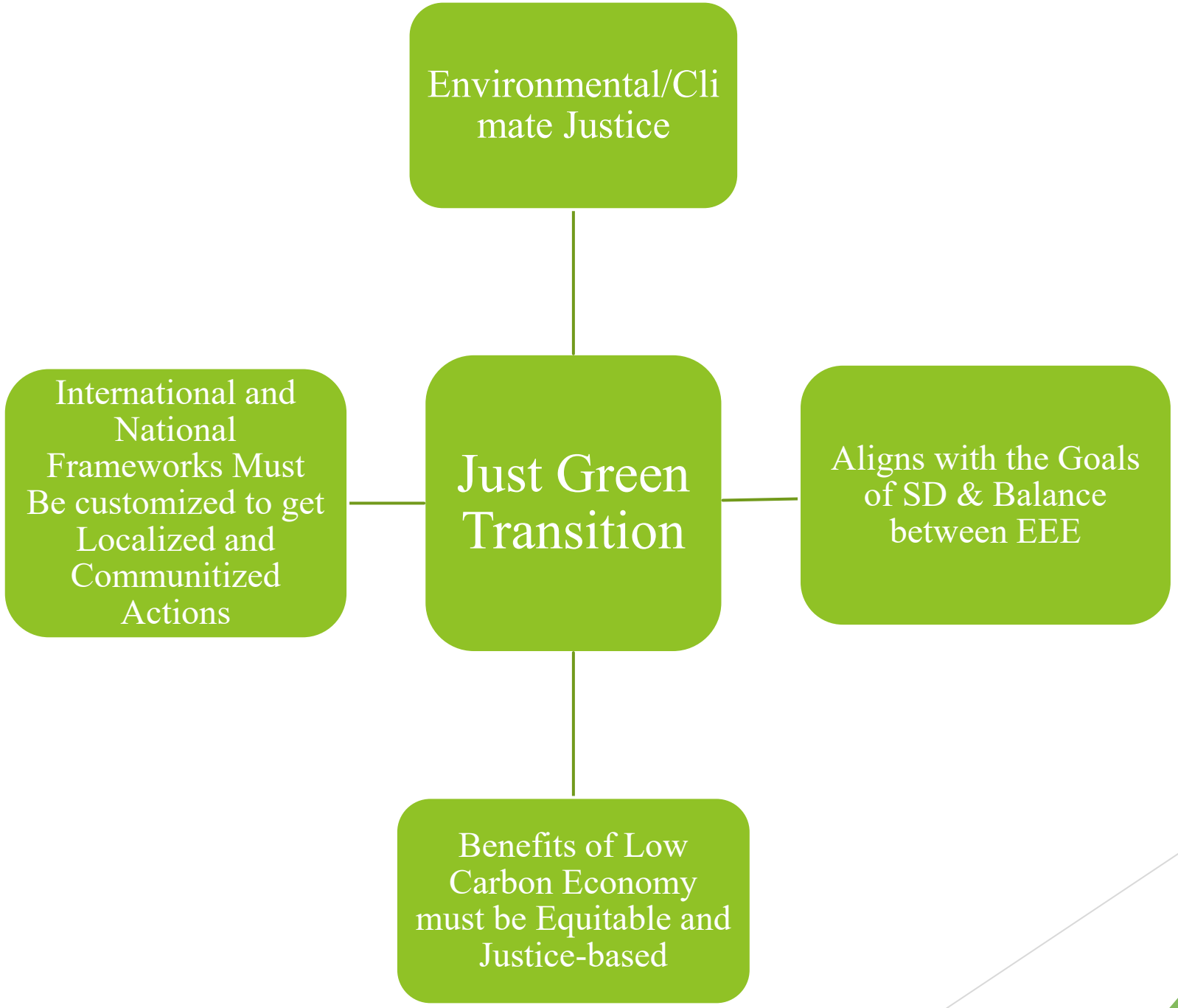
SHIPPING
Find out more

