The Impact of Climate Change on Power Dynamics between the GCC and the Horn of Africa

(1990- 2024)

Yasmine Radwan

Assistant Professor of Political Science- Faculty of Economics and Political Science- Future University in Egypt.

Abstract

The study explores the relationship between climate change and power relations between the GCC states and the Horn of Africa from 1990 to 2024. Although there are seven sovereign states in the GCC, they enjoy having earned their historic powers in the region through their enormous hydrocarbon reserves and economic influences. In contrast, the Horn of Africa has long been seen as a region of political instability, poverty, and environmental vulnerabilities that have been significantly inflicted with issues relating to climate change. How climate change worsened the already existing tensions and conflicts in the Horn of Africa, how competition over the scarce resources and economic differences between the two regions has become, and how the affected GCC states respond to the climate-induced phenomena of the region are some of the aspects that this research explores. It embeds itself in a theoretical frame that brings dependency theory, resource curse theory, climate security theory, and complex systems theory into the

research design, looking for the more profound implications that such investigations have for intra-regional power dynamics. This study conducts discourse analyses of official speeches, policy documents, and media narrations to show how climate change has been discursively constructed and how those constructions influence power relations. On the other hand, it states that these constructions have implications on the relationship between different climates with geopolitics and the economy. A study on the complex links between climate change, geopolitics, and economy has been carried out and calls for green research in new perspectives.

Keywords: Climate Change- GCC- Horn of Africa- Power Dynamics- Geopolitics.

Introduction

The complex interaction between climate change and geopolitical dynamics has become a pivotal element in shaping global power relations. This research investigates the specific context of the Gulf Cooperation Council (GCC) states and the Horn of Africa, focusing on how climate change has affected their power dynamics from 1990 to 2024. The GCC states, due to their extensive hydrocarbon reserves and notable economic influence, have historically exerted substantial power in the region (Wapner& Elver, 2016). However, the Horn of Africa, which is marked by geopolitical instability, poverty and environmental vulnerabilities,

has suffered disproportionately from climate change (Conway& Vincent, 2021). This paper examines the ways in which these diverging paths have been influenced by the escalating climate crisis. Through a thorough analysis of the intricate interrelationships among climate change, geopolitics and economic factors, this study seeks to illuminate the shifting power dynamics between the GCC and the Horn of Africa. It will enhance our comprehension of the diverse impacts of climate change on regional stability and international relations; however, the nuances of these influences are often overlooked. Although many scholars have addressed this topic, few have delved into the interconnectedness of these elements. This research is necessary, because it not only highlights current tensions but also offers insights into potential future developments.

Research Problem

How has climate change influenced the power dynamics between the GCC states and the Horn of Africa between 1990 and 2024?

Research Questions

1- How has climate change intensified existing tensions and conflicts in the Horn of Africa?
2- To what degree has climate change influenced resource competition and economic disparities between the two regions?

3- How have the GCC states reacted to the climate-induced challenges present in the Horn of Africa?
4- What are the broader implications for regional power dynamics?

Hypothesis

Climate change has significantly exacerbated power imbalances between the GCC and the Horn of Africa. This situation has led to heightened geopolitical tensions and intensified competition for resources. However, the complexities of these dynamics are not merely economic; they are also rooted in historical contexts. Although both regions face challenges, the disparities are stark because they affect not only governance but also the livelihoods of countless individuals especially between 1990 and 2024.

Theoretical Framework

This study is built within four main theories that will be tested through the case study. These theories encompass the following; Dependency Theory- Resource Curse Theory- Climate Security Theory- Complex Systems Theory.

1- Dependency Theory.

Dependency theory is a crucial theory which states that the economies of the global South are afflicted by the exploitative relationships with the global North (Pfefferle, 2016).

Dependency theory states that developing countries are dependent on developed countries to enhance their economies and to obtain technology, which ultimately results in an unequal economy and less independence of the former. Dependency, however, is a result of the historical inheritance of colonialism and imperialism and the unequal distribution of power within the global economic system, as defined by dependency theory. Dependency theory holds that reliance on developed countries must be broken off by an immediate move to policies that ensure self-sufficiency and independence from developed countries. It includes import substitution industrialization, investment in local industries, and preference for local funding instead of foreign grants and loans. Poor countries may acquire better control over their economic destiny and open ways for sustainable development by challenging the unequal power relationship in the international economic system. Dependency theory is, therefore, a critical lens under which the structural inequalities perpetuating underdevelopment in the global South can be analyzed, with proposals on how to address these inequalities in order to create a more just world's order (Özekin& Sune, 2021).

2- **Resource Curse Theory.**

Resource Curse Theory typically refers to that aspect of countries whose economies are primarily dependent on one or other natural resources, especially fossil fuels like oil, gas, and

rare earths, accompanied by devastating economic and social effects even after becoming rich nations. The assumption of theory that abundant natural resources turn the attention of most governments towards them and leave the economy open to monopolized allocation without being vast in economic diversification. These result in a number of problems like corruption, poor governance, and inequality, thereby making defaulted long-term economic development. The Resource Curse Theory comes about due to one of its primary origins, which is called "Dutch disease"; that is, the influx of natural resource revenues could lead to the increase in the value of the currency of the country. Therefore, other sectors like manufacturing and agriculture would begin to be less competitive on the world scene due to this trend. The end outcome of this is the decline of these sectors, leading to unemployment and eventual income dissimilarities. Further, the dependence on natural resources would also brew conflict and instability within the country as parties scramble for control over these resourceful areas. To avert the Resource Curse, therefore, resource-rich countries require putting into effect measures promoting diversification, good governance, and transparency for sustainable economic growth and development (Di John, 2010).

3- Climate Security Theory.

Climate security theory underlines the influence of climate change on security threats, both nationally and internationally. This theory points out that some impacts of climate change-such as flooding, drought, and limited food and water supply- are costly in terms of currently existing security risks with a potential for conflict and instability. This theory also emphasizes the necessity of a multi-dimensional approach in solving the climate change crisis because it has an impact on factors that are economic, social, and political. One of the important implications of climate security theory is that climate change is not merely an environmental problem, it is also an issue with respect to security. Thus, understanding the security threats that global warming has the potential to create might set the stage for superior mitigation and planning among the policymakers and security experts. By extension, this theory examines the need to act urgently towards mitigation and adaptation against possible security threats from climate change. Thus, this theory serves as a foundation for understanding and dealing with the multiple dimensions and effects of climate change in the context of security and calls for integrating climate into security strategies and policies (Scheffran, 2011).

4- Complex Systems Theory.

Complex Systems Theory can be defined as interdisciplinary contexts for understanding the behavior of complex systems through the analysis of their interconnected structures and their interrelationships. This theory has found its application across many disciplines -biology, economics, sociology, computer science- in a study of systems that emerge properties, nonlinear dynamics, and self-organization. By understanding how simple interactions between the elements give rise to complex behavior at the macroscopic level, researchers might understand the critical principles that govern the dynamics of complex systems. The process of emergence is important in Complex Systems Theory. It is spontaneous emergence of complex patterns and structures that cannot be predicted by just analyzing single components separately. This emphasizes studying systems as wholes regarding how feedback loops, interactions, and dependencies between elements work out overall behavior within a system. With understanding the real-world complexities and intricacies, researchers would be able to develop a more robust model, strategy, and intervention to face such nagging problems and thus also include the improvement of decision-making in different domains. In brief, Complex Systems Theory is a rich and interdisciplinary approach to studying the interlinkages, displays of emergence, and self-organization of systems in the natural and social sciences. It has thus emerged as a valuable framework in the analysis and understanding of the dynamics of complex systems (Sim, 2007).

Literature Review

This part is divided into three main categories as follows:

First Category- Climate Change Impacts on the Horn of Africa

a- Seife, T. K. (2021). The impact of climate change on agriculture and food security in the greater horn of Africa. *Politikon*, *48*(1), 98-114.

