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CHALLENGES OF ENVIRONMENTAL AND CLIMATE CHANGE: RESPONSE OF GLOBAL SOUTH (BRICS) COUNTRIES

The study's goal was to determine the environmental and climate change issues that the BRICS nations are now confronting, the steps that have been taken to address these challenges, and the outcomes of Agenda 2030 and other initiatives that have been done. Secondary data collection, qualitative analysis, and exploratory analysis were all done as part of this study. Secondary data, such as government reports and records, published research papers, websites, and other pertinent materials, are the basis for content analysis. Strict measures such as planting trees, prohibiting the chopping down of trees and clearing jungles, prohibiting the demolition of mountains, creating space for playgrounds, addressing issues with air and water pollution, and addressing noise pollution are necessary to ensure the security of the future, are required to take. As with the growth and development due to urbanization, pollution of various kinds has reached great heights and coping with these challenges has become difficult for every living being, that is, both plants and animal kingdom. A greener and cleaner tomorrow will welcome the future generation, if we take the initiative from now onwards by taking it as our responsibility towards the future generation. There is tremendous urbanization. The nations' expansion and progress are occurring at the expense of the wellbeing of their wildlife and flora, including people. It has become a threat to human civilization and the existing vegetations and animals. If serious action against the global threat of environmental pollution and Climate Change is not taken, the repercussion will be severe. It is the sole duty of the current generation to give the future generation a healthy tomorrow. Because of the obstacles presented by environmental and climate change, it is now imperative that each individual bear the responsibility of overcoming these issues.

Key words: Challenges, Environmental, BRICS countries, climate change, pollution, urbanization, future generation.

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Қоршаған орта мен климаттың өзгеруінің қиындықтары: Жаһандық Оңтүстік елдерінің жауаптары (БРИКС)

Зерттеудің мақсаты қазіргі уақытта БРИКС елдерінің алдында тұрған экологиялық және климаттың өзгеруі мәселелерін, осы проблемаларды шешу үшін қабылданған қадамдарды және 2030 күн тәртібінің нәтижелерін және жүзеге асырылған басқа да бастамаларды анықтау болды. Бұл зерттеуде қосымша деректерді жинау, сапалық талдау және барлау талдауы жүргізілді. Мемлекеттік есептер мен жазбалар, жарияланған зерттеу жұмыстары, веб-сайттар және басқа да тиісті материалдар сияқты қосымша деректер мазмұнды талдау үшін негіз болып табылады. Қауіпсіз болашақты қамтамасыз ету үшін ағаш отырғызу, ағаштарды кесуге және джунглилерді тазартуға тыйым салу, тауларды бұзуға тыйым салу, ойын алаңдарын құру, ауа мен судың ластануын жою, шудың ластануын жою сияқты қатаң шаралар қажет. Урбанизация нәтижесінде пайда болған өсу мен даму сияқты, әртүрлі ластанулар орасан зор мөлшерге жетті және бұл проблемалармен күресу кез келген тіршілік иесіне, яғни өсімдіктер мен жануарларға қиын болды. Жас ұрпақты болашақ ұрпақ алдындағы жауапкершілігіміз деп қабылдай отырып, қазірден бастап көш бастасақ, болашақ ұрпақты жасыл және таза болашақ қарсы алады. Үлкен урбанизация бар. Елдердің кеңеюі мен ілгерілеуі олардың жабайы табиғаты мен флорасының, соның ішінде адамдардың әл-ауқаты есебінен жүзеге асады. Ол адамзат өркениетіне, бар өсімдіктер мен жануарларға қауіп төндірді. Ластану мен климаттың өзгеруінің жаһандық қаупіне қарсы салмақты шаралар қабылданбаса, оның салдары ауыр болады. Бүгінгі ұрпақтың бірден-

ұрпақтың салауатты болашағын қамтамасыз ету. Қоршаған орта мен климаттың өзгеруіне байланысты кедергілерге байланысты әрбір адамның осы қиындықтарды жеңу үшін жауапкершілікті өз мойнына алуы маңызды.

Түйін сөздер: сын-қатерлер, қоршаған орта, БРИКС елдері, климаттың өзгеруі, қоршаған ортаның ластануы, урбанизация, болашақ ұрпақ.

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Вызовы окружающей среды и изменения климата: ответ стран Глобального Юга (БРИКС)

Целью исследования было определить проблемы окружающей среды и изменения климата, с которыми сейчас сталкиваются страны БРИКС, шаги, которые были предприняты для решения этих проблем, а также результаты Повестки дня на период до 2030 года и других реализованных инициатив. Сбор вторичных данных, качественный анализ и поисковый анализ были проведены в рамках этого исследования. Вторичные данные, такие как правительственные отчеты и записи, опубликованные исследовательские работы, веб-сайты и другие соответствующие материалы являются основой для контент-анализа. Для обеспечения безопасности будущего необходимы строгие меры, такие как посадка деревьев, запрет на вырубку деревьев и вырубку джунглей, запрет на снос гор, создание игровых площадок, решение проблем загрязнения воздуха и воды, а также решение проблем шумового загрязнения. Как и в случае с ростом и развитием, вызванным урбанизацией, загрязнение различного рода достигло огромных размеров и справиться с этими проблемами стало трудно для каждого живого существа, то есть как для растений, так и для животного мира. Более зеленое и чистое будущее встретит будущее поколение, если мы с этого момента возьмем на себя инициативу, приняв это как свою ответственность перед будущим поколением. Существует огромная урбанизация. Расширение и прогресс стран происходят за счет благополучия их дикой природы и флоры, включая людей. Оно стало угрозой для человеческой цивилизации, существующей растительности и животных. Если не будут приняты серьезные меры против глобальной угрозы загрязнения окружающей среды и изменения климата, последствия будут серьезными. Единственный долг нынешнего поколения – обеспечить здоровое будущее будущему поколению. Из-за препятствий, связанных с изменением окружающей среды и климата, сейчас крайне важно, чтобы каждый человек нес ответственность за преодоление этих проблем.

