

# BRICS nations' bilateral agreements on trading as a solution to mitigate climate change

Dr. Zamokuhle Mbandlwa

[ZamokuhleM@dut.ac.za](mailto:ZamokuhleM@dut.ac.za)

Google Scholar: [https://scholar.google.com/citations?view\\_op=search\\_authors&mauthors=zamokuhle+mbandlwa&hl=en&oi=ao](https://scholar.google.com/citations?view_op=search_authors&mauthors=zamokuhle+mbandlwa&hl=en&oi=ao)

ORCID ID: <http://orcid.org/0000-0002-7528-3565>

Durban University of Technology  
Department of Public Administration  
Lecturer and researcher  
DOI: 10.47750/pnr.2022.13.506.263

## Abstract

Climate change has been a global challenge and BRICS countries are not excluded from these challenges which affect weather conditions and subsequently lead to disasters. Climate change is regarded as a change in climate patterns that are caused by the increase in the levels of atmospheric carbon dioxide produced by the use of fossil fuels. Because of the awareness of this challenge, the purpose of the study was to look at possible ways to reduce pressure on the climate, particularly in BRICS countries. The objective of this study was to convince BRICS countries to use trade agreements to look at business models that would not put much pressure on the climate. Secondly, to ensure that companies do not produce carbon dioxide that is toxic to the climate. This study aimed to find ways to protect BRICS countries from various disasters that are caused by climate change. Business agreements between BRICS countries should, therefore, have terms and conditions that seek to protect the climate and natural resources. Because of the availability of data concerning the causes of climate change, this study applied a secondary research design. Reports, findings of the previous study, and conference findings data assisted in reaching the findings of the study. In conclusion, BRICS countries have to quickly do something about climate change. The floods that South Africa and India have experienced in 2022 should be the main reason why BRICS countries must prioritize the agreement.

**Keywords:** BRICS, climate change, Weather patterns, Business agreements, carbon dioxide.

## Introduction

Brazil is one of the few countries that reportedly have companies that openly declared that their production affects the climate. Brazil companies such as Petrobras, Ford Brasil, Walmart Brasil, and Whirlpool realized that climate change is a serious problem and developed a plan to transition to low carbon growth. All these companies are part of the Brazil GHG Protocol Program, a project of the World Resources Institute (WRI). Brazil as a developing country is seen as a country that is serious about measuring its emissions. Brazil has influenced China and India in developing inventory programs based on GHG protocol. Financial institutions in BRICS countries are working together in protecting investors from the risk of climate change. Major banks and financial institutions disclose the risk of climate change and the impact it could have on businesses. These institutions had introduced a carbon-intensive project meant to increase climate change awareness (Venugopalan and Shally, 2009: 02). This study

intends to show how bilateral agreements between BRICS countries can work together in finding a business model that could reduce air pollution.

Companies in other countries have planned to drop coal plants 8 out of 11. This was informed by how coal industries pollute the air. This, therefore, leads to climate change. Issues of climate change have been a global topic hence the United States of America has initiated strict measures for companies. Companies in New York are required to disclose their climate change exposure and how they plan to protect the climate. Insurance companies also require information related to climate change from companies and companies that are likely to influence climate change pay more premiums. Companies are required to disclose their environmental risk and plans on how to deal with the risk. Before companies present their plans they are expected to know the emissions and where they come from (Eccles and Krzus, 2018: 05).