It is in fact a location that at present depends on rain-fed agriculture and pastoralism, and it is, therefore, one of the areas that suffer most from the impacts of climate change. Oftentimes, long droughts give way to heavy flooding without exception to very wide extremes of weather, and all of this elicits disruption to produce crops and tends to lead to hunger followed by malnourishment and the displacing of populations. Water resources, which are most indispensable not only for agriculture but also for livestock and for household use, have been affected a lot by shifting rainfall patterns and higher temperatures. This produces a wide spectrum of impacts, including decreased amounts of crop yield, increased numbers of livestock deaths, and increased competition among the already scarce resources, which can then account for aggravation in social tensions and conflict. Urgent actions have been emphasized in the article

toward development strategies, which have a climate-resilient quality to mitigate the effects of climate change concerning agriculture and food security in the Horn of Africa. This would include promoting sustainable agricultural practices, improving water management, investing more in early warning systems, and strengthening social safety nets to vulnerable populations at risky sites. In tackling these issues, the region stands to make a significant improvement in building resilience and securing a sustainable future for its citizens.

b- Bedasa, Y.& Bedemo, A. (2023). The effect of climate change on food insecurity in the Horn of Africa. *GeoJournal*, *88*(2), 1829-1839.

At a region highly dependent on agriculture and pastoralism, the Horn of Africa is particularly vulnerable to climate change. This study looks at the effects of climate on food insecurity within the area by utilizing panel data analyses. The results indicate that increased temperature and carbon dioxide emissions combine to raise food insecurity. Higher temperature, on the other hand, has a direct negative effect on food production. In addition, the study shows that cereal yield, food production index, and political stability are major drivers influencing food insecurity, which further worsens due to climate change effects. Hence, the interaction creates a complex cycle of amplifying and raising the region's vulnerability. In this regard, actions must be taken urgently to

mitigate climate change and its negative consequences toward food security in the Horn of Africa. The adaptation to alter climate, as well as the introduction of sustainable agricultural practices and investment in climate-resilient infrastructures, is necessary to protect the food supply and the sources of livelihood in that region.

Second Category- Geopolitical Interests of the GCC States

a- Baabood, A. (2003). Dynamics and Determinants of the GCC States' Foreign Policy, with Special Reference to the EU. *The Review of International Affairs*, *3*(2), 254-282.

This article explores the determinants of the foreign policy of Gulf Cooperation Council (GCC) countries vis-a-vis the European Union (EU). The author sheds light on the extent to which these decisions are tied to complex domestic and international factors regarding foreign policy opted for by GCC states. Internally, these are the political systems in GCC countries combined with economic prosperity and social aspirations. Externally, also issues, such as security with reference to Iran and Iraq, with development with regard to Islamism cut into foreign policy, not to mention many other factors concerning places like the worldwide US-based political order, which influence the strategy-making process by GCC countries. Studies the changing relations between the

GCC and EU through cooperation for areas of energy, trading, and potentials in security, coupled with the likely challenges and limitations that such partnerships may have. This gives a meaningful insight into the dynamics of foreign policy that will be available for GCC states with the EU and beyond. To unravel the dynamics of foreign policy decision-making, it goes into the domestic and international complexities and guises lying behind it.

b- Al Shayji, A. K. (2014). The GCC-US relationship: A GCC perspective. *Middle East Policy*, *21*(3).

This is an article that brings a GCC perspective on the strategic partnership between the Gulf Cooperation Council (GCC) states and the United States. It traces the historical evolvement of this relationship and establishes the interests that underpinned such a relationship. The article highlights major areas of cooperation between the two parties-such as security, energy, and trade-and delves into how the aforementioned cooperation has been challenged and those opportunities it has created. Al Shayji claims that the GCC-US relationship holds significant meaning for both sides, especially with respect to the increased regional security threats and the prevailing global economic dynamics. The article, moreover, underscores the importance of interaction and collaboration on issues of common concern to guarantee stability for the region. The article outlines the internal issues

and complexity perceived in the GCC-US relationship and its strategic importance to both sides.

Third Category- Power Dynamics and Interdependence

a- Tjosvold, D.& Wisse, B. (Eds.). (2009). *Power and interdependence in organizations*. Cambridge University Press.

This book investigates the complex power games played in organizations, with a focus on both the positive and negative aspects of the phenomenon. It investigates how it can use power constructively to improve performance and employee welfare while hinting at the darker uses to which power can sometimes be put. The interdependence between members of an organization, and the effects, would include the power that manages this interdependence. Various aspects of power, such as its sources, the ways in which it affects decision-making, and the conflicts and cooperations associated with it, will be discussed in the book. Other topics include the role of leadership in the effective management of power for positive organizational outcomes. The book is expected to give a wide view of power relations in organizations to serve those interested in power dynamics, be they managers, leaders, or researchers.

b- Grevi, G. (2008). The rise of strategic partnerships: between interdependence and power politics. *Partnerships for*

effective multilateralism: EU relations with Brazil, China, India and Russia, Chaillot Paper, *109*.

The article takes into account the changing status of the European Union (EU) in relation to four emerging powers: Brazil, China, India, and Russia. It shows how the EU has been trying to develop a strategic partnership with those countries in order to respond to global challenges and be relevant in a multipolar world. Thus, this article aims to provide a sense of interdependence and power politics in the straights of these relations. Unlike interdependence that opens up chances of cooperation, it raises the possibility of an unbalanced distribution of power and strategic competition. The intention of the EU is to balance those risks by encouraging dialogue and cooperation, as well as a commitment to shared values, while at the same time safeguarding its interests. This article elaborates on the manifest challenges and opportunities pertaining to those four partnerships as to the distinction and priority of each such country. It also deals with the particular consequences on global political and economic orders that these partnerships have.

Research Methodology

In order to tackle the research problem, this study will utilize a framework grounded in political discourse analysis. This approach will center on scrutinizing official speeches, policy documents and media narratives emanating from the GCC states

and the Horn of Africa from 1990 to 2024. By examining the language, framing and the underlying assumptions present within these texts, the study aims to reveal how climate change has been discursively constructed. Furthermore, it will highlight how these constructions have influenced power dynamics between these two regions. Content analysis will serve as the primary tool employed to systematically dissect the textual data. This method entails identifying, categorizing and quantifying particular themes, keywords and patterns within the texts.

By applying content analysis, the study will be capable of identifying several key aspects, such as:

- Discursive strategies that reveal how climate change has been framed and represented by various actors.
- Power relations which illustrate the ways in which power dynamics between the GCC and the Horn of Africa have been formed and reinforced through discourse.
- Policy implications that consider the potential impacts of differing discursive constructions on climate change policies and regional cooperation.

However, it is important to acknowledge the complexity of discourse and its multifaceted implications. By using content analysis to apply political discourse analysis, this study aims to provide a nuanced understanding of the intricate relationship between climate change, discourse, and power dynamics in the

region. While previous research has explored these topics, few have delved into their interconnections. This study seeks to address this gap and shed light on significant implications for policy and practice.

Research Plan

- Historical Context of GCC-Horn of Africa Relations.
- Climate Change in the GCC and the Horn of Africa.
- Economic Implications of Climate Change in the Region.
- Security and Geopolitical Shifts.

1- Historical Context of GCC-Horn of Africa Relations.