Ключевые слова: вызовы, окружающая среда, страны БРИКС, изменение климата, загрязнение окружающей среды, урбанизация, будущее поколение.

Introduction

In response to the growing challenges posed by climate change and the current pandemic, the BRICS countries have united to coordinate their efforts (Petrone, 2019). In addition to deciding to collaborate closely before to the UN Conference on Climate Change in November 2021, the nations also decided to address the issues around climate change by adopting the «New Delhi Statement on Environment,» which went into effect in October 2021(D'souza, 2022).

There is a chance to make a significant dent in the current global problems of climate change, biodiversity loss, air quality, marine plastic litter, and other areas of focus by the BRICS countries, according to Bhupender Yadav, India's Union Minister for Environment (Twinkle, 2022).

However, the nations must work jointly under the guidance of equity national priorities and conditions (Ranger & Surminski, 2013). At the 7th BRICS Environment Ministerial Summit in 2021, Yadav stated, "The BRICS countries, which are biodiversity hotspots and may be instrumental in halting the COVID-19 pandemic, can explain to the world how we have been preserving such enormous diversity for aeons" (Sampene et al. 2022).

As a result, after agreeing to concentrate on waste management cooperation, the countries have begun exchanging information about their climate change programmes (Twinkle, 2022). India, for instance, discussed its goals and plans for carbon sinks, sustainable environments, renewable energy sources, sustainable transportation, etc. But cooperation would also be required, with fair national priorities and conditions serving as a guide (Ranger &

Surminski, 2013). China has established a goal for addressing climate concerns. " Being biodiversity hotspots, the BRICS nations can educate the world on how we have preserved such incredible diversity for all of humankind's history," Yadav said during the 7th BRICS Environment Ministerial Summit in 2021. China committed to becoming carbon neutral by 2060 and reaching a peak in carbon dioxide emissions by 2030 was stated on December 2020 (Camioto & Pulita, 2022).

The space agencies of the BRICS countries are working to help with climate change and environmental conservation inked a contract in August (D'souza, 2022). To make the environment better, several projects have already been started, and six BRICS Environment Ministerial meetings have been held to date.

Need of the Study

The study is extremely important because, if proper action is not made to address the concerns of environmental preservation and climate change, civilization would collapse. It is necessary to implement the measures rigorously to keep flora and faunas alive on the planet earth. To keep the planet pollution free and at least the necessities of fresh air and clean water can be provided to each living being on the earth. If proper care is not taken now the future generation will suffer to such an extent that there will be scarcity of fresh air, clean water and natural fruits, vegetables and food grains. The study will make the current generation cautious and compel them to do something to save the world from exhaustion of life.

Objectives of the Research Study are:

1) To investigate the environmental concerns related to climate change in the BRICS countries.

2) Examine the steps being taken to address environmental concerns and the climate change that the BRICS countries are facing.

3) To explore environmental protection and climate change concerns pertaining to the BRICS countries as per the agenda 2030.

Literature Review

Climate Governance in BRICS, since the inaugural BRICS summit took place in Russia in 2009, the governance of climate change has been a key topic (Rinaldi & Martuscelli, 2016). Climate change is included in about 10 regular BRICS summit communiqués, or one in five that have already taken place (Sampene et al. 2022). The most remarkable one was when Russia last hosted in Ufa in 2015. (Petrone, 2019).

The first meeting of the BRICS environment ministers was held in Russia that same year, and it subsequently turned into an annual occasion (D'souza, 2022). Climate change was a constant topic during these cabinet meetings. They soon had a committed working group and platform behind them (Camioto & Pulita, 2022). Since they began doing so in 2010, the BRICS summits have established 17 specifics, long-term, legally enforceable climate change pledges (Leal-Arcas, 2013). In 2011, when China was the host, they reached a height of six, fell, and subsequently raised to three in 2019 in Brasilia. The Group of Twenty and United Nation's summits' increased action on sustainable development, biodiversity, and meetings of environment ministers have drawn a great deal of interest and the credit to the BRICS summits (Sampene, Li, Oteng-Agyeman & Brenya, 2022). The majority of BRICS summit pledges have backed the UN in a similar way (Camioto & Pulita, 2022). Conversely, though, to tackle climate change, BRICS members expanded their collaboration on nutrition, food security, and agriculture at Ufa Summit in 2015 of Russia (Camioto & Pulita, 2022). The BRICS nations are working by giving their contribution in "fostering cooperation, sustaining information exchange, and exchanging experiences with regard to pertinent national policies, programmes, plans and change in climate, adaptation and mitigation methods, adaptation climate change by agriculture and the adversative influence of change in climate on the obtainability of food products" rendered by the UN report, commitment was made by the leaders.

Present-Day Climate Crisis

Climate change will be the main obstacle in the BRICS countries and the global community must overcome it by 2025, otherwise, it is at the verge of reaching levels that will have catastrophic effects as well as several irreversible outcomes (Rinaldi & Martuscelli, 2016). The pricey repercussions were observed in all BRICS nations in 2019.

Massive forest fires erupted, December 2021 in Moscow was the warmest it had ever been, and Russia's Arctic warmed up in large areas twice as quickly as the global average. Due to the country's increasing greenhouse gas emissions, Shanghai and Guangzhou, two of China's economic powerhouses, Seas that are warming and rising as well as related extreme weather events could soon overwhelm the area (Petrone, 2019).