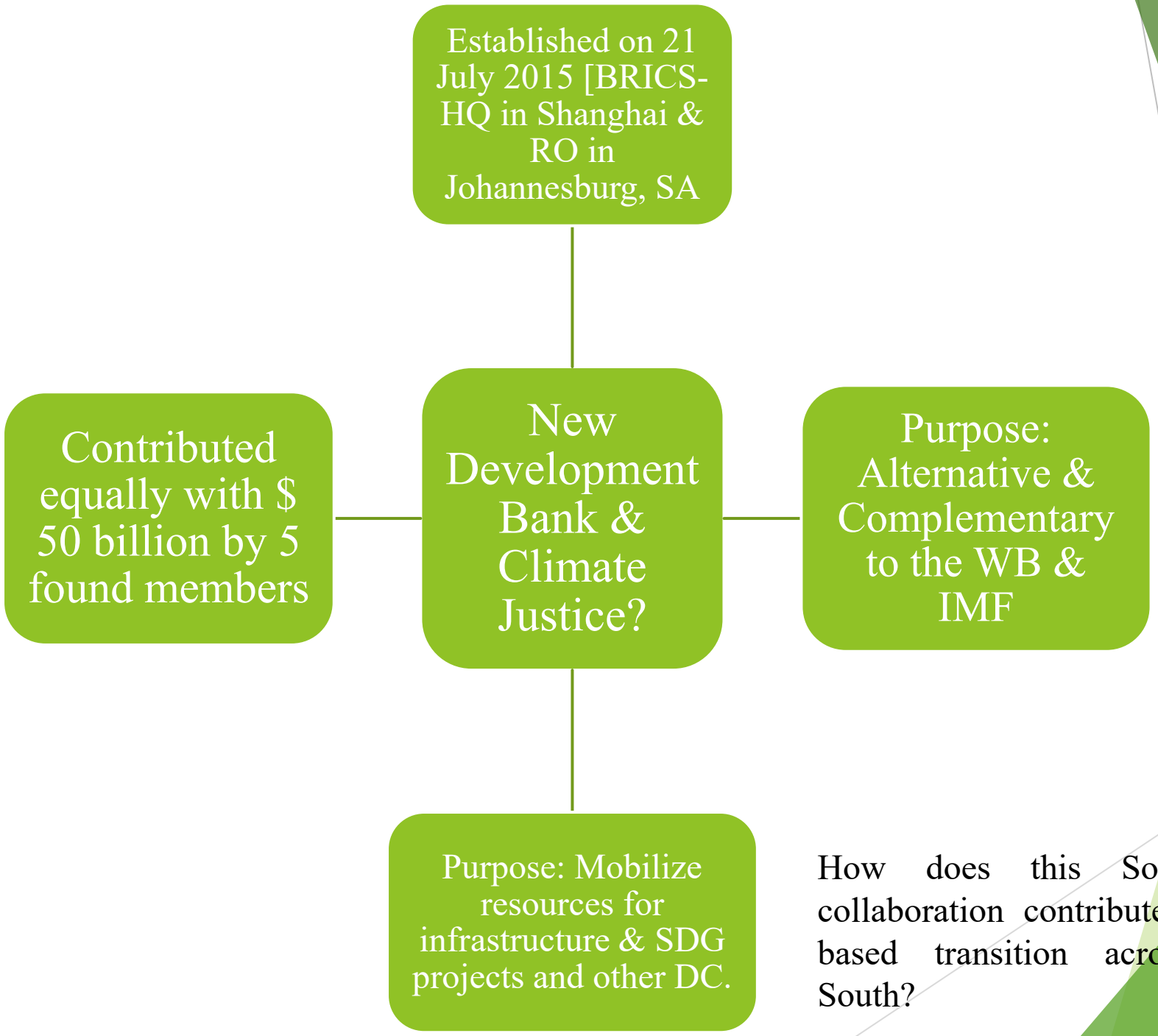
The maps displayed are for reference only.