For earlier centuries, the historical and cultural ties between the GCC states and the countries of the Horn of Africa ran deep (Mason& Mabon, 2022). This is much complaining from the long trade, exchange of faiths, and the mutual maritime legacy between them. However, the current scenario has changed, and these ties are now strengthened. The reasons for this include the strategic, economic, and security clashing interests. The strategic location of the Horn of Africa at the confluence of the Red Sea and Indian Ocean gives it the opportunity to become a maritime artery for world trade. It is this geostrategic importance of the region, in particular Saudi Arabia and UAE, that prompted the Gulf states to secure their interests over the Red Sea and Bab el-Mandeb Strait. Furthermore, it

provides tangential economic opportunities, such as unexploited natural resources, fertile land, and a youthful consumer base. Gulf countries started pouring lots of investment into infrastructure projects and development initiatives to harness and utilize these opportunities and diversify their economies. Then, there is more connection that brought the GCC and the Horn of Africa together. The two regions are more or less likely to face common problems of terrorism, piracy, and instability in the region itself; thus, security is one of the important pillars of this relationship. In that way, Gulf states extend their support to the Horn of Africa countries in addressing these challenges. The relationship between the GCC and the Horn of Africa is marked by complications too. Geopolitical competition among Gulf states, internal conflicts within the Horn of Africa countries, and external influences can all affect the regional dynamics of the relationship. Nevertheless, the increasing interdependence of the two areas suggests that their cooperation will keep on deepening in the coming years (Sandwick, 2019).

The GCC and the Horn of Africa have very strong cultural and religious ties, mostly through Islam that has created a feeling of commonality and mutual understanding between these two regions. Their centuries-old trading and cultural exchange across the Red Sea buttressed this bond, which led to the adoption of similar habits, traditions, and even, in some instances, languages. Such a heritage opened the doors for very close co-operation and

collaboration between the GCC and the Horn of Africa in areas like education, religious scholarship, and cultural exchange (Alcaro& Pirozzi, 2014).

The Red Sea has been a significant highway of trade for the Gulf Cooperation Council states and the Horn of Africa. A channel of trade, the sea has facilitated the transfer of goods, people, and ideas for several centuries. For example, from the recorded history of trade, vessels sailed with the spices and textiles from the ports of the Arabian Peninsula to those in the Horn of Africa, stimulating exchanges between the two regions. The exchange of goods acted not only in boosting the economy but also as a channel for the transmission of cultural and religious ideas. Traders from both regions introduced one another to new products, technologies, and customs, thus enriching their respective societies; such cultural exchange would have solely reinforced the bonds of both regions in terms of shared histories and heritage. Movement of people along the red sea facilitated intermarriages and the spreading power of languages, further emphasizing the cultural and social ties between GCC and the Horn of Africa (Mason& Mabon, 2022).

Important maritime route globally is provided through the Horn of Africa at the Red Sea and Indian Ocean cross-junction. Involvement of major powers of the world in this particular strategic location is at present, albeit limited to the Gulf states.

The Red Sea and Bab el-Mandeb Strait provide crucial passage for the movement of oil and various goods between Asia, Europe, and Africa. Control over these passages is requisite for uninterrupted flows of goods and energy in the world. On this foundation, as well as with the recognition of the geopolitical importance of the region, Gulf states, especially Saudi Arabia and the UAE, have been seeking ways to guarantee their interests in the Horn of Africa. Port infrastructure, logistics, and security have been invested in order to protect their trade route from such countries or by which energy supplies from Africa can be realized. It has also been incorporated in the foreign policy aspect of the states in the Gulf to establish a strong rapport with the countries of the Horn of Africa for interest in regional politics and favorable settlements. Strong regional presence concerning the Gulf state would also mean economic interest protection and enhancement of regional influence (Yimer& Erko, 2023).

A region of great economic opportunities, the Horn of Africa, makes it an attractive investment location. It has large areas of fertile land that can be used for agriculture, especially for the cultivation of crops, such as coffee, tea, and spices. The Horn of Africa is also abundantly endowed with a wide range of mineral resources, including gold, oil, and gas. The resources, which are yet to be tapped, have huge potential for economic growth and development. Furthermore, the Horn of Africa has a rapidly growing population, which creates a very new developing

consumer market that offers new opportunities in businesses in retail, consumer goods, and services. These developmental opportunities have encouraged Gulf states to spend heavily on infrastructure, including ports, roads, and railways, within the region. This is basically to improve the connectivity within the region and move goods and people. Thus, the Gulf states would unlock the Horn of Africa's economic resources and create new trade and investment avenues by developing the region's infrastructure (Vertin, 2019).

However, Gulf states, in acknowledging the challenge of the long-term sustainability of their oil-dependent economies, have been gradually putting together diversification strategies. A major strategy even bids to explore other avenues for investment in and growth around regions believed to have great potential. This would include the Horn of Africa- an attractive destination for Gulf investment owing to the endless natural resources, the ever-increasing population, and the strategic geographical location. Investing in the Horn of Africa, unlike the Gulf states, implies a move from oil revenues and sources of income into several new incomes, which may take the form of infrastructure development, agriculture, mining, and renewable energy. For instance, investments by Gulf states towards infrastructural goods such as ports to enhance trade narrowing, new capital financing in the region, establishment of innovative and renewable means of energy, and even food production by

agricultural projects. It touches also on potential consumer markets, so one implication of the diversity of options in the Horn of Africa for the Gulf states would be the widening of their economic influence in the area. Such a stronger economic presence would further guarantee the necessary access to resources, jobs, and enhanced political and diplomatic relations with the Horn countries (Ding, 2024).

Both the Gulf Cooperation Council countries and the Horn of Africa have terror threats and piracy as common menaces. Extremist groups such as al-Shabaab in Somalia and others add considerably to the security risks faced by both areas. Maritime trade has thus been disrupted and lives endangered due to piracy in the Red Sea and in the Gulf of Aden. In the name of doing enhanced cooperation with one another, the GCC and the Horn of Africa, for instance, adopted intelligence sharing, joint military exercises, and capacity building programs enhancing the counter-terror capabilities of the nations of the Horn of Africa to deal with common security challenges. Some of these Gulf states funded and delivered other logistical support to the regional counter-terrorism operation. Joined together, these two regions are intended to disrupt networks of terrorism, dismantle operations of piracy, and create a safer environment for citizens as well as their economies (Kabandula& Shaw, 2020).

The Gulf governments, over time, have acknowledged that for their very own safety and economic interests, work towards the stability of the Greater Horn of Africa will truly pay dividends, so, they have got themself engaged with a lot of diplomatic efforts in bringing about the mediation of conflicts, dialogue promotion, and peace process support. Their interventions have included negotiations to warring factions, financial aid to peace building projects, and deployment of peacekeeping forces, among others. Moreover, Gulf states have brought in different sorts of assistance programs to meet the immediate humanitarian demands of the region and paved the way for its future development. Such intervention areas are education, healthcare, infrastructure, and food security. Gulf states foreign policies in this regard purport to alleviate suffering and poverty, as well as cultivate a goodwill base among the peoples of the Horn of Africa. In securing the region, Gulf states secure a more secure and prosperous ground for investments and trade (Mason& Mabon, 2022).

The inter-state geopolitical martial between the Gulf states, specifically Saudi Arabia and the UAE, extends its tentacles to the Horn of Africa to instigate rivalries and tensions. They are trying to clasp their interests in the region- that includes drawing up construction projects, having the hand of assistance, and backing specific politicians. Their tussle sometimes takes them to clashing interests and the ironic support of either side in the region's

conflicts, which sometimes leads to tension and instability. The face of competition was reflected in Somalia where Saudi Arabia and the UAE were caught swinging between factions with competing port and infrastructure projects. Such competition has proven worrisome to the effective stabilization of the country, at times resulting in skirmishes between rival militias defended by both GCC powers. Similar developments in other Horn of Africa countries like Yemen and Sudan depict a pattern where Saudi and Emirati support for specific factions aggravates conflict. This ethnic and geopolitical competition has impeded the region's stability and sometimes weakened the efforts towards a permanent peace agreement and reconciliation (Liu, 2023).

Internal challenges within the Horn of Africa countries act as hindrances in the building of solid and sustainable ties between the GCC and the Horn of Africa. These issues include conflict, political instability, and economic challenges. Internal conflicts like civil wars and ethnic tensions destabilize entire areas, which makes them ineffective in building close ties with outside partners. These lead to the flight of people as refugees from crisis areas, humanitarian catastrophes, broken-down infrastructure, and too high cost and complexity of setting up essential services to newer countries' governments to get foreign investments. Political instability is when the leadership frequently changes, while the other features include weak governance and corruption. Under such conditions, it is

impossible to develop a good image for the businesspeople or the investors of their acts in the country; this is the most dangerous condition for investment and thus for economic development because Horn of Africa countries cannot reap the benefits of such close ties with the GCC. Economic threats like poverty, unemployment, and inequality also stand in the way of stiff and sustainable relationships with the GCC. There was less capacity than for Horn of Africa countries to nourish and be part of regional economic integration and to have benefits from the trade and investment opportunities with the Gulf (Rondos, 2016).