Russia is amongst the largest countries globally that emit greenhouse gases. This put much pressure on the climate and warmed the planet 2.5 times faster. Climate change harms the livelihood of the people and businesses. Just in 2019, Russia was regarded as the hottest country in the world due to the tons of carbon dioxide the country produces. Taiga in Russia is estimated to melt completely in the next 30 years. At this point, Russia does not have a sufficient response mechanism to climate change. Businesses in Russia despite the high production of carbon dioxide do not change the business models that can reduce the pressure on the climate. However, Russia is adapting to the pressure of global opinion on climate change. The attitude of Russia on climate change is questionable because of the decisions that have been made by the Russian leadership. Russia has signed a Paris accord that compels Russia to reduce carbon dioxide emissions to 70%. Climate change in Russia is not only affected by carbon dioxide but also by poor waste management and forest fires (Pattberg, 2012: 614). Climate change in Russia harms businesses. Because of this, the government of Russia has regulated and mandated companies to emit carbon dioxide. The government closely monitors the process and has stringent measures on companies that have more than 150 000 tons of carbon dioxide. Carbon dioxide emissions quotas are subjected to penalties. Companies that do not comply with the carbon dioxide emission plans are forced to pay a fine. Countries within the BRICS nations can learn from the strategy of Russia. On the other hand, Varun and Ashwini (2021: 02) reported that Indian companies are in a process of changing models of production to reduce the pressure on the climate. India is also subscribing to the Paris agreement on climate change. India is playing a role in reducing carbon dioxide through adjusting the transport systems, industrial technologies, and lifestyles. China as a member country of BRICS is the largest emitter of carbon dioxide in BRICS countries and globally. The infrastructure of china focused on coal and fossil fuels. Even though china's carbon dioxide emissions are less than the United States but the country has improved. Agriculture, water resources, and forestry in china suffer from the negative impacts of global warming. In South Africa, climate change is likely to increase by 90% due to the increase in greenhouse gases. South Africa will experience an increase of 3-5 degrees Celsius in summer and will experience extremely hot days. The rainfall will decrease and this could lead to droughts. It is therefore very important for BRICS countries to meet and discuss possible bilateral agreements on trade that will look at the business model that will save the countries (Maryam, Bandy and Mittal, 2018: 05).

### **Theoretical Framework**

Climate change is caused by air pollution that threatens the atmospheric commons. The climate risk is a global risk that requires a global solution. Scientific theories are hypotheses that have survived repeated verification and extensive testing. Therefore, theories are falsifiable and testable. The theory of global warming focuses on the importance of CO<sub>2</sub> for the climate. This theory suggests that CO<sub>2</sub> (Carbon Dioxide) would make the world warmer. This phenomenon affects the weather conditions. The surface of the earth becomes colder. This study derives from theories such as this theory. This theory states that the sentiments made by the theory lead to climate change. Global warming theory also looked at how greenhouse gases influence climate change. Global warming gets stronger daily and humans are the cause. This cannot rule out some past global warming caused by natural factors. Global warming causes climate instability. Those instabilities lead to irreversible impacts that affect human beings, the environment, and animals. This theory supports the recommendations made in this article (Schweizer, Davis and Thompson, 2013: 44).

## Research Methodology

Research methodology is determined by a researcher based on the study to be conducted. Research methodology and the availability of data affect the study. Studies are not always based on primary data but some studies can reach conclusions based on secondary data. This could be made possible by using data simulation. Data simulation is based on a real-world process using test models over time. This method helps to determine what would happen under certain circumstances. Data for this study was derived from the existing data points from different sources to create new knowledge that adds to the body of knowledge. Data were collected on various platforms such as online material, newspapers, journal articles, and conferences. This method is informed by the aim and objectives of the study (Snyder, 2019: 334).

## Findings and recommendations

United Nations Framework Convention on Climate Change (UNFCCC) provides universal membership to countries that want to participate in climate agreements. Kyoto Protocol provides extensive guidance on how countries can work together in monitoring the climate. The Bali conference on climate change known as COP-13 2007 marked a turning point for many countries and created an awareness of climate change. This conference discussed a long-term cooperative action to reduce climate change. Climate change was at the centre of discussions but business models were also discussed. It was discovered at the conference that climate change is mainly caused by the type of businesses that produce greenhouse gases globally. Countries committed themselves to mitigation strategies. The assessments and discussions were based on developed and developing countries (Wertz-Kanounnikoff, 2007: 10).