LAST UPDATE: *November 2025*

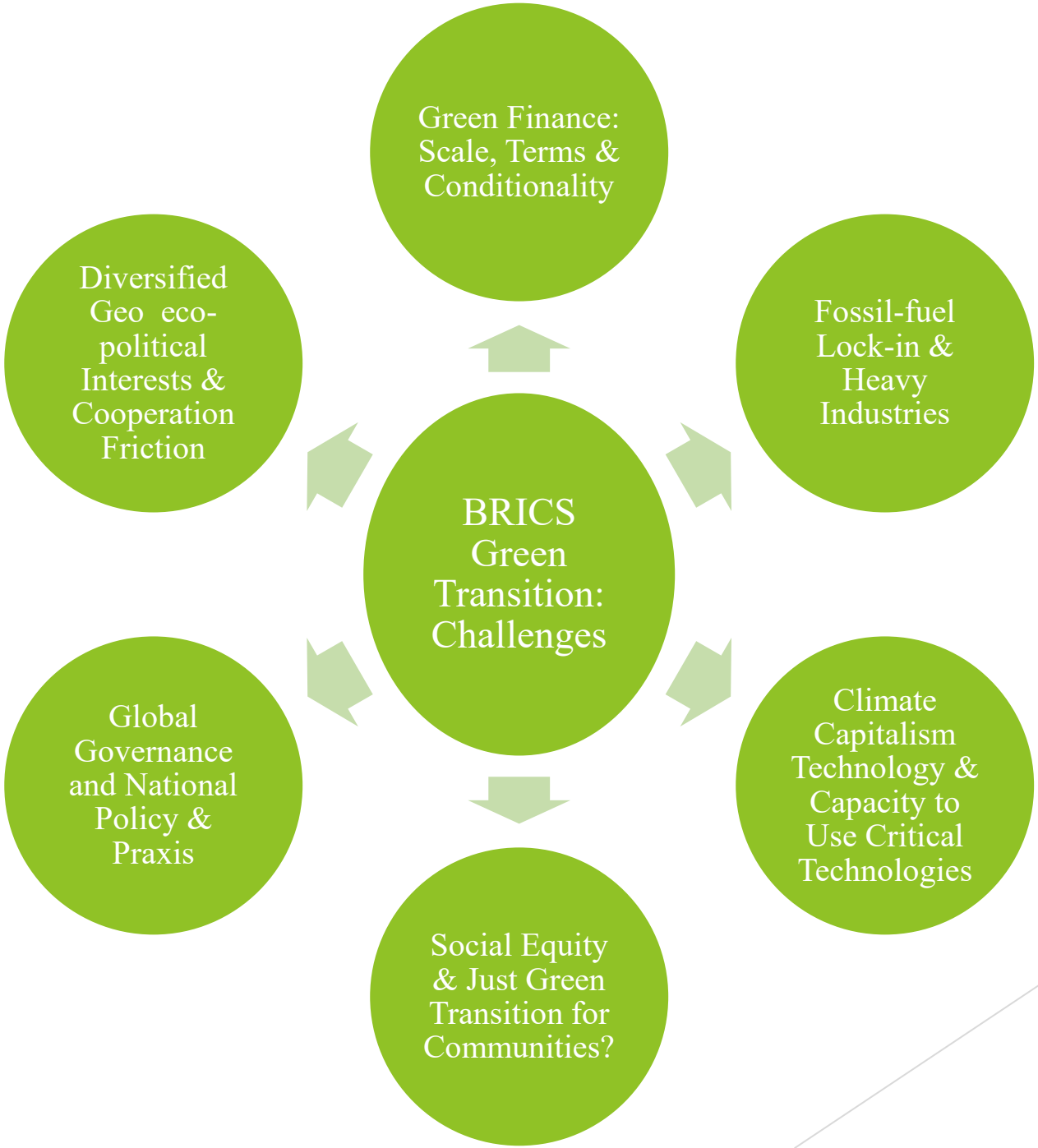
CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT	INSUFFICIENT	ALMOST SUFFICIENT	1.5°C PARIS AGREEMENT COMPATIBLE


Common But Differentiated Responsibilities;
North South Politics?
Historical Responsibility & Respective Capability
EQUITY: Population VS GDP Per Capita
Disproportionate Impacts; Inter & Intra Generational Equity; Systemic & Structural Barriers; Inclusive Decision Making
Climate Leadership Gap: BRICS Can Redefine the Course of Global Transition?
Climate Justice & BRICS