In Delhi there was record levels of air pollution caused due to change in climate. It is the capital of India. High level of pollution in the capital city is forcing several schools, companies, and centres of

transportation. High level of air pollution is increasing premature deaths (Camioto & Pulita, 2022). 9,123 square kilometres of the Amazon, the planet's vital lungs, were burnt by Brazil's catastrophic forest fires.

Since 2015, there has been a terrible drought in South Africa and its neighbours that has burnt grazing fields, caused grazing lands to dry up, and kept tourists away. South Africa warmed up twice as quickly as the average worldwide temperature (Haryanto, Affandi & Tanaya, 2022). The G20, G7, and United Nation's conferences in 2019 attempted to contain the catastrophic global emergency but were unsuccessful. It was up to the BRICS nations to achieve these at their summit into St. Petersburg in July 2020 by acting more audaciously, more brazen manner than ever before.

Climate Change Capacity of the BRICS

The BRICS nations can do various precautionary activities and plan for saving the plan from global warming. With 36,573 MtCOs, the five BRICS nations contributed 42% of the world's greenhouse gas emissions in 2018. (Camioto & Pulita, 2022). With 28% of the total emissions worldwide, China was the top emitter, and the United States came in second with 15%. India and Russia followed in third and fourth place, each with 7% of the vote. With almost 1% apiece, South Africa and Brazil were ranked 13th and 14th, respectively (D'souza, 2022).

The BRICS countries can accomplish this. The five BRICS countries made up 42% of the world's greenhouse gas emissions in 2018 with 36,573 MtCOs. (Pulita & Camioto, 2022). China was the highest emitter, accounting for 28% of all emissions globally, followed by the United States at 15%. With 7% of the vote apiece, India and Russia came in third and fourth, respectively. With about 1% apiece, South Africa was ranked 13th and Brazil was placed 14th (D'souza, 2022).

The BRICS created roughly twice as much emissions as the G7 (24% vs. 42%). Together, BRICS members are dispersed across the world's major climate regions, including the Arctic in Russia, the Tropics in Brazil, the Vineyards in South Africa, China's Deserts, and India's Mountain Peaks (Camioto & Pulita, 2022). At their 2016 summit, the environment ministers of the BRICS countries said that the decisions we make have an impact on the entire planet: The population, land area, and natural resources of the world are mostly represented by the BRICS countries."

BRICS alliance is made up of South Africa, Brazil, the Federation of Russia, China, India and has initiated new policy paths to benefit from prospects and new opportunities for sustainable growth and economic development (Rojas-Rueda et al. 2019). Other than holding within its boundaries a land area greater than a quarter and more than half of entire global population correspondingly, BRICS is hugely able to gain eminence on the international scene as a result of its growing economic contribution (Ranger & Surminski, 2013). Although the BRICS cooperation may be centered on economic development, environmental conservation and the avoidance of climate change have been on the group's agenda since its official founding in 2009 (Rena,2008; D'souza, 2022). Acknowledging that "one of the threats faced by the flora and fauna of the globe is the change in climate challenging societies and citizens' incomes," the Beijing Five (BRICS) objective was to deliberate on productive solutions to the difficulties by employing the perception of shared but segregated tasks (Ranger & Surminski, 2013).

Methodology

Based on the documented environmental and climate change issues that the BRICS countries are confronting, the research study is qualitative in nature. Secondary data, such as government reports and records, published research papers, websites, and other pertinent materials, are the basis for content analysis.

The purpose of the qualitative study is to learn how the citizens of the BRICS countries perceive and comprehend the issues related to the environment and climate change. The study employs a qualitative, exploratory, descriptive, and contextual research approach with the goal of comprehending the behaviours, perceptions, experiences, and emotions of different BRICS country stakeholders. It places emphasis on the comprehension of these factors.

Research Phase

The conceptual, narrative, and interpretive components of the study were finished in three stages (Morse & Field, 1996).

Conceptual Phase – In order to become familiar with the concept, content, and preconceived notion about the research and to understand the perception of the BRICS countries about the developments to combat Environmental and Climate Change problems, research questions, objectives, and a review of the literature were formulated at this stage of the conceptual phase.

Narrative Phase – The goals and strategies put in place by the BRICS countries served as the basis for the designing of the research design. As part of the narrative phase, the BRICS countries' stake-

holders approved a range of policies, programs, and strategies. Stakeholders expressed their opinions via mail and email as well as the media.

Interpretative phase – The phase of data collecting involved the gathering, analysis, and interpretation of qualitative data.

Context – The study is focused on the BRICS nations. In qualitative inquiry, the background is important. Participants in this study include a range of BRICS country stakeholders – Ministries of BRICS countries and other members are also part of the study. Research papers, newspapers, magazines, government reports, records, documents publicized for issues of global warming and environment in the BRICS countries whose prospects are given significance. Social media also helped in gathering requisite information for the investigational study.

Research's ability to reflect itself – When choosing the stakeholders of Environmental and Climate Change Issues and Information for Research Credibility, the researchers self-monitored the preexisting beliefs, concepts, feelings, assumptions, and conflicts to increase objectivity and prevent biasness.

Discerning of the study

By fully committing to the investigation, the researchers in this study attempted to comprehend the interested parties. The phenomenon as seen from the stakeholders' perspective in the BRICS countries was the only focus of the researcher's attention. Challenge was to collect the correct information from various sources. The contents were reviewed and analysed.