Fortunately, South Africa 2011 hosted the COP-17 in Durban. The country had an opportunity to host the conference and was exposed to various ideas to mitigate climate change. There was an evolution of coalitions of countries to look at their priorities. 131 developing countries that are part of G77 have allied to investigate measures to reduce climate change. Within developing countries and developed countries, other groups such as Environmental Integrity Group formed a coalition to assess industries. In 2012 COP-18 was in Doha, Qatar, and a lot of decisions on climate change were taken. Participating countries focused on quantified emission reduction commitments. Countries agreed that the emissions allowance must be market-based and allow flexibility mechanisms. Many countries declared that climate change is mainly caused by carbon dioxide produced by companies or industries. For countries to reduce carbon dioxide, they had to look at how industries can be transformed. Companies were skeptical about changing their business operations. This was caused by the uncertainty of the proposed new ways of doing business. Perhaps this could have been caused by the modalities and linkages that were presented by the Adaptation Committee (Althaus, 2012: 05).

Climate change is not something new, various committees were established to investigate and provide recommendations on how to deal with climate change. Different stakeholders have played a role in dealing with climate change. The finance sector has established a finance committee to investigate the financial impacts of climate change. Climate finance led to the establishment of the Climate Technology Centre Network (CTCN). And later led to the establishment of the Technology Executive Committee (TEC). Technology Executive Committee was established to exchange information. These platforms are diversified and designed to contribute to effectively dealing with climate change. All these platforms contributed to the long-existing United Nations Environment Programme (UNEP). UNEP has assisted countries that needed help in understanding and stopping climate change. This has taken place through training and the provision of emissions gap reports. The analytical efforts and funding for adaptation by UNEP have assisted many countries. UNEP set objectives for countries that required the funding. BRICS countries could benefit from this funding and this will improve the climate (Chen, 2011: 03).

Based on the UNEP as the foundation to assist countries with climate change, various countries established national funding entities. These funding entities are responsible for addressing climate change with human development. If this can be made possible by the UN and various countries, BRICS countries can also do it. BRICS countries can establish a funding model to focus on climate change for BRICS countries. The funding model could assist businesses within BRICS countries. The funding can be a relief for businesses while looking for new ways of doing business that will not affect the climate. The funding can also help countries to follow the Montreal Protocol on

substances that deplete the stratospheric ozone layer. The ozone layer and the climate are affected by human actions (Molina, Zaelke, Sarma, Andersen, Ramanathan and Kaniaru, 2009: 20617).

50 countries signed an agreement to pledge about 4 billion US Dollars in the year 2010. The pledge was for avenues for climate change financing. This was designed to assist countries to transition to low-carbon technologies. Funds were also used to establish the International Renewable Energy Agency (IRENA). IRENA was established to transfer renewable energy technologies. It has 163 member states which include all BRICS countries. This, therefore, suggests that BRICS countries are well experienced in forming platforms that could provide solutions to climate change problems. The above discussions show that bilateral agreements in BRICS countries on the business model are possible. BRICS countries can find solutions to change the industries that produce carbon dioxide. Based on the experience and previous engagements with other formations and countries, BRICS countries can secure the climate against human behaviour. Countries can start by forming a climate change policy (Khan and Roberts, 2013: 175).

The business model will help vulnerable countries to adapt to climate change impacts easily. This could also help in the phasing out of the insufficient fossil fuel subsidies. This could be an extension of the existing dialogue of 30 industrialized and developing countries. These countries are working together in committing themselves to a legally binding domestic policy to reduce emissions of carbon dioxide. Climate change is not a problem of a particular country or a few countries but a global challenge as has been mentioned earlier. Countries are working together in trying to find possible solutions. Countries that already have grouped themselves for other platforms or activities could easily add the topic of climate change. The dialogues should focus on increasing the understanding of climate change and explore joint actions to deal with climate change (Ang and Fredriksson, 2021: 106).