The increasing involvement of other global and regional powers in the Horn of Africa has significantly complicated the dynamics of GCC-Horn of Africa relations. While countries such as China, Russia, the United States, and European nations have intensified their engagement in this region driven by a variety of strategic, economic, and geopolitical interests, Asia seems to have emerged as a major player in the Horn of Africa. Infrastructure projects and huge aid packages are heavily pegged by China. This increased Chinese influence poses tremendous potentials for altering regional dynamics and perhaps refashioning traditional relationships between the GCC and Horn of Africa countries. Russia too has shown interest to expand in this region, particularly Eritrea and Sudan. Often, the Russian presence in the region was through arms sales and military cooperation, which can further complicate the security landscape and may even jeopardize the

peace of the region. United States and European countries have maintained a significant presence in the Horn of Africa with much focus on counterterrorism, humanitarian assistance, and development aid. Although these clear edges can serve the purpose for regional stability, they can as well introduce competing interests and their consequent influence dynamics on GCC-Horn of Africa relations. Increased foreign competition would thus only create a more complex and multifaceted environment in the Horn of Africa. This would mean increased tensions, strategic maneuvering, and the potential for conflict, so, the GCC states must maneuver through this increasingly complex geopolitical landscape and adapt their strategies to maintain their influence and protect their interests in the region (Dahir, 2022).

Indeed, the Horn of Africa finds itself such an interesting geopolitical region because of its shoreline with the gulf countries. Not completely sufficient were the centuries-old cultural and religious ties and the maritime heritage that joined this ancient connection, but the strategic importance of the Horn of Africa at present situated at vital crossroads of vital maritime routes has compelled the heightened intensification of this relationship. Hence, Gulf kings, especially Saudi Arabia and the UAE, have made investments in this region for providing secure interests while attempting to diversify their economies over heavy funds into infrastructure projects. This is not a rosy relationship but complicated by geopolitical competition among

Gulf states, which is often evidenced by their different allegiances in the propping of their respective factions during the process conflict raging within the region. Internal conflicts, political instability, and economic hardships experienced by the countries of the Horn of Africa could stall the development of very strong, sustainable partnerships. Moreover, increasing involvement of other global and regional powers in the area adds much complication, for these external players follow interests and influence of their own. Given this daunting picture, however, there exists great potential for convergence between the GCC and the Horn of Africa. Through dialogue, common security issues, and economic development, the two regions, together with their individual and healthy considerations on differences and perspectives, may be able to forge and move toward a better, secure, prosperous future (Cherkas& Novytska, 2023).

2- Climate Change in the GCC and the Horn of Africa.

Climate change turns into a common and intensifying challenge for the pairs with profound historical, geographical, and economic ties across two regions: the GCC and the Horn of Africa. More so, both regions contribute a negligible fraction to the greenhouse gas emissions but are counted on the impacts. As GCC countries are mostly arid and semi-arid, increasing temperatures, less rainfall, and greater water scarcity make them more vulnerable. In fact, there are serious threats to water

resources and agriculture and energy production. Coastal cities are also threatened by rising sea levels, which will manifest in terms of erosion, floods, and saltwater intrusion. The Horn of Africa is already vulnerable to climate change and is becoming increasingly affected by adverse climatic events. Rain-dependent agriculture, fragile ecosystems, and political instability exacerbate the consequences of droughts, flooding, and desertification in this geography. Severe food shortages, forced migration, and disputes may result from these climatic events. These common challenges present opportunities for the GCC and the Horn of Africa to work together in climate action and adaptation strategies. This involves investing in renewable energy sources, promoting the implementation of water conservation practices, implementing climate-resilient agriculture practices, creating early warning systems, and enhancing regional cooperation. By collaborating, these two regions can develop resilience to climate change and realize a sustainable future (Scheffran et al., 2012).

The above-mentioned GCC countries pertain to the region whose characteristic climate is arid to semi-arid. These countries are suffering from severe water scarcity. Besides limited freshwater resources, the ever-increasing population growth, rapid urbanization, and industrialization exert immense pressure on the existing water supplies. Consequently, it leads to water stress in several of the GCC nations where demand is greater than the available supply. In response to this, desalination formed the main

fresh water supply of the GCC. Desalination processes usually consist of extracting saline water from seawater and converting it to freshwater for domestic, agricultural or industrial uses. Desalination, however, is energetically intensive since it requires using large amounts of electricity and increases demand for desalinated water and therefore electricity consumption as water scarcity increases. Changes in rainfall patterns, increased evaporation rates and heat waves have further aggravated the water scarcity in the region due to climate change. Therefore, these conditions contribute to depriving the water resources further and increasing the demand for desalination, thus creating a vicious cycle of water scarcity and energy consumption. Long-term security is dependent upon the GCC states upon adopting sustainable water management and conservation technologies and innovative solutions to replace energy-intensive methods of desalination (Sons, 2024).

Frequent and severe extreme climatic phenomena are increasing within the GCC area, seriously affecting everyday life and putting infrastructure and public health to problem. Among the frequently rising temperatures include the ongoing and increasing heatwaves. Vulnerable groups such as the elderly and children suffer greatly as heatwaves bring heat stroke, dehydration, and a host of other health problems. Most outdoor activities are put on hold; productivity reduces when people resort to indoor activities; energy demand increases for cooling

purposes. In addition, dust storms and sandstorms affect visibility and may damage infrastructure. Respiratory ailments are some effects of such storms. They are mostly aggravated by climate change, hoisting the dust and standing up into the atmosphere, which offer them favorable conditions with high temperatures and drier conditions. Plunge upon human life generally: Super floods have water down into the areas resided by humans. No health can be kept safe from the dangers of sinkholes. Extreme weather can disrupt important infrastructures like roads, bridges, and power lines; render them dysfunctional in transportation as well as economic activities. Agriculture also suffers a lot from them; crops may fail due to this, thus lessened food production. In general, taking major steps for making the GCC economies climate-resilient by investing up in early warning systems as well as public health measures against climatic extreme events would reduce potential risk factors for the populace. Adaptations to changing climates can help the region to avoid the most negative consequences that happen due to extreme weather events and safeguard the lives of its people (Kabandula& Shaw, 2020).

These coastal cities within the confines of GCC are going to be among the first to feel the consequences of sea-level rise: their lives, infrastructure, economy, and environment would all topple under that threat. Rising temperatures continue to boost the seas; low-lying coastal areas will be inundated, and coastlines will deteriorate. This would eventually end up losing land;

damage to infrastructure; and increased flood risks. Among all, the most critical issue is the impacts of rising sea levels on the coastal ecosystems, such as mangroves and coral reefs which provide an important role for shorelines, bringing safety from erosion and storm surges. There is a possibility that the loss of these ecosystems could worsen the impacts of the change and make coastal communities more vulnerable. Another serious consequence of sea-level rise is saltwater intrusion into freshwater aquifers. It poisons drinking water sources and agricultural land by infiltrating the seawater into freshwater sources. Such events would considerably exacerbate problems in water security and food production. The GCC countries must invest in coastal measures such as seawalls and coastal restoration projects to reduce the impacts of sea-level rise. They should work toward sustainable land use, greenhouse gas emission reductions, and comprehensive adaptation plans to protect coastlines and communities (Lahn& Shapland, 2022).