Resaults and disscussion

Environmental and Climate Change Challenges in the BRICS Countries

Numerous man-made and natural risks were present in the year 2020. Events like the Australian fires, the Iranian issue are notable examples. They included issues with Brexit, the current Sino-American trade war, difficulties with arms control, and most recently, the COVID-19 epidemic. These occurrences put people, states, and international organisations under stress. During these several crises, established institutions and authorities fell short of exhibiting true leadership. The BRICS's history, meantime, pertains to the international institutions that are in place now and their helpful complementarity. The Big Five must take an active role and exercise leadership as a result of these new problems can be tackled easily which the organisation is facing.

Table 1 – Environmental and Climate Change Challenges

S/No.	Various Environmental and Climate Change Challenges
1.	Australian Fire
2.	Tehran Crisis
3.	Arms control obstacle
4.	Brexit – the British government's decision to leave th e European Union
5.	Chinese American trade conflict
6.	COVID-19 outbreak
7.	Global health crises
8.	Changing weather
9.	Loss of biodiversity
10.	Air toxicity
11.	Plastic waste in the ocean
12.	Electronic waste
13.	Single use plastic product pollution
14.	Forest fire
Note – Authors' Own Compilation	

Table 2 – BRICS Countries' Efforts to Fight the Problems Caused by Environmental Change

S/No.	Measures to Address the Environmental and Climate Change Challenges
1.	'New Delhi Statement on Environment'
2.	COP 15 Biodiversity meet
3.	COP26 Biodiversity meet
4.	In response to the global climate crisis, the BRICS took decisive action together, motivated by equity, national priorities, and circumstances.
5.	The BRICS nations decided to abide by the « common but distinct responsibilities, and appropriate skills (CBDR-RC)» guiding principles."
6.	Worked to simultaneously accomplish economic and development objectives

Continuation of the table

S/No.	Measures to Address the Environmental and Climate Change Challenges
7.	The necessity of «honouring the commitments made by developed countries in the pre-2020 period» was emphasized by the BRICS countries.
8.	As we enter the post-2020 age, the BRICS countries have taken the initiative.
9.	The BRICS countries agreed to set an annual budget of $100 billion for climate funding.
10.	The plans for enacting trade restrictions, such as the unilateral adjustment of the carbon border, were met with caution by BRICS.
11.	The BRICS countries placed a high priority on solving current world problems including biodiversity loss, climate change, marine plastic trash, air pollution, etc.
12.	BRICS nations have decided to concentrate their efforts on waste management cooperation.
13.	The BRICS nations prioritise preserving resources, maintaining a healthy ecosystem, and improving people's quality of life.
14.	The BRICS nations will also include discussions on textiles, food, water, solar energy, packaging, electronic waste, and the environment.
15.	Forestry, the fight against marine plastic pollution, the circular economy with relation to sustainable production and consumption, and air pollution have also been identified as BRICS priorities.
16.	Forest fire prevention, mitigation, and biodiversity preservation
Note – Authors' own Compilation	

The BRICS Environment Ministerial's 7th meeting was held, and the attending were the environment ministers of Brazil, China, India, Russia, and South Africa. The «New Delhi Statement on Environment» was adopted before the COP 15 Biodiversity Meet and the COP26 in November, which also aims to strengthen the BRICS nations' cooperation for continuity, consolidation, and consensus in environmental affairs. Before these two important meetings, the nations have pledged to cooperate closely to solve the concerns related to climate change. Mr. Bhupender Yadav, the environment minister, presided over the meeting.

India emphasized that, in order to address the climate catastrophe, operative, synchronised global accomplishment must be executed, considering national goals, equity, circumstances, and «responsibilities which are common yet diverse, and suitable skill sets (CBDR-RC)» perceptions.

The countries highlighted the necessity to account for the extraordinary conditions and to «respect the pledges made by advanced countries in the pre-2020 time period, although it was passing into a post-2020 time period, which includes the annual $100 billion objective for finance of climate» which the developing countries likely to experience in attaining both their goals of climate and their development and economic goals concurrently.

The suggestions for enacting trade barriers, such as the unilateral adjustment of the carbon border, have also been highlighted by the BRICS countries with "great concern." Yadav stated that India places a high value on the BRICS and that 2021 will be a pivotal year for the BRICS as well as the entire world because of the UNFCCC COP 26 and UN Biodiversity COP 15. He also emphasised how important a role the BRICS nations can play in tackling the current global problems like biodiversity loss, air pollution, marine plastic trash, and global warming.

The IPCC Working Group 1's contribution to "Climate Change 2021: The Physical Science," the Sixth Assessment Report, has been determined to be sufficient and may be the deciding factor for effective global collective action against pressing climate change and environmental issues, Yadav went on.

«The BRICS nations, being hotspots for biodiversity, have the potential to not only stop the Covid-19 pandemic but also serve as a powerful example to the rest of the world of how we have managed to preserve such vast diversity throughout history,» stated Yadav.

Considering that "effective disposal of waste, the conservation of resources, maintenance of a healthy ecosystem, and the welfare of population depend on the recovery of energy and secondary raw materials, among other things", the nations have resolved to focus their efforts on collaborating in the area of waste management. (2016) Gladun and Ahsan India has initiated enhanced information exchange and implementation of the BRICS Resource Efficiency and Circular Economy Dialogue project, with the goals of resource efficiency and the circular economy, and best waste management practises.

The nations will also discuss biofuels, solar energy, electronics waste, food, packaging, textiles, and other issues.

Some of the main areas of focus for the BRICS countries include air pollution, the circular economy in relation to sustainable consumption and production, the fight against marine plastic pollution and single-use plastic product pollution, forestry, including the prevention and mitigation of forest fires, and biodiversity conservation.