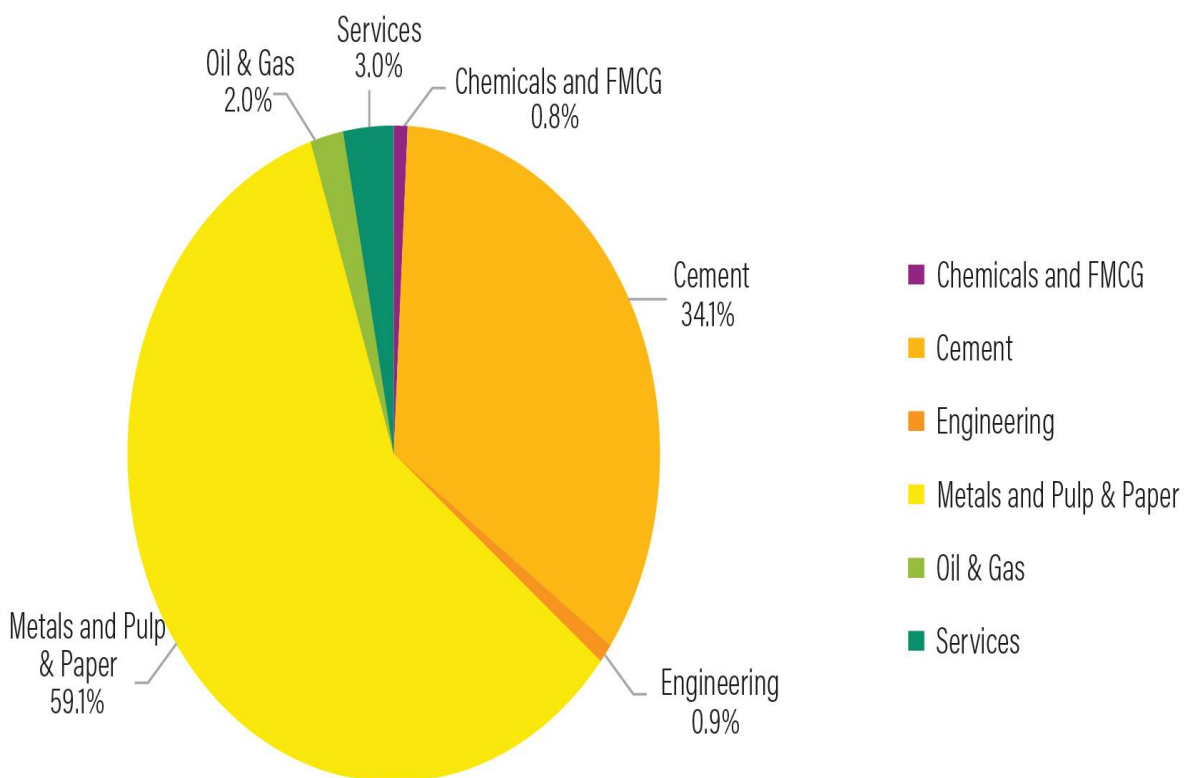
The linkages between countries show that market regulations could assist countries to control climate change. Business models and mechanisms are a solution to control climate change. Carbon markets have to be taken into consideration when dealing with climate change. BRICS countries have to look at how other countries collaborated to deal with climate change. Countries did not look at the measures to reduce carbon emissions only but also focused on business models that improve the national and global economy. Some projects can be useful in BRICS countries. The agreement in BRICS countries can include the bilateral agreement on imported goods. Imported goods must not produce carbon or any harmful pollution that affects the climate. The bilateral treaties are important for the BRICS nations. Bilateral treaties have some requirements that could be a stumbling block to progress. Bilateral agreements in BRICS countries will help the countries to reduce the mitigation costs of climate change. The linkage will have to look at the possible ways of controlling the market without negatively affecting the trade agreements. The national control of carbon markets in BRICS countries could be uniform. This could be made possible by linking the multinational trade systems and the implementation or review of the carbon tax (Ang and Fredriksson, 2021).

There are different ideas amongst countries about the relationship between climate and trade. Countries have some fundamental assumptions on preferences concerning the role of governments and markets. Governments are seen as responsible for the market failures and failures to address climate change. Territorial policies and regulations could be a problem and a stumbling block in forming some bilateral agreements. Trade agreements and domestic product management could play a major role when countries deal with climate change. Some countries believe the trade measures are appropriate as a tool to pursue climate change reduction. Even though the World Trade Organization (WTO) agreement applies principles that are pertinent in dealing with climate change (Khan, 2015).