The Horn of Africa is one of those regions most threatened by climate change manifestations, especially recurrent droughts. Droughts, aggravated through rising international temperatures as well as altered rainfall patterns, come with grave consequences for the population and environment of this region. During one such period of rainfall failure, crops wither, livestock perish, and water sources dry up. The consequence of this is severe food shortages, malnutrition, and even famine, affecting some of the most

vulnerable communities that rely highly on agriculture and pastoralism. Several million individuals end up forced to migrate in search of food, water, or pasture, leading to extreme pressure on already scarce resources, and even increasing the risk of conflict. Droughts have been occurring increasingly more frequently and more intensely compared to a few years ago, leaving communities little time for recovery between events. The result has made communities be in a cycle of crisis forever, as they keep struggling for survival and rebuilding. Therefore, it is important to adopt technologies in climate-resilient agriculture; invest in water conservation and management; and uplift early warning systems to facilitate timely response and mitigation efforts (Earle et al., 2015).

The Horn of Africa would experience enormous climatic disturbances such as heavy rains and flash floods. Landslides would occur when these extreme rainfall events are accompanied by steep slopes in mountainous areas or areas with severe deforestation. They bury houses, roads, and farmland and cause considerable loss in life and property. Moreover, during these extreme rainfall events, a drainage system would most likely be overwhelmed and cause widespread flooding. Rivers overflow their banks, inundating communities, and causing damage to infrastructure. Another way that flooding affects communities is by contaminating the sources of water; it increases the risk of waterborne diseases. The main source of displacement in the affected areas, death, disruption of livelihoods, and destruction of

important infrastructures such as bridges and roads are that they cause flooding and landslides. Food shortages and economic incapacities may result from the destruction of agricultural land. This sudden calamity could raise even more already existing social and political tensions, as communities scramble to lay their claims on scarce resources and aid (Mason& Mabon, 2022).

Desertification is a major environmental challenge in the Horn of Africa. This is a combination of many factors: such as climate change, natural ones, but mainly use of land through overstoring, deforestation, and unsustainable agricultural practices. Soil turning into desert reduces agricultural output in the region. The result is less production of food, which contributes to the food scarcity situation in the country, making the condition poor and increasing the levels of poverty. In even worse conditions, desertification may exacerbate the situation with reduced water storage on the land. This limits agricultural outputs and leads to crowded shoulders over less water. It has shown effects on the environment, and examples of its effects have proven to be the social and economic states of the region. It implies that combating desertification should require sustainable land management practices such as agroforestry, conservation agriculture, and reforestation. These methods would help rehabilitate degraded land, improve soil fertility, and conserve water (Kannan, 2012).

Climate changes aggravate latent conflicts in the Horn of Africa, or conflict itself becomes a potential conflict trigger in the region. Intensification of climate change leads to increased resource competition, including water and land, and brings about tension among groups, particularly those with local historical grievances and claims over resources. It can also displace communities, displacing large-scale populations due to climate-induced disasters such as droughts and floods. The displaced population usually settles in urban areas and neighboring countries, further aggravating resource-strained conditions and leading to social and possible political unrest. New influxes of displaced people can also aggravate existing ethnic and sectarian tensions, leading to further conflict. Governments become discredited by the effects of climate change on state institutions. Governments that were not prepared for the impacts of climate change would now have very little capability of controlling important services or security and would be diminished even further. Such a scenario creates space for infiltration by non-state actors such as arms-bearing groups to step in and influence the situation. In terms of threat multipliers, climate change remains a significant factor in the Horn of Africa. Whenever a conflict already exists or is in the process of being created, climate change impacts such conflicts and may even increase their intensity and multiply them. Addressing climate change security

dimensions demand overall climate adaptation, conflict prevention, and peacebuilding measures (Mason& Mabon, 2022).

The GCC and the Horn of Africa need ambitious strategies for climate action and adaptation in response to an acute climate crisis. For example, a shift toward renewable energy is one important thing to do to reduce fossil fuel dependency and greenhouse gas emissions, also by the sun and wind, both regions can largely rely on renewable energy. Solar and wind energies are the best sources of abundant and clean energy, especially for the GCC states that avail a lot of sunlight and experience consistent wind patterns. Investments in infrastructure for renewable energies like solar and wind power facilities can diversify energy sources, reduce fossil fuel dependency, and generate sustainable employment. Most importantly, renewable energy projects would promote energy security and reduce the adverse impact of the external price fluctuations in energy. Transitioning to renewable energy allows the GCC and the Horn of Africa to develop not just environmentally sound but also economically viable solutions towards employment generation and improving air quality, apart from combating climate change. The application requires investment in technology, infrastructure, and human capital while offering enormous long-term environmental and economic benefits (Liu, 2023).

Water conservation and efficiency would be critical strategies to mitigate the effects of climate change on water

security in both the GCC and the Horn of Africa. By instituting water-saving technologies and efficient irrigation practices, this region can reduce water consumption, maximize agricultural productivity, and conserve vital water sources. This includes the adoption of advanced irrigation technologies, such as drip irrigation and sprinkler systems, making it possible to deliver water directly to root zones of plants and thereby minimizing evaporative losses and runoff. Water-efficient irrigation scheduling techniques, such as soil moisture sensors, would also help farmers in optimizing their water use while minimizing wastage. In addition, water conservation can also be achieved by investing in water treatment and recycling technologies. Also, treated wastewater can be reused for irrigation and other non-potable uses, thus lessening the requirement of freshwater. The GCC and the Horn of Africa stand to gain in terms of increased water security, improved agricultural productivity, and sustainable ecosystems by investing in such water-saving strategies (Elmi, Alomirah& Al-Zenki, 2016).

It is important to use climate-resilient agriculture to maintain food security in the GCC and the Horn of Africa, where climate change jeopardizes agricultural production by extreme changes. Such practices will help farmers to sufficiently reduce the impact of droughts, floods, and severe heat conditions on their food production. One such important measure is to encourage the growing of drought-resistance crop varieties.

These are those crops that are genetically engineered or bred for long periods of time without drought and increased temperatures. This will help farmers plant drought-resistant crops, thereby reducing water usage and still maintain yields during adverse climatic conditions. In addition, sustainable farming techniques such as agroforestry and conservation agriculture improve soil health, minimizing soil erosion and maximizing retention of moisture. These practices promote agricultural productivity and will reduce the vulnerability of the farming community to climate change events. The three measures include investments in agricultural research and development, education and training for farmers, and access to climate information services. These measures can thus be effective in promoting adoption of climate-resilient agricultural practices. They will also ensure food security; poverty alleviation and greater resilience to climate change effects in the GCC and those in the Horn of Africa (Lahn& Shapland, 2022).

The use of early warning systems is paramount for the reduction of the effects of extreme weather conditions like floods, droughts, and storms. For one, such systems inform and make available accurate and timely alerts regarding the existence of possible incoming hazards, thus enabling a community to take preventive measures and react adequately to the disaster effects. For such areas as the Gulf Cooperation Council (GCC) countries and the Horn of Africa, which are very susceptible to disasters

regarding climate change, these systems will be of great importance to provide early warnings about disastrous weather events. Early warning systems will, therefore, be important in monitoring the weather patterns, development, and occurrence of extreme-consuming weather events, and issuing timely announcements to communities at risk. Evacuations to safer places can be made, property secured, and the necessary precautions taken as early as receiving warnings. Development has been indirect, however, because cost alone is being incurred on such matters as investments in advanced technologies-instrumentation like weather satellites, radars, and data processing instrumentation-since cost is incurred on the technological advancement and public awareness campaigns and a strong communication network linkages and public awareness campaigns will ensure the warnings reach the relevant vulnerable people, especially in more remote, marginalized communities. In short, investments in early warning systems will, together with their application, save lives and property damage, and increase resilience among populations and governments to climate-related disasters (Krampe et al., 2020).