Agenda 2030 to address environmental and climate change concerns in the BRICS nations

Prosperity, environment, and people are the agenda's main objectives. Additionally, it strives to advance global peace and greater freedom (Basile & Cecchi, 2019). We understand that the biggest task is putting an end to all forms of poverty, including extreme poverty the world has ever faced and a crucial step toward sustainable development (Grigoryev, & Grigoryev, 2020). This strategy will be carried out in a cooperative manner by all nations and stakeholders (Tsalis. et al. 2020). The agenda is interrelated and unbreakable, balancing economic, social, and environmental sustainability (Weiland et al. 2021). 169 integrated and indivisible targets that are connected to 17 Sustainable Development Goals are included in the announcement (CEPAL, 2019).

The objectives and targets will spur action in several critical areas for humanity and the environment over the next fifteen years:

Table 3 – Agenda 2030's Areas of Interests and its Defined Properties

S/No.	Areas of Interest	Properties
1.	People	Devoted to making sure that everyone can realize their potential and live in a world free from hunger and poverty in all of its forms, as well as one of equality, dignity, and a healthy environment.
2.	Planet	Committed to stopping the degradation of the environment by using natural resources wisely, responding quickly to climate change, and promoting sustainable production and consumption in order to preserve the ability of the planet to support present and future generations.
3.	Prosperity	Devoted to making sure that social, technological, and economic development coexists with nature and that everyone can live happy and led prosperous lives.
4.	Peace	Committed to promoting societies that are free from violence and fear and that are just and inclusive. There cannot be sustainability until and unless peaceful environment exists, and also growth and development cannot be retained without peace.
5.	Partnership	To activate the resources, it is necessary to be dedicated for carrying out the Program. It has become important to revitalize the World Collaboration for Sustaining Growth, which involves all the organizations, countries, and citizens.
Note – Authors' own Compilation		

To accomplish the goals of the New Plan, the Objectives for Sustainable Development must be connected and integrated. If the nations are successful in completing the agenda, everyone's lives will be considerably enhanced, and the world will change for the better.

The 2030 Plan for the Environment and Climate Change includes Goals 13, 14, and 15.

Table 4 – Goal 13: Resolving the Effects of Climate Change as Soon as Possible*

S/No.	For Fighting Back and alleviate change of climate and its consequences
13.1	Enhance global promptness for threats related to change of climate and calamities which are natural.
13.2	To amend national level strategies, plannings and programs to incorporate in change of climate modification methods.
13.3	Improved scope for early caution, decline in damage, control of damage, established adjustment to change in climate, and adaptability of human beings.
13.3 a	To totally functionalize the Fund for Green Climate with the support of its funds at the earliest. It necessitates taking out the advanced-country parties' assurance to the UNFCCC which raise $100 billion yearly by the year 2025 from various sources which will help to back the requirements of developing nations in the background of effective justified approaches and translucent execution.

Continuation of the table

S/No.	For Fighting Back and alleviate change of climate and its consequences
13.3 b	Endorse the embracing of strategies which will reinforce the capability of small size island emergent states and less developed nations to efficiently formulate for and succeed change in climate, with an prominence on youth, women and demoted and local groups.

Note – Authors' Own Assemblage
* Acknowledging the UNFCCC as the primary global forum for intergovernmental discourse regarding the global response to climate change.

Stopping global warming and its effects as soon as possible is Goal 13 of the UN's 2030 Sustainable Development Goals, is defined in the table above. All points under Goal 13 are stated in the above table.

The above table portrays Goal 14 of UN. The central objectives of improvement should be to safeguard and intelligent use of aquatic resources, according to the 2030 Agenda for Sustainable Development. The table above is a list of every point that falls under Goal 14.

The 2030 Plan for Sustainable Progress of United Nation, which fundamentally summarizes the goals as follows: stopping deforestation; defending, reestablishing, and inspiring the supportable use of terrestrial environmental system; maintaining woodlands restoration; and decreasing the loss of biological diversity, in the table above. All the points under Goal 15 are stated in the above table.

Table 5 – Goal 14: Encourage sustainable development through protecting the ocean and using marine resources wisely

S/No.	Utilization Aquatic Reserves and the Oceans and Seas Reliably
14.1	It is important to eliminate or radically cut down aquatic contamination by the year 2025, incorporating those which consequences from activities associated with land and the contamination produced by nutrients and sea fragments.
14.2	Accountable administration and conservation of aquatic and coastal ecological systems can lead towards healthy and fruitful seas and water bodies by the year 2025, it can be achieved principally with the help of augmenting their flexibility, is authoritative to prevent serious outcomes.
14.3	Moderate the effects of ocean acidifying by, like, expanding scientific cooperation at different stages.
14.4	By the year 2025, all damaging fishing operations–including overfishing and unlawful, unreported, and irregulated fishing–should be eliminated which can produce the maximum restorable yield as revealed by their genetic characteristics.
14.5	By the year 2025, 10% or higher range of aquatic and coastal habitations should be conserved while adhering by the recent lawful and technical apprehension which existed at national and universal level.
14.6	By the year 2025, eliminate all incentives which encourage unreported and illegitimate fishing, ban some of the subsidies which supports excessive fishing and over loading, and to prohibit increasing new ones. World Trade Organization granted that developing and less developed countries should obtain appropriate and competent preferred treatment while settling fisheries financial assistance.
14.7	There will be reduction in the size of island by the year 2030 which developing, and less developed nations will get financial advantage from the sustainable utility of aquatic resources, particularly with the help of management of marine culture, tourism and fisheries.
14.a	It is of prime importance to enhance knowledge, boost ocean health, and increase the involvement of marine biological diversity which leads to the growth of poor nations by raising research competence and transferring aquatic technology. while observing the rules and specifications which the Internal government Oceanographic Commission has formed.
14.b	Markets and sea resources are worthy to small-scale, traditional fishermen.
14.c	As portrayed in UNCLOS, the applicability of global law which specifies the regulatory outline, would enhance the protection and sustainable utility of oceans and its resources.