Businesses play a major role in addressing climate change. Businesses can work together from different countries in addressing climate change. BRICS countries can learn from how other countries and their businesses collaborated when dealing with climate change. The progress made by businesses globally shows that climate change is influenced by humans. About 500 cities and more than 2000 companies are involved in a campaign for carbon production. Businesses are doing this under the slogan “Race To Zero” this campaign and slogan emulate the global plans to preserve nature and prevent future threats to climate. Many businesses globally have been mobilized to form part of the campaign. If businesses were seen as an important role player by other countries the BRICS nations can do the same and the impact will be realized (Zhongming, Linong, Xiaona, Wangqiang and Wei, 2021).

The study further found that BRICS countries do have business models that are designed to stop climate change. These models are domestic and designed to work for single countries. Based on these models, BRICS countries can develop a universal model that will empower all BRICS countries. India, for example, has undertaken progressive action on climate change and businesses are at the centre. The industrial sector of India comprises 35 percent of total emissions.

## Relative Contribution to Total Estimated Emissions Reduction in 2030 by Sector for the Set of Companies Analyzed



*Figure 1 Relative Contribution by Sector to Overall Emissions Reduction Estimated from Companies' Voluntary Commitments*

Source:

figure 1 shows an analysis of how businesses have contributed to the reduction of climate change in India. Industries in India have volunteered to change the production processes in pursuit of reducing carbon dioxide. India is a country that is overly populated and this strategy has worked significantly for the country. This, therefore, shows that BRICS countries can meet and find a way of dealing with climate change. Strategies that were applied by the Indian companies can also be applied by other BRICS countries. If needs be, BRICS countries have to look at the

business models and sign bilateral trade agreements to consider climate change. Metals, pulp, and paper produce more carbon dioxide and the above figure shows 59.1 emissions. This business and many other businesses will not have to be closed down but BRICS countries must meet and find better solutions to sustain the climate while not frustrating the business (Saint, 2021: 03).

The study found that few impacts are caused by climate change. The impacts are not only in one country but in almost all BRICS countries. Addressing climate change is the responsibility of BRICS countries collectively. Business models that will address the climate change in BRICS countries are imminent. That business model will help countries to develop domestic business models. The commitment of businesses to mitigate climate change is crucial. Businesses put pressure on climate through mining, petrochemicals, buildings and construction, and various other business types. Government policies must be strict on companies that are producing carbon dioxide. Long-term sustainability of the climate is only possible if countries work together. BRICS countries must create a platform for businesses that will allow innovations and creativity for companies on how they will deal with climate change. Businesses must realize the importance of their business and see some implications they have on climate. The trade bilateral agreement in BRICS countries will lead to legislative frameworks for each country. Businesses in different countries will have to comply with the legislative framework. Companies will not play a reactive approach but will be proactive in debates around energy and climate change in BRICS countries (Sorokin, 2021).

Another crucial aspect this study found important is the adaptation of the international policy framework to mitigate the vulnerability and impacts of climate change. Some sectors are highly affected as has been mentioned earlier. The adaptation strategies could reduce the vulnerability caused by the climate change conditions. The study further found that developing an effective climate change strategy for businesses can effectively respond to climate change impacts and can reduce climate change in the future. This study, therefore, recommends that BRICS nations create a dialogue that seeks to find a business model that can lead to the reduction of climate change. The proposed business model will not limit countries to regulate their businesses. The proper and viable business model can be identified if BRICS countries meet and discuss the national needs of each country.