Regional cooperation is one of the main elements in facing climate change, one of the most complex challenges to humanity. However, GCC and the Horn of Africa can garner cooperation in pooling resources, sharing the available knowledge and expertise, and initiating joint initiatives on mitigation and adaptation to climate

change. The area of focus that underlies the framework for such cooperation is knowledge and best practice sharing. On climate science, impact assessments, and adaptation strategies, both regions can learn from each other and develop more effective solutions. In addition, research and development together can bring about innovative technology and solutions that could be developed in all areas across the region. In fact, regional cooperation opens avenues for mobilizing resources for climate actions. Together, the GCC and the Horn of Africa can ensure greater mobilization from international investments and funding for climate-related projects. Jointly, as an example, funds at the regional level for climate and investment partnerships could help lock resources and hasten climate action. Moreover, it would finely strengthen the institutions within the region as well as governance mechanisms. On the institutional side, the two regions could build regional institutions on climate change to coordinate both policy and strategies at a regional level. Such institutions might also be critical in monitoring and evaluation of impacts and progress toward climate goals. Through such integration, GCC and Horn of Africa will be able to synthesize resilience against climate change; they will be able to give themselves a sustainable future, and their input will also be felt globally in the fight against climate change. Instead of creating havoc in the challenges that climate change poses, these two regions can, through regional cooperation, create a way out for a more sustainable and prosperous future for their peoples (Liu, 2023).

3- Economic Implications of Climate Change in the Region.

The GCC and the Horn of Africa, two regions intimately linked by geography, history, and economy, face significant economic implications due to climate change. These impacts are multifaceted, affecting various sectors, including agriculture, tourism, energy, and infrastructure (Mason& Mabon, 2022).

The GCC is home to states that are both arid and semi-arid. Their serious difficulty is ensuring enough water resources from these climatic conditions. Rising temperatures, accompanied by declining rainfall, have been aggravated by increasing population growth, which have led to these water shortages. To keep pace with the highly growing freshwater demand, GCC countries heavily depend on desalination, which takes the sea water, removes abundant salt from it, and provides fresh water at the end of the process. However, desalination is an energy-consuming process, demanding large amounts of electricity. As water scarcity increases due to climate change, so does the demand for desalinated water, which leads to increased energy consumption. The additional energy requirements would strain power grids and increase electricity prices, in addition to higher operational use of energy for many manufacturers and households. The growing dependence on fossil fuels for the power generation needed by desalination plants will also be an

additional factor in increased greenhouse gas emissions and consequent climate change. GCC will have to adopt a variety of interventions to help mitigate the economic liabilities induced by water scarcity and energy use. Such interventions include energy-efficient desalination technology investments, water conservation-oriented measures, and diversification into renewable energies within the energy mix. These will help GCC states in reducing fossil fuel power and improving water use efficiency as a way of alleviating economic burdens caused by climate change and future water security (Krampe et al. 2020).

The states of the Gulf Cooperation Council are becoming victims to an extent where they happen to be under the blows of harsh weather systems, which usually become quite severe, with massive economic repercussions. Very high temperatures will now be accompanied by changing weather patterns and many more outrages of heatwaves, sandstorms, and coastal erosion. Heatwaves go on to cause serious damage to the infrastructure such as roads and power grids. The extreme heat will affect the quality of asphalt, cause road deterioration, and consequently lead to higher maintenance costs. High temperatures will also induce strain on power grids, resulting in blackouts and vaporization of electricity along affected lines. Sandstorms are becoming more dangerous and frequent. They also cause damage to buildings, infrastructure, and transport. The winds carry large amounts of abrasive particles, which erode surfaces, obstruct

machinery, and lead to visibility problems that can result in accidents and transport disruption. Erosion is escalating at the coastal sites of the rising sea levels and greater storm activity, thus causing a great threat to coastal cities as well as infrastructure in the region. All eroded coastal areas have effects on road, port, and other coastal infrastructures, which results in huge losses for the economy. Coastal erosion damages beaches and tourist attractions, which a major industry in many Gulf countries relies upon. Infrastructures devastated by severe weather effects need to be investigated by the GCC countries so that they are prepared to invest in climate-resilient infrastructure, prepare early warning systems, and provide effective disaster management measures: all this to mitigate the economic effects of infrastructure damage caused by these extreme weather events. Such proactive adaptive measures would reduce the incidence of costs over the long term with respect to damage caused by the developing climate (Dahir, 2022).

Tourism is a major source of revenue and employment in most GCC countries, mainly in the coastal destinations. However, the tourism industry of the region faces severe threats due to the direct impacts of climate change. Rising ambient temperatures coupled with increasing frequency and severity of extreme weather events like heat waves and sandstorms will deter tourists. High temperatures make most outdoor activities uncomfortable and sometime dangerous rendering, as dust storms

can lead to adverse air quality resulting in health complications and experience issues in tourism. Increased erosion of coastlines due to rising sea levels and increased storm activity has the potential to erode beaches, destroy coastal infrastructure, and lessen the attractiveness of coastal destinations. Beaches will continue to shrink while water quality declines such that beaches that were once tourist destinations might be outcompeted by other destinations perceived to have better conditions for beach tourism. Climate change also damages the cultural and natural heritage that attracts tourists. Rising temperatures and changing patterns of precipitation will damage historical sites, archaeological ruins, and natural wonders. For instance, increased aridity will destroy desert ecosystems, which will lessen their appeal to ecotourists. First, to mitigate these negative impacts of climate change on tourism, GCC countries need to invest in climate-resilient infrastructures, advocate sustainable tourism practices, and diversify their tourist offerings. By adapting to the changing climate and investing in sustainable development, the region can cost-effectively put itself in a position to attract tourists while maximizing the economic benefit from the tourism industry (Cherkas& Novytska, 2023).

Having been very ill at ease in the oil and gas business, a persistent GCC state does not feel insulated from the adverse effects of climate change on the energy sector. Intensifying temperatures or a bunch of increasingly severe weather events

will upset oil and gas operations, thereby leading to lower output and revenue. One of the most immediate impacts will be accidents that would not cause oil and gas production to suffer disruption due to severe weather conditions such as heatwave-induced equipment failure, worker productivity reduction, and increased maintenance costs. Storms and floods are other examples of extreme weather events, possible damage of infrastructures such as pipelines, refineries, and offshore structures. Again, there is long-term influence of climate change effects on oil and gas production. Rising sea levels and coastal erosion threaten offshore oil and gas installations. In addition, increased water scarcity may affect the operation of water-intensive processes such as those of cooling systems in refineries and power plants. Investment in climate-resilient infrastructure, development of advanced technologies to improve energy efficiency, and economic diversification that will alleviate reliance on fossil fuels are measures that the GCC states would thus need to take to limit the economic impacts of climate change on the oil and gas sector. In so doing, the GCC can ensure that adaptation to climate change will secure a sustainable future for the oil and gas industry in the event of metamorphosis potential in the energy sector (Ahmed, 2023).

The Horn of Africa, with its rain-dependent agriculture, is quite acutely exhibiting effects of climate change. The frequency and severity of droughts have increased, and with the erratic

patterns of rainfall, regions have seen devastating impacts on their agricultural sector. Food shortage and malnutrition are consequences of yield losses due to reduced rainfall. Many communities are also affected by water scarcity and insufficient pasture for livestock, which is an important economic asset. These outcomes often lead to considerable economic losses for farmers and herders who mostly rely on agriculture for their livelihoods. Climate-change-induced droughts can also lead to famines and displacements. The declining food production because of water scarcity from dwindling water resources will force communities to migrate in search of food. This may result in increased social unrest, a high probability of conflict, and further economic instability. The decrease in output from the agricultural sector has spillover effects in other sectors of the economy. Reduced agricultural production may limit the availability of raw materials to these industries, thus hindering economic growth. Further, declining agricultural exports harm the foreign exchange earnings a country gets. Empower the Horn of Africa countries to invest in climate-resilient agricultural practices, like drought-tolerant crop varieties, efficient irrigation systems, and sustainable land management as mitigation measures against economies of climate change's impacts on agriculture. Promote and strengthen social safety nets that can complement the diversification of livelihoods as they prepare

vulnerable communities to cope with the impacts of climate change (Lahn& Shapland, 2022).