Note – Authors' Own Contribution

Table 6 – Goal 15: Changing and prohibiting land degradation, protection, maintenance, and promotion of sustainable management of forest, decreasing the loss of biological diversity, stopping land turning into deserts, and usage of terrestrial ecological systems restoration.

S/No.	Highly Significant to Safeguard, Regain, and Utilize Earthbound Ecological Systems Sustainably
15.1	Land and inland freshwater ecological systems, such as mountains, wetlands, forests and drylands must be lawfully authorized to be conserved, restored, and utilized sustainably by the year 2020.
15.2	Deforestation needed to be eradicated by the year 2020, to repair existing damaged forests lands, and considerably multiply afforestation and reforestation to be done. Promote the devotion of sustainable forest managing methods in all the types of forests lands.
15.3	By the year 2030, it is urgent to stop land from losing its fertility, stop lands turning to deserts and restore land and soil which lost its fertility due to by famine, floods, and lands becoming deserts.
15.4	By the year 2030, it is to be guaranteed that mountain ecological systems are protected, in particular to enhance their scope to provide advantages that are significant to sustainable growth.
15.5	To curb the loss of biological diversity, the disappearance of sensitive species, and the declining of natural ecological systems, extensive and immediate steps must be implemented by 2020.
15.6	Promote equitable division of the gains resulting from the usage of hereditary resources, as well as proper approach to them as per the international treaties or accords.
15.7	Illegal wildlife trade needed to be stopped, the smuggling of such products, and the stealing of endangered floras and faunas to be restricted.
15.8	Determination of policies by 2020 to eliminate priority species, control the spread of aggressive unfamiliar species, and remarkably diminish the destruction that is brought to water and terrestrial ecological systems.
15.9	By the year 2020, all projection, improvement, and poverty-abolition strategies at the metropolitan, state, and central levels should take biological diversity and the environment in consideration.
15.a	Enhance all existing finances, activate it, and to utilize it for the sustainable accumulation and usage of environmental systems and biological diversity.
15.b	Outstanding monetary incentives to financially weaker nations to support preservation and reforestation initiatives as well as ecological forest administration and activate a extensive quantity of liquidity from all existing resources.
15.c	Promotion of worldwide efforts to stop the trade in and stealing of endangered species, particularly by giving local populations additional resources to explore for long-term sources of income.
Note – Authors' Own Contribution	

Table 7 – India's Foreign Ministers at the BRICS Meeting: Eight Key Points

S/No.	The Eight Key Points Raised by India at the BRICS Foreign Ministers' Meeting
1.	Build supply chains that are robust and self-sufficient.
2.	Energy prices have sharply increased due to the fallout from the Ukraine crisis, and these costs must be reduced for the developing globe.
3.	The BRICS ought to uphold sovereign equality, territorial integrity, and international law.
4.	BRICS should support reforming the UN Security Council in unanimity.
5.	The BRICS should show that they are seriously committed to working together to encourage climate justice and climate action.
6.	BRICS countries must exhibit that they have no tolerance for international terrorism.
7.	Because it will value trust and transparency, a globalised and digital world should be BRICS's goal.
8.	The pursuit of sustainable development goals must be comprehensive.
Note – Authors' Own Assemblage	

China most recently hosted the BRICS foreign ministers' meeting on May 19, 2022. (Roy, 2022). Carlos Alberto Franco França from Brazil and Wang Yi from China, Sergey Lavrov from Russia, and Grace Naledi from South Africa, and India's Dr. S. Jaishankar, the Foreign Minister, all participated in the discussion («EAM S Jaishankar emphasises eight crucial themes,» 2022). The timing of the diplomatic meeting, which took place as a full-fledged war is being fought in Ukraine, is revealing.

Dr. Jaishankar emphasised eight crucial points (Camioto & Pulita, 2022). He first, raised that BRICS should develop resilient and self-sufficient supply chains in addition to pursuing socioeconomic recovery from the pandemic. Second, the Ukraine crisis's ripple effects have led to sharp increases in energy prices, which needed to be moderated for the developing countries. Third, the BRICS should support international law, territorial integrity, and sovereign equality. Fourth, the BRICS should unanimously support the UN Security Council reform (Krishnan, 2022).

The BRICS should, according to 2015's «The BRICS nations' response to climate change,» show a credible commitment to working together to promote climate action and climate justice. Sixth, according to the Chinese People's Republic Ministry of Foreign Affairs, BRICS countries must show «zero tolerance» for international terrorism. Seventh, as because a globalised and digital world would value trust and transparency, the BRICS should work toward it. Finally, holistic approaches are required to achieve sustainable development goals.

Conclusion

A Review of BRICS's Performance of Climate Action

Pre-industrial values are expected to rise by more than 1.5°C by 2100 due to the projected increase in global temperature (D'souza, 2022). Together with more climate action, an assessment of countries' present climate change policies is required (D'souza, 2022). Global organizations must be assessed for their effectiveness in mitigating climate change by galvanizing member countries in this direction (Camioto & Pulita, 2022). In the struggle against global warming, five BRICS grouping factors are used in a comparative analysis with the OECD and the Group of Twenty (Warren, 2020). It offers suggestions for how the BRICS and other global organisations might help members who are lagging in their performance on climate action (Rinaldi & Martuscelli, 2016).