Environmental/Climate Justice
International and National Frameworks Must Be customized to get Localized and Communitized Actions
Just Green Transition
Aligns with the Goals of SD & Balance between EEE
Benefits of Low Carbon Economy must be Equitable and Justice-based

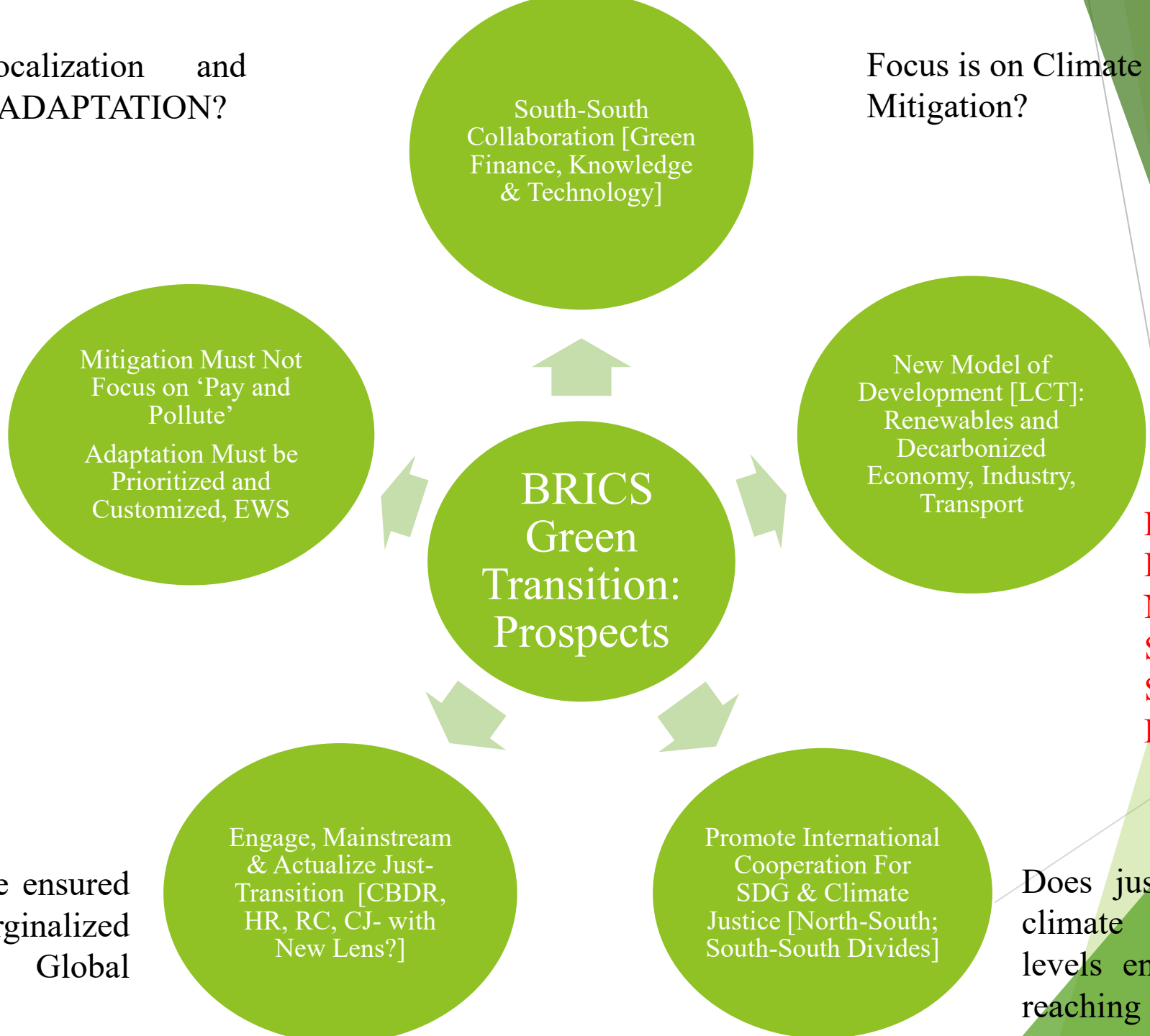


How does this South South collaboration contribute to justice based transition across Global South?