Water scarcity is one of the major threats to economic development within the Horn of Africa. With climate change accelerating, rainfall becomes increasingly erratic, resulting in longer cycles of drought and less water available. This has serious repercussions for different sectors of the economy. The agricultural sector has been affected by decreased availability in irrigation services, reduced crop yields, and lower agricultural productivity. This in turn leads to state-of-nature crop yield reductions, food shortages, malnutrition, and increased poverty because agriculture is a prime source of livelihood for many people in the region. Besides, the energy sector, especially hydropower generation, is not spared from the vagaries of water shortages. Hydropower plants need a continuous outflow of water to produce electricity. But reduced rains with prolonged droughts will cut down the levels in reservoirs, thus reducing the hydropower generation capacity. This inevitably leads to power outages; hence the increasing reliance on fossil fuels to power the economy adds to the problem of climate change. Water scarcity is likely to hinder industrial activities since production processes in many industries take a lot of water to manufacture. Sectors such as textile, food-processing, and manufacturer industries may face great water shortages and lead to diminished production with increased costs and possible unemployment. The Horn of Africa

countries must adopt sustainable management practices for water, invest heavily in water infrastructure, engage in activities encouraging water conservation, and explore alternative means of accessing available water sources like rainwater harvesting and waste treatment to curb water stress and secure water supply over the long run (Nyamukondiwa, 2019).

Drought, floods, and severe weather events are climate-induced disasters that have destructive implications on the livelihoods and overall well-being of people in the Horn of Africa. These disasters destroy safety nets, homes, crops, and destruction to infrastructure, forcing people to vacate their homes and seek alternate places of refuge. The dislocation encourages poverty and increased migration as people scour opportunities and safety in cities or neighboring states. Thus, the influx of displaced people would cause a strain on social services such as health and education and infrastructure like houses and transport. Consequently, this would go on to aggravate the already present social and economic problems leading to heightened poverty, inequality and social unrest (Alcaro& Pirozzi, 2014).

Technological wonders of the world will, for a few of these nations in the Horn of Africa, be tourism, which has brought about the economy's principal growth and employment. Climate open challenges pose a serious threat to the tourism sector for the region. The rising sea levels can threaten the footprints on the beach, cause

damage to the coastal infrastructure, and increase the flood risks. Extreme weather events like cyclones and storms can affect tourism activities and damage the facilities meant for tourists. Impacts under climate change might further threaten natural and cultural heritage sites that are otherwise tourist attraction countries, like coral reefs, wildlife sanctuaries, and historic sites. The climate-related impacts will eventually make tourist destinations not attractive anymore, thus adversely affecting the number of visitors who visit these destinations, hence driving down the amount of revenue from tourism. This will result in severe economic ramifications for communities whose livelihoods are primarily tourism dependent. The countries of the Horn of Africa will need to invest in climate-resilient infrastructure to sustain the tourism base without compromising the integrity of the environment for the negative impacts of climate change on tourism to be ameliorated. Such countries need to invest in sustainable practices in tourism, diversify economies, and not only rely on tourism. Greater tourists will continue flocking to the area, and the economic advantages of the tourism industry will be sustained by climate adaptability and investment in sustainable development (Kabandula& Shaw, 2020).

The GCC and the Horn of Africa will need a multi-pronged approach to address the economic impacts of climate change. In transitioning to renewable forms of energy like wind and solar energy, use-derived greenhouse gas and diversifying energy supplies will improve energy security. Investment in renewable

energy infrastructure will lessen fossil fuel dependence, while conserving the region from the adverse economic implications of fluctuating oil prices. Water-saving technologies and efficient irrigation systems for the conservation of this precious resource would include high-efficiency irrigation technologies, such as drip irrigation and water-efficient agriculture, as well as investment into waste-water treatment and recycling technologies for less water usage and better water quality. Because of extreme weather events in the country, damages must be minimized through resilient infrastructure. Well-designed and built infrastructure such as roads, bridges, and buildings adapt to impacts brought by climate change events. Investment in an early warning system and disaster preparedness would minimize economic losses and make livelihoods resilient (Adeto, 2019).

To address these risks economically, it is important to diversify their economies, which have moved away increasingly from agriculture and tourism, both very climate-sensitive sectors, to more climate-resilient industries. Such diversification could include the development of the technology, finance, and services sectors that will have less climate change vulnerabilities. To find solutions to the global challenge of climate change scenario, cooperation with other countries and with international organizations has become fundamentally important (Vertin, 2019).

These measures will empower the GCC and Horn of Africa countries to enhance their resilience to climate change, protect their economies from the possible changes, and provide their populations with a sustainable future (Chatterjee, 2024).

4- Security and Geopolitical Shifts.

GCC and Horn of Africa regions are undergoing diverse geopolitical transformations resulting from the interaction of several factors, including economic interests, security concerns, and regional rivalries. These transformations affect regional, international, and global stability. The GCC states, especially Saudi Arabia and the UAE, have increasingly sought to have more interventions in the Horn of Africa. The cost of these investments is aimed at infrastructure projects, military bases, and other diplomatic initiatives, while at the same time, supporting each country trying to secure more strategic interests for that vital maritime line of communication and access to resources. However, that has worsened difficult situations and instabilities prevalent in the region. Rivalry generally prevailed between Saudis and Emiratis and influenced the tensions in the Horn of Africa, where the two countries have been funding rival factions in regional wars. This scenario complicates overall resolution and contributes to regional instability (Telci, 2022).

Security challenges and threats pose both short-term and long-term problems concerning threats to the GCC and the Horn

of Africa. Such international security challenges can be presented in terms of terrorism, piracy, and regional conflicts. Despite these problems, climate change, economic inequality, and political instability have worsened the situation. Threats of extremist groups, particularly Al-Qaeda and ISIS, are still pervasive within both regions. Political grievances and social tensions, in addition to economic hardship, are often used by these groups to recruit and mobilize fighters. Traditionally, piracy in the Gulf of Aden and the Red Sea has been an important security threat. International efforts have reduced piracy incidents; however, piracy continues to be a major threat. The Horn of Africa has a long history of conflicts, civil wars, disputes over borders, and ethnic tensions. Many of these conflicts have destabilized the region and had dire humanitarian and economic consequences (Cherkas& Novytska, 2023).

With the increasing involvement of major powers, such as the United States, China, and Russia, in this region, the security landscape has been further complicated. The major powers currently compete among themselves to secure a strategic interest in influencing the regional order. Historically, the United States has been a primary player in the region with a robust military presence, offering various forms of security assistance to partner countries. Today, though, it has focused increasingly on the Indo-Pacific, relative to the Middle East and Africa. In the economic and diplomatic arena, China has fast risen to be a major player in

the region, investing heavily in infrastructure projects and financial aid. Such growth in Chinese influence has elicited fears over debt traps and strategic competition with other powers. Russia sought to expand its influence in the area, specifically in states such as Sudan and Eritrea. Military and technical assistance are rendered to these countries, usually in exchange for strategic advantages (Telci, 2022).

All these factors have resulted in creating a complex and dynamic security environment in the regions of the GCC and the Horn of Africa. Straight regional cooperation, coupled with international diplomacy, will be considered vital in addressing critical challenges. Nations of their region, thus, can further advance their security, be part of efforts toward stability, and encourage sustainable development.

Conclusion

Intricate is the relationship shaped by climate between the GCC and the Horn of Africa. The present research has examined the complex interconnections between the geopolitical, economic, and environmental strands affecting power relations between these two areas. The GCC states have the potential to build their position in the Horn of Africa, as they hold enormous economic resources and wield quite some geopolitical influence. Climate change, however, brings serious risks in terms of both challenge and opportunity to this region. While they have severe

infrastructure and investment needs, that is true to an extent, the activities of the GCC and the states therein become politically motivated from that of the domestic priorities. On the flip side, the Horn of Africa is facing a cocktail of climate-related challenges such as droughts, floods, and food insecurity. It has increased pre-existing vulnerabilities making it unable to fully optimize the wealth creation potential that lies hidden in the region. The overall situation has become further complicated by geopolitical competition between regional and global powers as each vying for control of influence and resources.