With the existing global policy frameworks in place, there will likely be a 2.7°C global temperature increases above pre-industrial levels (Camioto & Pulita, 2022). Warming is anticipated to be limited to 2.1°C by different government commitments and targets, such as long-term net-zero aims and NDCs (D'souza, 2022). Global warming should decrease to 1.8°C under the pessimistic assumption that the 140 nations that have already committed to net-zero objectives. People appraising them will abide by their loyalty (Gladun & Ahsan, 2016). Even though, the striking difference between the government's actions exist (pledges and targets) and the actual outcome is shocking. This discrepancy – Doubts are raised about the likelihood that the optimistic projections will materialise due to government's failure to fulfil their stated commitments and objectives (Petrone, 2019).

The BRICS group of nations have emphasised taking climate action and backed the UN and G20 in their efforts to protect biodiversity and fight climate change (Rinaldi & Martuscelli, 2016). For example, the UN Convention's Global Biodiversity Framework for post-2020 on Biological Diversity adoption requires cooperation, as the BRICS have emphasised. The BRICS countries also frequently exert influence within the G20 to persuade the group to think about significant changes in the benchmarks for environmental assessment, energy efficiency, and energy security (D'souza, 2022). The club's cause has been advanced by the BRICS summits since they first made a number of bold commitments about climate change (Ranger & Surminski, 2013). Equity, national interests and conditions, as well as the idea of "shared but differentiated obligations" are the foundations of this partnership (Camioto & Pulita, 2022).

Based on its present policies, commitments, and ambitions, The Climate Action Tracker (CAT) evaluates a nation's capacity to maintain global warming at 1.5°C, an unbiased analysis platform. By highlighting the reality and seriousness of departure from the intended goal of reducing global warming, it provides governments with guidance on whether they need to take extra climate action. But the CAT considers several assumptions when evaluating future performance, leaving opportunity for ambiguity (D'souza, 2022).

Based on measures of state of the climate and results of climate efforts, this study contrasts the BRICS group's performance with that of the OECD and the Group of Twenty (Warren, 2020). By doing this, the kind of ambiguity that restricts CAT analysis is removed. The advice given to the BRICS

countries by the CAT to comprehend their role in global climate change efforts is supplemented by this paper.

The OECD and Group of Twenty have been selected to compare the efficacy of three different multilateralism models for acting against climate change (Warren, 2020). While the G20 is made up of both developed and emerging economies, and the BRICS are made up of emerging economies, the majority of OECD members are wealthy countries (Warren, 2020).

*Climate Action Performance***:** OECD and Group of Twenty vs. BRICS

In this study, the effectiveness of the BRICS group is contrasted with Group of Twenty and OECD to identify the BRICS nations that have a positive impact on how well the group performs in combating climate change (D'souza, 2022). The five metrics chosen to assess the BRICS grouping's efforts to combat climate change are significant as crucial input and output elements (Rojas-Rueda et al. 2019).

1. Change in the Yearly Mean Surface Temperature on Average

Global warming mitigation aims to keep it below a desired level (Sampene, Li, Oteng-Agyeman & Brenya, 2022). Determining a country's achievement of slight temperature rises in relation to its geography is crucial (Rojas-Rueda et al. 2019). This indicator illustrates how a nation's rising temperature contributes to total global warming. India and Brazil do admirably in the BRICS' climate action (Sampene, Li, Oteng-Agyeman & Brenya, 2022). Brazil had an average yearly mean surface temperature change of 1.38 degrees Celsius from 2016 to 2019, compared to 0.91 degrees Celsius in India (Haryanto, Affandi & Tanaya, 2022). Both nations outperform the global average and the G20, where both recorded the top results for this metric (Climate Change Indicators, 2021).

2. Greenhouse Gas Emissions Per Person

Emissions of greenhouse gases (GHGs) are the main cause of both global warming and climate change (Lamb et al. 2021). This indicator clarifies the necessity to evaluate a nation's success in lowering GHG emissions (Mendoza et al. 2021). Even while carbon dioxide (CO2) is the most prevalent GHG generated. Also, production of nitrous oxide, methane, and trace gases by humans for industrial use has a significant impact on global warming, as do fluorinated chemicals (Adeleye et al. 2021). These GHGs are created utilising fossil fuels for combustion, industrial production processes, the consumption of industrial products, agriculture and altered land use, as well as improper waste management (Mrówczyska-Kamiska et al. 2021). In other words, the production of goods and services to fulfil requirements and desires of people results in GHG emissions (Goldstein, Gounaridis & Newell, 2020). For a fair comparison, GHG emissions must be modified for each country's population. (Yang, Hao & Feng, 2021). The most recent level of emissions (for 2018) is considered to quantify the impact of countries' adopted climate change mitigation measures on their emissions profiles rather than historical emissions since the Industrial Revolution (Crippa et al. 2019).

3. Per Capita CO2 Emissions from Production-Related Fuel Use

Reduced economic reliance on fossil fuel consumption has been a key goal of climate action (Sampene, Li, Oteng-Agyeman & Brenya, 2022). This research (Transforming our planet, 2022) uses a nation's CO2 emissions from fuel combustion based on per-capita production to evaluate its reliance on fossil fuels. This indicator shows how much a nation has contributed to global warming as a result of its use of fossil fuels (Parker & Bhatti, 2020). Progress of green alterations are also demonstrated which decreases reliance on fossil fuels, for example usage of clean machineries and energy-competent utilisations and the transference to imperishable energy bases (Caporale, Claudio-Quiroga & Gil-Alana, 2021). Once more, emissions are adjusted for a country's population (Zhang, Chen & Wang, 2021).

