Title: Racing Against Time: The Climate Change, Resource Competition, and Future of Global Peace

Abstract:

Ever imagined why birds keep fighting for the limited food or a favourable spot where food is easily accessible, but sitting together when they get scared or have their food separately or equally. Similarly, the world is designed this way, with nations having unequal geographical locations and resource availability. The humans are selfinterested by nature which is vividly seen in human driven states as well (Thucydides, 5th century). The States have prioritized their national interest beyond any international collaboration for peace and security, ultimately risking their own climate, biodiversity, and ecosystem, but has also collaborated to mitigate the climate crisis if destruction is mutual, risking the humanity at global level. The climate change has severe consequences on ecosystem, as it has the potential of complete destruction of the life on earth. However, the international community's 13th sustainable development goal or SDGS of Climate Action, provides a framework to deal with climate related hazards and reduce potential causes of climate change but unfortunately, the national interest of states and quest for valuable resources often surpasses these concerns and the ultimate winner often turns out to be resource competitions, conflicts and geopolitical tensions for global influence and power as seen in Asia Pacific, Artic region, and quest for Ukraine.

This Article delves into how the resource competitions, thirst for power and geopolitical influence among the nations drives them to adopt strategies that exacerbates climate related consequences, potentially undermining the 13th SDGS goal. This Article aims to stress upon the need for international collaboration to mitigate the climate consequences and promote the climate sensitive conflict resolution between war prone nations in future.

Keywords : Climate Change, geopolitical influence, National Interest, Resource Competition, ecosystem, conflict resolution, sustainable development goals.

1.Introduction:

The world is like a global village, where everything is interlinked and closely connected, so the relationships between climate change, resource scarcity and the world peace. The quest for resources between nations commences when the human driven climate consequences get worse. This competition for valuable resources such as water, land, and energy often leads to a more intense and violent conflict, with every nation competing to thrive in geopolitical influence and survival. This complex linkage between climate change, resources and Global peace signifies the importance of 13th Sustainable development goal of international community, aiming to unite the nations for urgent action against climate related consequences. As we know that the global warming and unpredictable weather patterns negatively affects the food security and resources of nations, ultimately rising the potential for conflict between them over controlling these resources. Moreover, this desire of resources also leads to the severe climate change consequences, creating a drastic situation for environment as well as political stability and wellbeing of populations. The SDGS 13 stresses upon the necessity to tackle the climate change impacts as a serious challenge for international community that transcends the borders and urges the states to adopt climate measures into their strategies and policies in order to avoid further damage. However, the implementation of such policies and incorporating the SDGS 13th goal into domestic and foreign affairs often seems to clash with the national interest of states, as the Nations tends to gain geopolitical influence through resource controlling. This clash is central to many ongoing conflicts and is likely to contribute to future wars and conflicts as well, risking the future peace and stability of international system. This research paper aims to understand the complex interplay between climate change, resource-based conflicts, and global peace, particularly in relation to SDGS 13th.

By analysing different cases studies of ongoing resource rivalries, exploring the possible future scenarios and discussing the solutions, this paper aims to elaborate the understanding of these complex dynamics of climate change and resource competitions and offers a Pathway towards a sustainable and peaceful global future.

2. Literature Review

In academic research, the connection between climate change, resource competition, and global peace has been studied extensively by scholars across various fields. This literature review compiles key ideas from multiple disciplines to give an overview of recent research on this topic. Studies on natural resource scarcity indicate that climate change significantly impacts the availability and distribution of resources among populations. Notable climate-related hazards, such as altered rainfall patterns, more intense storms, and rising sea levels, threaten essential resources like water, arable land, and energy (IPCC, 2014). Research suggests that environmental scarcity may lead to violent conflict, particularly in

underdeveloped regions with existing resource shortages. Studies have examined how ecological events, social factors, and warfare are interconnected (Homer-Dixon, 1994), and further research has delved into the complex relationships among social unrest, climate change, and resource-based conflict (Hsiang et al., 2013). For example, an analysis of 60 case studies found a notable correlation between conflict types and climate conditions, revealing that shifts in temperature and rainfall could increase the likelihood of individual violence by 4% and group conflicts by 14% per standard deviation in climatic variation (Princeton Berkeley, 2013).