In conclusion, climate change has become the salt on the old wounds of power imbalances and geopolitical tensions between the GCC and the Horn of Africa. It offers new avenues for the GCC to assert its influence in the region, even as the experience underlines the importance of developing a fairer and more sustainable approach to regional development.

Recommendations

Considering the intricate considerations posed by climate change and shifting global politics, the following recommendations are made for consideration:

a- Mitigation and Adaptation to Climate Change:

- Investment in Renewable Energy: Both areas should focus their efforts on promoting renewable energy as one of the

ideal solutions toward the reduction of greenhouse gases and mitigation of climate change.

- Sustainable Agriculture: Adopt climate-related resilient agricultural practices whose main thrust is food security and the mitigation of droughts as well as floods.
- Water Resource Management: Improve the management of water resources, both in terms of rainwater harvesting and efficient irrigation and treatment of wastewater.
- Develop an early warning system: Appropriate resource investment in early warning systems would help mitigate the effects of forthcoming natural disasters.

b- Geopolitical Cooperation and Diplomacy:

- Regional Cooperation Promotion: Nurture regional dialogue for cooperation in addressing common challenges such as climate change, security, and economic development.
- Conflict Resolution by Peaceful Means: Peace efforts to resolve disputes peacefully through diplomatic mediation.
- Deepening International Cooperation: Collaborate with international partners to mobilize resources and expertise to respond to challenges posed by climate change and security.

c- Sustainable Economic Development:

- Diversify Economies: Reduce dependence on oil and gas revenue; develop other sectors, such as renewable energy; and diversify into technology and tourism.

- Invest in Human Capital: Invest in education, healthcare, and skills development for a skilled workforce and improved human capital.
- Promote Good Governance and Transparency: Alleviate poverty and promote growth and development by establishing robust governance institutions and fighting corruption.

If these recommendations are implemented, then the GCC and the Horn of Africa could enhance efforts to build climate resilience, reduce geopolitical tension, and create a more sustainable and prosperous future for their people.

List of References

1- Adeto, Y. A. (2019). State fragility and conflict nexus: Contemporary security issues in the Horn of Africa. *African Journal on Conflict Resolution*, *19*(1), 11-36.
2- Ahmed, K. A. A. W. (2023). MENA pivot to Asia: Rebalancing old relationships with new friendships. *Indian Foreign Affairs Journal*, *18*(1/2), 33-54.
3- Alcaro, R.& Pirozzi, N. (Eds.). (2014). *Transatlantic Security from the Sahel to the Horn of Africa* (Vol. 12). Edizioni Nuova Cultura.
4- Al Shayji, A. K. (2014). The GCC-US relationship: A GCC perspective. *Middle East Policy*, *21*(3).
5- Baabood, A. (2003). Dynamics and Determinants of the GCC States' Foreign Policy, with Special Reference to the EU. *The Review of International Affairs*, *3*(2), 254-282.
6- Bedasa, Y.& Bedemo, A. (2023). The effect of climate change on food insecurity in the Horn of Africa. *GeoJournal*, *88*(2), 1829-1839.

7- Chatterjee, T. (Ed.). (2024). *International trade, economic crisis and the sustainable development goals*. Emerald Publishing Limited.
8- Cherkas, B.& Novytska, N. (2023). The interests of the Gulf monarchies in the Horn of Africa. *Przegląd Politologiczny*, (2), 67-84.
9- Conway, D.& Vincent, K. (2021). *Climate risk in Africa: adaptation and resilience*. Springer Nature.
10- Dahir, A. (2022). Strategic geography in jeopardy: Qatar–Gulf crisis and the Horn of Africa. In *The Gulf states and the Horn of Africa* (pp. 171-198). Manchester University Press.
11- Di John, J. (2010). The 'resource curse': Theory and evidence. *Elcano Newsletter*, (72), 9.
12- Ding, L. (2024). The evolving roles of the gulf states in the horn of Africa. *Asian Journal of Middle Eastern and Islamic Studies*, 1-14.
13- Earle, A. et al. (Eds.). (2015). *Transboundary water management and the climate change debate*. Routledge.
14- Elmi, A., Alomirah, H.& Al-Zenki, S. (2016). Framework for sustainable agro-ecosystems in support of Gulf Cooperation Council (GCC) countries' food security. *Arab Gulf Journal of Scientific Research*, *34*(3/4), 97-105.
15- Grevi, G. (2008). The rise of strategic partnerships: between interdependence and power politics. *Partnerships for effective multilateralism: EU relations with Brazil, China, India and Russia, Chaillot Paper*, *109*.
16- Kabandula, A.& Shaw, T. M. (2020). Rising powers and the horn of Africa: Conflicting regionalisms. In *Rising Powers in International Conflict Management* (pp. 109-127). Routledge.
17- Krampe, F. et al. (2020). *Water security and governance in the Horn of Africa*. Stockholm International Peace Research Institute.

18- Lahn, G.& Shapland, G. (2022). Cascading climate risks and options for resilience and adaptation in the Middle East and North Africa. *Chatham House*, 463-472.
19- Liu, C. (2023). The cooperation between China and the Gulf Arab states in the Horn of Africa: From the perspective of the Global South. *Asian Journal of Middle Eastern and Islamic Studies*, *17*(4), 404-427.
20- Mason, R.& Mabon, S.(2022). *Gulf States and the Horn of Africa: Interests, influences and instability*. Manchester University Press.
21- Nyamukondiwa, P. (2019). *Developing community-informed technology for harvesting rainwater for domestic use in a semi-arid area of South Africa* (Doctoral dissertation, Doctoral Thesis. University of Venda).
22- Özekin, M. K.& Sune, E. (2021). *Critical Approaches to International Relations: Philosophical Foundations and Current Debates* (Vol. 205). Brill.
23- Pfefferle, T. (2016). *Is dependency theory dead?* (Vol. 2117). GRIN Verlag.
24- Rondos, A. (2016). The Horn of Africa. *Horizons: Journal of International Relations and Sustainable Development*, (6), 150-161.
25- Sandwick, J. A. (2019). *The gulf cooperation council: Moderation and stability in an interdependent world*. Routledge.
26- Scheffran, J. (2011). Theories and models of the climate-security link. *Climate Change, Human Security and Violent Conflict: Challenges for Societal Stability (eds. Scheffran J, Brzoska M, Brauch HG, Link PM, Schilling J), Springer, Berlin*.
27- Seife, T. K. (2021). The impact of climate change on agriculture and food security in the greater horn of Africa. *Politikon*, *48*(1), 98-114.

28- Sim, Y. S. (2007, July). International Relations& Complex Systems Theory. In *Proceedings of the 51st Annual Meeting of the ISSS-2007, Tokyo, Japan*.

29- Sons, S. (2024). The Gulf momentum in flux: Geopolitics in the GCC states in times of growing multipolarism and regional transformation. In *The Palgrave Handbook of Contemporary Geopolitics* (pp. 619-642). Cham: Springer Nature Switzerland.

30- Telci, I. N. (2022). The Horn of Africa as venue for regional competition: Motivations, instruments and relationship patterns. *Insight on Africa*, *14*(1), 73-87.

31- Tjosvold, D.& Wisse, B. (Eds.). (2009). *Power and interdependence in organizations*. Cambridge University Press.

32- Vertin, Z. (2019). *Toward a Red Sea forum: The Gulf, the Horn of Africa& architecture for a new regional order*. Brookings Institution.

33- Wapner, P. K.& Elver, H. (Eds.). (2016). *Reimagining climate change*. Oxford, UK: Routledge.

34- Yimer, N. A.& Erko, H. G. (2023). Middle East: States rivalry in the Horn of Africa. key drives, geopolitical implications, and security challenges. *Conflict Studies Quarterly*, (44).