4. Effective Costs Associated with Reducing Carbon

The BRICS nations' reaction to climate change, 2015, defines this indicator as the difference between the economic growth rate from the prior year and the percentage rise in CO2 emissions over the prior year. This statistic is based on rising CO2 emissions as a result of economic expansion. Concerning carbon emissions, it symbolises the price of economic expansion (Shamsuzzaman et al, 2021). The GDP elasticity of carbon emissions is largely represented by this cost. The growth rate, expressed as a percentage, can be superficial, can be used as a substitute for finance which can be utilized to minimalize carbon releases or decrease the carbon power of economic developments through funds in energy effectiveness, imperishable energy, and other associated carbon-exchangeable approaches (Patnaik & Kennedy, 2021). A nation's per capita GDP is then used to adjust this proxy expenditure (Turner et al. 2021).

5. Effective Percentage of Energy Produced By Coal

Researchers at the Swiss Federal Institute of Technology created the 2000-watt society concept as a solution to the problem, « How much energy is required to provide wealth and a decent standard of living while adhering to sustainability limits?» 2020 (Jakob et al.). The answer is that each human on the earth must continuously consume 2000 watts of basic energy (Gasparotto & Martinello, 2021). Additionally, according to Brazilian scientist José Goldenberg, humans can benefit from increased energy use up to 1000 watts per person, but not more (Finkelman, Wolfe & Hendryx, 2021). Currently, there are significant regional differences in the average primary energy use per person (Ghorpade & Goswami, 2020). For instance, in wealthy nations, it can be six times greater than the 2000-watt requirement and a few hundred watts or less in poor countries (Leal-Arcas, 2013). According to report, the crucial energy threshold at which countries must change their energy consumption is 2000 watts per person (Camioto & Pulita, 2022). Countries that are above this limit can reduce energy use without sacrificing their standard of living (Ranger & Surminski, 2013). Countries below the threshold are required to close this gap and are given the necessary space free of carbon to do so (Camioto & Pulita, 2022). As a result, this statistic calculates the percentage of a nation's primary consumption per person that is made up of coal use (Fisher & Liou, 2021). Regarding the 2000-watt threshold's energy surplus or shortfall, this fraction is altered (Maamoun et al. 2022). Sustainable Development Goals (SDGs) should not have to give up any of their objectives in order to prevent excessive energy use. Because unnecessary energy usage is compared to given that energy comes from dirty sources like coal, excessive energy use that fuels climate change should also be penalized (Li, Sampene, Oteng-Agyeman & Brenya, 2022).

Key points

- The Group of Twenty and the OECD are outperformed by the BRICS in terms of performance.
- Brazil and India are in favour of the BRICS performing better.
- Amongst the BRICS nations, India is a leader in combating climate change.

Recommendations

Recommendations are based on the official reports and records of BRICS countries on environmental and climate change. After observing the problems, the solutions are proposed.

1. Planting Trees: Establishing Forests

To increase the quantity of trees, the primary message of the BRICS should be to stop deforestation, enhance afforestation, and extend naturally protected areas. When forests expand and are preserved, they serve as a significant carbon sink while also reducing one of the main sources of emissions. For many millennia, the effectiveness of this natural technology has been established. Additionally, forests have numerous positive effects on human health as well as economic development and sector diversification into businesses with high added value like infrastructure, tourism, and building. Therefore, the BRICS summits should adopt:

a. To guarantee the success of the Kunming COP 15 on biodiversity, BRICS members must set and meet deadlines for reducing deforestation and increasing afforestation.

b. Adopt regulations requiring the replacement of any trees destroyed as a result of logging, pest infestation, fires, or agriculture is one of the other human activities that contributes to 73% of global deforestation.

c. Replace steel and concrete with high carbon content with wood while building and maintaining infrastructure.

d. In line with the recently announced BRICS pledge to limit the amount of plastic trash that enters the ocean through its rivers, replace petrochemicals and plastics using biochemicals from the forest, (like lignin used in adhesives).

e. As Sweden and Finland does, educate business and the public about forestry's role in averting climate change.

f. Urban green spaces are being created in support of the G20 smart cities project and the BRICS 2019 urban agenda. Additionally, by doing so, less refrigeration would be needed, which is another item regarding Project Drawdown list for climate control.

g. Every time a member asks its allies for assistance in the struggle for quick deployment and emergency reaction particularly severe outbreak occurrences, establish a BRICS international firefighting force.

2. Food: Edible Plants

The main takeaway regarding food should be to consume all plants that are produced for human consumption, regardless of crops. As a result, the BRICS Summits should promise:

a. Target 3 of SDG 12, "cutting wasteful food production "from farm to fork," requires national legislation with goals, a schedule, and accompanying measures.

b. Subsidies should be switched from animal agriculture to production using plants.

c. Encourage silvopasture and agroforestry

d. Encourage agricultural diversification and oppose monocultures, which consume excessive amounts of chemical fertilisers, harm the land, and water contamination.

e. Investigate and support organic agriculture.

f. Motivate people to buy, grow, and eat local food, especially in ways that are appropriate for their culture.

g. Provide women and young people who are smallholder farmers with access to innovative finance solutions like microloans so they may switch to agroforestry and other plant-based land uses, which will cut back on carbon emissions, improve dirt fitness, and improve water adequacy.

h. Support the eight guidelines for utilising natural remedies by International Union for Nature Conservation.

i. Observe the land ownership rights of local and indigenous people, as outlined in the Indigenous Peoples' Rights Declaration of the United Nations.

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