Political scientists and international relations experts have investigated how competition for resources heightens conflicts and tensions. The post-Cold War period has been identified as a key driver of global conflicts over vital resources, as seen in regions like the South China Sea, Caspian Sea, and Nile River (Klare, 2001). Further studies aim to develop a model illustrating how natural resources influence armed conflicts, focusing on issues like resource dependence, allocation, and conflict patterns, while also exploring how commodities like oil, diamonds, and timber can affect the initiation, duration, and severity of conflicts (Le Billon, 2001). A systematic review of climate-related conflict research indicates that while direct causation is debated, climate-induced disruptions may worsen existing social and political tensions, increasing the risk of violence and conflict (Theisen et al., 2013).

Researchers, policymakers, and legislators concerned with climate change and security are increasingly focused on the security implications of climate change. The concept of climate security has recently emerged, encouraging a more nuanced examination of these relationships. Limited access to essential resources due to extreme weather threatens food security and survival, potentially leading to geopolitical rivalries between nations (Barnett & Adger, 2007). Consequently, it is crucial to recognize that the consequences of climate change can escalate existing security issues and introduce new challenges (UNSC, 2007).

Adapting climate-related challenges into national peace and security policies is vital. Sustainable Development Goal 13 (SDG 13) represents an important step towards environmental protection, but researchers have noted obstacles in achieving these goals due to geopolitical rivalries and differing national priorities. From a governance perspective, research indicates that institutional changes and improved coordination across governance levels are essential for the successful implementation of SDG 13, highlighting the need for stronger accountability mechanisms (Biermann et al., 2017). An assessment of global progress on the SDGs reveals inconsistent application and gaps between policy objectives and actual outcomes regarding climate action.

Despite valuable contributions to the field, there remain significant gaps in research. Scholars express interest in further investigating the effectiveness of global initiatives addressing climate impacts, such as SDG 13, to foster international cooperation in

tackling climate-related security issues and promoting shared resource management. A more integrated approach is necessary to fully understand the interactions between environmental, social, and political systems. This review serves as a foundation for continued academic exploration of these critical topics.

3. Case Studies

There are countless case studies if we analyse throughout the international arena for resource-based tensions and thirst for geopolitical influence and power. One of the most recent case studies is the Russo- Ukraine war which is still ongoing, and is a hot topic of current affairs. This interstate conflict highlights how the competition for energy resources can facilitate the geopolitical animosity and tensions, ultimately impeding the collective actions against climate change. The conflict centring around natural resources with Russia leveraging its position as a major exporter while Ukraine relying on its supplies but also providing a transit route to Europe. Russia as a major power quests for energy resources in the black sea since 2014 and also Ukraine ‘s valuable minerals such as cobalt, lithium, graphite and unique earth metals. However, this war for resources has led to the major destruction in both countries, undermining their potential to tackle climate change amidst increased military spending and political and economic instability.

Another major case study is the Grand Ethiopian Renaissance Dam or GERD, located on the Blue Nile River, which serves as a bone of contention among African countries including Ethiopia, Egypt, and Sudan. However, the GERD was developed to manage the water resources but unfortunately resulted climate related risks and water scarcity. The Dam on one hand seems beneficial for energy supply and development for Ethiopia and nearby regions while on the other hand Egypt might struggle in water access in future, particularly during the droughts facilitated by climate change impacts while Sudan is at a two-way street. This conflict illustrates how the differing national aspirations, regional cooperation and environmental stewardship can clash and overlap each other, highlighting the need for effective water management agreements.

Moreover, the Artic region is emerging as another Battleground for major powers to exercise their hegemony and quest for geopolitical influence in the region. The glaciers are melting at greater scale, creating golden opportunities for resource extraction and competition for economic gains among the Artic nations as well as rising powers such as China. The Artic is expected to hold a vital range of undiscovered oil and natural gas resources, driving the states attention such as USA and Russa to assert their territorial claims over the region. The nations in search of wealth potentially overlooks the deadly consequences of global warming and are willing to destroy the Artic ecosystem for their national interests. The Climate change has facilitated new geopolitical challenges and demands the international community to manage the eco sensitive resource-based competition.

Another prominent case study can be considered the South China Sea dispute, where the neighbouring countries have their territorial claims over the rich maritime resources such as oil, fish and natural gas. This dispute is not solely the regional tensions for resources but also involves the US involvement through its navigation operations in the region. Both US and China has increased their military presence in South China Sea to deter the other one, diverting their focus from climate related impacts and marine protection. The climate change is likely to severely destroy the region, with effects like rising sea levels and shifting fish stock distribution that would eventually result in intense geopolitical rivalries and resource competition. There is a need for legal international frameworks for the management of marine resources in the face of emerging threats by climate change.