## Conclusion

Even though climate change is natural but it is caused by human behaviour, a lot can be done to limit climate change. Countries must not only create a business platform but that particular platform must further address climate change. Proper monitoring and evaluation of technological policies and technological developments could contribute to the fight against climate change. Incentives for countries that comply with international climate change obligations could contribute to reducing pressure on climate. Technology is a sensitive issue, especially for developing countries. Developing countries are desperately in need of technology for the countries to grow their economy and be part of the global community. This vulnerability leads to developing countries being forced by the economic conditions to use a technological system that put pressure on the climate. Tariffs and non-tariff trade barriers are the stumbling blocks to technology transfers. Further, countries are not able to help one another with business ideas that could reduce the emission of carbon dioxide. Bilateral agreements on trade amongst BRICS countries can address this challenge. Countries should start working on incentives and policies that encourage the mitigation of climate change. Educating businesses and the public about climate change and the impact it has could help in recruiting more people who will be aware and work towards protecting the climate.

## References

- Althaus, J. 2012. COP 18 in Qatar: between 'Fossil of the Day' and 'Best Green Practice'. Friedrich Ebert Stiftung Perspective, Dialogue on Globalization, November,
- Ang, J. B. and Fredriksson, P. G. 2021. Does an early start help or hurt? Statehood, institutions and modern climate change policies. *Energy Economics*, 94: 105075.
- Chen, C. 2011. UNEP institutional reform with its impact on developing countries. *Power shifts and global governance: Challenges from South and North*: 301-320.

- Eccles, R. G. and Krzus, M. P. 2018. Why companies should report financial risks from climate change. *MIT Sloan Management Review*, 59 (3): 1-6.
- Khan, M. R. 2015. Polluter-Pays-principle: the cardinal instrument for addressing climate change. *Laws*, 4 (3): 638-653.
- Khan, M. R. and Roberts, J. T. 2013. Adaptation and international climate policy. *Wiley Interdisciplinary Reviews: Climate Change*, 4 (3): 171-189.
- Maryam, J., Bandy, U. J. and Mittal, A. 2018. Trade intensity and revealed comparative advantage: an analysis of Intra-BRICS trade. *International Journal of Emerging Markets*,
- Molina, M., Zaelke, D., Sarma, K. M., Andersen, S. O., Ramanathan, V. and Kaniaru, D. 2009. Reducing abrupt climate change risk using the Montreal Protocol and other regulatory actions to complement cuts in CO2 emissions. *Proceedings of the National Academy of Sciences*, 106 (49): 20616-20621.
- Pattberg, P. 2012. How climate change became a business risk: analyzing nonstate agency in global climate politics. *Environment and Planning C: Government and Policy*, 30 (4): 613-626.
- Saint, A. 2021. The race to resilience: While the 'Cities Race to Resilience' campaign aims to accelerate action against climate change and ensure commitment to achieving specific goals, many resilience initiatives are already under way in cities all around the world. *Engineering & Technology*, 16 (10): 1-4.
- Schweizer, S., Davis, S. and Thompson, J. L. 2013. Changing the conversation about climate change: A theoretical framework for place-based climate change engagement. *Environmental Communication: A Journal of Nature and Culture*, 7 (1): 42-62.
- Snyder, H. 2019. Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104: 333-339.
- Sorokin, L. 2021. Climate change scenarios as a driver for "Race to Zero" campaign. In: *Proceedings of SHS Web of Conferences*. EDP Sciences,
- Varun, A. and Ashwini, H. 2021. Role of Indian businesses in driving ambitious climate action. Available: <https://wri-india.org/blog/role-indian-businesses-driving-ambitious-climate-action> (Accessed 20 July 2022).
- Venugopalan and Shally. 2009. Closing the Bankers' Loophole in Emissions Reporting. Available: <https://ghgprotocol.org/blog/closing-bankers-loophole-emissions-reporting> (Accessed 10 July 2022).
- Wertz-Kanounnikoff, S. 2007. Reducing emissions from deforestation and degradation in developing countries (REDD): Insights from the UNFCCC COP-13 in Bali.
- Zhongming, Z., Linong, L., Xiaona, Y., Wangqiang, Z. and Wei, L. 2021. Mark Carney, UN Race to Zero campaign and COP26 Presidency launch Net Zero Financial Alliance.