Green Finance: Scale, Terms & Conditionality
Diversified Geo eco-political Interests & Cooperation Friction
Fossil-fuel Lock-in & Heavy Industries
BRICS Green Transition: Challenges
Global Governance and National Policy & Praxis
Climate Capitalism Technology & Capacity to Use Critical Technologies
Social Equity & Just Green Transition for Communities?

Actions for Localization and Communitization—ADAPTATION?

Focus is on Climate Capitalism for Mitigation?



Business as Usual-Climate Negotiations? Become incremental or transformative change-maker?

Fossil Fuels Lock in-Climate Negotiaions—Syncronize Science and Politics of CC?

How is climate justice ensured for communities, marginalized and vulnerables in Global South?

Does just transition through climate capitalism to state levels ensure justice without reaching communities?

Conclusions

- COP-30 at Balem has achieved some important items such as the discussion about doubling the climate finance and informally supporting the indigenous people [forest] but it has yet to see how these unfold in actualization but there is little progress in fossil fuels phase out plan and loss and damage.

- Climate justice is an umbrella terminology and just green energy transition is one component of it. Climate justice or just transition must cater not only to developing countries, but also to least developed countries, especially to communities which are marginalized, vulnerable and get affected by multifaceted impacts of climate change on life, livelihood, water system, agriculture and overall sustainable development. Development has caused climate change and climate change is reversing development now.

- BRICS and BRICS+ countries are primarily either exporter or importer of fossil fuels. BRICS' engine of economy still primarily depends on fossil fuels. They have different alliances based on their national interests [for example, India a BRICS member and India a key member of Indo-Pacific QUAD & China, Russsia and SA support BRI while India and Brazil oppose]. In this context only climate capitalism is within the capitalistic system of profit making and there are opportunties for collaborations for energy transitions.

Selected Bibliography

- BRICS-Leaders' Framework Declaration on Climate Finance.
- Petrone, F. 2019. BRICS, Soft Power and Climate Change: New Challenges in Global Governance? *Ethics & Global Politics*, 12 (2): 19-30.
- Downie, C. & Williams, M. 2018. After the Paris Agreement: What Role for the BRICS in Global Climate Governance? *Global Policy.* 9 (3): 398-407.
- Government of China. 2024. China's Policies and Actions: Addressing Climate Change. Ministry of Ecology & Environment, China.
- IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. IPCC, Geneva, Switzerland, pp. 1-34.
- Kiprizli, G. & Kostom, S. 2022. Understanding the BRICS Framing of Climate Change: The Role of Collective Identity Formation. *International Journal*. 77 (2): 270-291.
- Makarov, I., Khlebnova, A. & Shuranova, A. 2024. Towards Global Green Leadership: Priorities for BRICS Cooperation on Climate Change. HSE University, International and Comparative Law Research Center. https://we.hse.ru/data/2024/12/05/1923701533/Towards%20Global%20Green%20Leadership.pdf
- Owojori, O. M. & Anwana, E. 2025. Climate Governance in the BRICS: Pathways toward Net-zero emissions. *Global Sustainability*. 6: 359.
- Pandey, C. L. 2014. The Limits of Climate Change Agreements: From Past to Present. *International Journal of Climate Change Strategies and Management.* 6 (4): 376-390.
- Pandey, C. L. 2014. Resources and International Climate Change Policy Gridlocks. *Chinese Journal of Population, Resources and Environment.* 12 (3): 199-209.
- Pandey, C. L. & Dahal, N. 2022. Rethinking Climate Diplomacy Gains: Strategic Benefits to Nepal. Journal of Foreign Affairs, 2 (01), 69-89.
- Presidential Climate Commission. (Undated). South Africa's Just Energy Transition Investment Plan. https://www.climatecommission.org.za/south-africas-jet-ip
- Pryshansen, M. 2022. Competition and Cooperation: India and China in the Global Climate Regime. *GIGA Focus Asia*. 4: 1-11.
- Waskow et al., 2025. Beyond the Headlines: COP30's Outcomes and Disappointments. World Resources Institute.

Thank you very much for listening!