Furthermore, the Caspian Sea, linking the border between Europe and Asia, is another perpetual geopolitical conflict among five countries, vying for control over its rich oil, fish and natural gas resources (kalyuzhnova,Y. 2018). The resource allocation and control of subsea area and pipelines contributes to the conflict in Caspian Sea. While the Azerbaijan and Turkmenistan aims to construct pipelines to Europe and demands for separating the sea for enhanced control over adjacent resources, Russia and Iran oppose this decision for their geopolitical control and historical agreements respectively (Kassenova, N. 2018). The convention signed in August 2018, required the mutual consensus among all five members for the pipeline construction, resulting in favour of Russia and Iran. Moreover, there is a constant security threat by littoral countries developing their naval capabilities. There is an urgent need for diplomacy among these five states to navigate the uncertainty, national strategic interests and resource competition.

The water dispute between India and Pakistan over the Indus River is another case illustrating how the climate change can worsen resource conflicts. The Indus Waters Treaty, established in 1960, has regulated water sharing for many years, but climate change is increasingly challenging this agreement. The river flow in both countries is likely to experience uncertainty, with the glaciers melting in the Himalayas due to global warming. This might seem as increased water flow but would ultimately result in water scarcity over time (Erzeel et al., 2010). This shift in water patterns primarily due to climate change underscores the significance of adopting the water management strategies and policies to include climate related impacts.

4. The Future of Global Stability: Resource Scarcity and the Pathways to Peace:

The state of global stability is being increasingly affected by competition for essential resources and the quest for peace. Climate change significantly contributes to resource scarcity, leading to shortages of freshwater, arable land, and key minerals

needed for green technologies. This situation raises the risk of conflicts among countries trying to access these limited resources (Koubi, 2019). Therefore, it is crucial for policymakers and researchers to urgently seek solutions that can ease geopolitical tensions while promoting sustainable peace.

A likely scenario for the future involves prolonged conflicts over resources, particularly in underprivileged areas like the Arctic, Asia-Pacific, and parts of Africa. These regions are drawing more attention from states, resulting in disputes over sovereignty and overlapping territorial claims (Brussels Institute, 2021). Nevertheless, historical and current examples show that countries can collaborate despite their differences, such as in the joint efforts against terrorism. The Arctic Council exemplifies how international cooperation can help manage resource-based conflicts through collaborative protocols and preventative initiatives (Dodds, 2017). Likewise, agreements on shared water resources, such as the Nile Basin Initiative, illustrate that mutual reliance can lead to diplomatic solutions rather than violent confrontations (Wolf, 2013).

Understanding the link between resource scarcity and conflict is essential, along with working collectively to address these issues. Central to this task is Sustainable Development Goal 13, which emphasizes the urgent need to address climate change impacts to foster peace and sustainability for all. This goal encourages countries to integrate climate resilience, sustainable resource practices, and peaceful conflict resolution into their policies (United Nations, 2015). Various UN agencies, such as UNEP and the UN Department of Political Affairs, promote environmental peacebuilding, where ecological restoration and dialogue initiatives are combined to achieve sustainable peace in conflict-prone areas (Conca & Wallace, 2016). However, the national interests of states can still jeopardize these commitments.

To support these objectives effectively, international organizations are focused on enhancing diplomatic tools. Strategies such as confidence-building measures, collaborative scientific research, information sharing, and resource agreements that highlight mutual benefits rather than zero-sum competition can provide a framework for environmental stewardship and conflict resolution in troubled regions (Dabelko & Conca, 2017). Mechanisms promoting transparent data sharing and fair water management have successfully alleviated tensions between states for extended periods, as demonstrated by initiatives in the Mekong River Commission, the Nile Basin Initiative, and the Indus Water Treaty (Gleick, 2014). However, tensions may still emerge due to uneven resource distribution and the effects of climate change, highlighting the need for more comprehensive approaches to address these challenges.

Additionally, the international community must implement multifaceted solutions that encompass structural changes and shifts in perspectives to achieve lasting peace in

conflict-affected areas. Robust legal frameworks should be established to define rights and responsibilities regarding shared resources, complemented by effective monitoring and implementation (Elgström & Jönsson, 2000). International institutions must also improve technological capabilities for states through enhanced early warning systems that include climate forecasts and conflict risk indicators, enabling proactive diplomacy and resource mediation before tensions escalate (Takeshita & Millar, 2020).

A cultural shift is also necessary, moving from adversarial views of resource competition towards collaboration. Media, education, and transnational networks can significantly contribute to this change by highlighting the benefits of cooperation and the significant costs of conflict (Conca & Wallace, 2016). Local and indigenous communities can play a critical role in this effort as their involvement in resource governance can enhance legitimacy and address grievances that may lead to resource-related conflicts (Biermann et al., 2020).

Ultimately, the prospects for global peace amid rising resource competition and geopolitical tensions will depend on effectively integrating Sustainable Development Goals into policies and cooperative frameworks. While the intense climate challenges ahead pose risks for conflicts, emerging approaches such as environmental peacebuilding, proactive diplomacy, and structured legal standards can help address these issues and foster sustainable peace. To remain committed to these initiatives, nations must transcend narrow national interests and acknowledge their interdependence and shared vulnerabilities (Koubi, 2019; United Nations, 2015).

5. Statistics, Data Analysis, and Discussions:

The Climate Change, Resource based rivalries and world peace and stability are closely intertwined together which is also evident in quantitative data and empirical observations. Researchers identified that the world temperature has risen by 1.1°C above pre industrial levels, which ultimately resulting in the severe droughts, floods and extreme weather consequences that drastically threatens the humanity and its food security. (IPCC Assessment Report, 2023). These Climate change consequences are the primary sources that drives the nations towards conflicts and deadly wars over the limited resources such as drinkable water, arable lands, and energy etc, mostly in the underdeveloped regions.

One of the most prominent examples can be considered the water scarcity in Asia – Pacific region, which deprives around 1.6 billion population for the water availability, one of the basic survival resources. This situation has resulted by the altered precipitation patterns and melting of glaciers in Himalayas region (UNEP, 2022). Moreover, the tensions between riparian states over transboundary river basins such

as Mekong and Ganges- Brahmaputra- Meghna are also challenging the regional peace and stability at a greater level (Wolf, 2021). Furthermore, the Artic region has also emerged as a new cause of concern, opening new shipping routes and access to valuable minerals for trade and economic benefits. The statistics shows that during 2010 and 2020, commercial vessel traffic in the region has accelerated by around 50%, exacerbating the geopolitical tensions among the major and rising powers such Russia and China (Smith and Stephenson, 2021).

The resource-based conflicts between nations have also been studied through empirical research (Global Peace Index, 2023), illustrating that the state's having limited access to resources are around 2.4 times more prone to the wars and instability as compared to nations having basic resource abundance (IEP, 2023). The unequal access to energy consumption, such as natural gas and oil, ultimately drives the geopolitical ambitions and energy security concerns, leading to drastic climate related consequences and interstate wars as we witnessed in Russo- Ukraine war (Kuznetsova, 2023). Furthermore, the consumption of fossil fuel still surpasses the renewable energy consumption by nearly 80% of global energy consumption in 2022, igniting the extreme weather events through greenhouse gas emissions at the greater scale (IEA, 2023).

As we know that, the 13th Sustainable Development Goal or SDGS 13 aims to unite the international community for the collaborative climate action but unfortunately, the state's national interests often prioritize the economic gains over collective actions for environmental preservation. The studies represents that only 40% of Paris Agreement signatories are likely to stick to the nationally determined contributions or NDCs, while the others busy in excessive resource extraction and economic gains, potentially undermining their commitments for climate (Climate Transparency Report, 2023). These states behaviour is alarming as climate related consequences are the wreak havoc which is likely to exacerbate the existing tensions between conflict prone states over Scarce Resources and quest for valuable resources between major powers (Homer Dixon, 1999).

Thus, these likely scenarios stresses upon the urgency for an integrated and climate sensitive conflict resolution mechanisms and approaches while recognising the interplay between Climate change, resources and conflict. The empirical research illustrates that cooperative management of resources and organised institutional frameworks can help reduce the conflicts and violence. The water sharing agreements in the Nile Basin can be considered a great example of mechanism aimed at mitigating the tensions among the riparian states with resource scarcity, highlighting that such issues can also have the potential for multilateral collaboration (Cascao and Nicol, 2016). The international community must adopt such models in resource-based conflict prone areas before it gets too late to respond. However,

such models remain exceptions rather than norms, highlighting the significant flaws in international governance.

6. Conclusion:

In conclusion, quantitative data affirm that climate-induced resource scarcity significantly accelerates the conflict potential, complicating the international community s collective actions towards the sustainable development and stability. The increasingly evident correlations between rising temperatures, resource competition, and geopolitical tensions highlight the urgency for strengthened international collaboration to take responsible stances on climate related risks. Failure to align national interests with collective climate action (per SDG 13) risks the global peace and prosperity ultimately perpetuating the insecurity and environmental degradation globally.

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