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**Master of Arts in Security Studies: Mini dissertation**

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#### DECLARATION

I declare that this dissertation, which I hereby submit for the degree of Master of Arts in International Relations at the University of Pretoria, is my work and has not been previously submitted by me for a degree at this or any other university.

A handwritten signature in black ink, appearing to read 'David Willima', written over a dotted line.

David Willima

June 2024

## ABSTRACT

Maritime securitisation is increasingly receiving scholarly attention, particularly regarding its role in protecting national interests and it is therefore being linked to geopolitical and developmental discussions. However, there is a noticeable trend of maritime security being focused on traditional security conceptions which neglect human security concerns.

This study examines the capacity of the Great Blue Wall (GBW) initiative to attain human security in the Western Indian Ocean (WIO) region through the development of a human security framework centred around the ocean and focused on five dimensions of human security: Environmental Security, Food Security, Economic Security, Health Security and Political Security. The study uses this approach to evaluate the GBW's ability to enhance human security in the WIO. The results suggest that the GBW, through its three-pronged objectives of climate action, biodiversity restoration and promotion of a blue economy has great potential to attain human security by tackling the complex obstacles encountered by coastal communities. Nevertheless, it is crucial to acknowledge that the GBW is not a panacea and its benefits might be compromised by evolving geopolitical factors. Hence, it is imperative to supplement the GBW with additional regional initiatives to enhance maritime safety and mitigate pollution in the WIO. The Indian Ocean Rim Association (IORA) and the International Maritime Organisation (IMO) have the potential to significantly contribute to the support and enhancement of the GBW's aims. By adopting a comprehensive and cooperative strategy, the WIO region may strive to attain sustained human security and protect the welfare of its coastal populations. These regional initiatives can help address the specific challenges faced by the WIO region, such as illegal fishing, piracy, and oil spills. By collaborating with IORA and IMO, the WIO countries can benefit from capacity sharing, additional resources, and regional coordinated efforts to ensure that effective maritime safety and security measures are in place. Additionally, these initiatives can also promote sustainable development and economic growth in the region by facilitating trade and promoting responsible maritime practices.

**Key Words: Maritime Security, Blue Economy, Great Blue Wall Initiative, Western Indian Ocean Region, Geopolitics, Conservation, Cooperation, Human Security.**

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## ABBREVIATIONS AND ACRONYMS

ABES	Africa Blue Economy Strategy
AUC	African Union Commission
AIMS	African Integrated Maritime Strategy
CGPCS	Contact Group on Piracy off the Coast of Somalia
CSO	Civil Society Organisation
EEZ	Exclusive Economic Zone
EU	European Union
EUNAVFOR	European Union Naval Forces
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
GBW	Great Blue Wall
IDP	Internally Displaced Persons
IMB	International Maritime Bureau
IOC	Indian Ocean Commission
IOR	Indian Ocean Region
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature
IUU	Illegal, Unreported, and Unregulated Fishing
SADC	Southern Africa Development Community
SDG	Sustainable Development Goal
SAGAR	Security and Growth for All in the Region
SOLC	Sea Lanes of Communication
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNGA	United Nations General Assembly
UNODC	United Nations Office for Drugs and Crime
UNSC	United Nations Security Council
WFP	World Food Programme
WIO	Western Indian Ocean
WTO	World Trade Organisation
WEF	World Environmental Forum

## Chapter 1: Introduction

### 1.1. Introduction

The first United Nations Security Council (UNSC) resolution addressing piracy and robbery off the coast of Somalia was passed in 2008. After 12 years, the most recent counter-piracy Resolution 2608, issued by the UNSC, expired in March 2022. The decision not to renew the resolution was based on a reported decrease in piracy attacks. Consequently, the UNSC no longer considers piracy to be a prevailing security threat in the Horn of Africa (UNSC Reports, 2022).

Since 2013, Somali piracy has declined as a result of various multinational naval efforts aimed at countering piracy. However, Walker and Reva (2022) argue that the underlying local conditions, such as political instability, poverty, and illegal, unreported, and unregulated (IUU) fishing by foreign fleets, among other factors, that initially facilitated the emergence of piracy, continue to endure. To effectively enhance regional maritime security, it is essential to go beyond purely militaristic strategies. This approach should include efforts to combat transnational organised crime, alleviate poverty, ensure ecological stability, and secure food resources. The significance of oceans as a critical source of food security is also becoming increasingly apparent to African countries. With over 400 million people dependent on the fisheries sector for both their livelihoods and sustenance, the industry holds a substantial value of US\$24 billion in Africa (World Bank, 2020). Yet, there is a growing threat to ocean-based food security and overall ocean health due to IUU fishing.

As indicated by Daniels, Kohonen, Gutman, and Thiam (2022) half of the global industrial IUU fishing vessels operate in Africa and cost the continent up to US\$11 billion. This trend is more pronounced in the Western Indian Ocean (WIO) region, which encompasses the East African coastal states of Kenya, Mozambique, Somalia, South Africa and Tanzania, and the island states of Comoros, Madagascar, Mauritius, Seychelles, and the French overseas territories of Mayotte and Reunion. The WIO which will form the focus of this mini dissertation is a coherent biogeographic, climatic, and socio-political region encompassing the western perimeter of the Indian Ocean. It covers 30 million square kilometres, equating to 8.1



per cent of the world's ocean surface. It has six million square kilometres of exclusive economic zones (EEZs) and over 15,000 kilometres of coastline (Nairobi Convention, 2023).

This region suffers from the highest regional IUU fishing rate because of a lack of state efforts to address this threat. East Asian countries like China and Taiwan and European countries such as Spain and France are the main perpetrators, which leads to the overexploitation of fisheries resources. For coastal populations who rely on fisheries resources for their livelihoods, this is a major cause of food and socioeconomic insecurity (Moss, Pigeon, Benson, Burroughs, Devlin, Joubert, Lycan, and Mohabeer, 2022).

Further, the discovery of vast gas reserves in Mozambique's Exclusive Economic Zone has transformed the Mozambique Channel and adjacent onshore areas, such as the conflict-ridden Cabo Delgado province, from a global maritime and strategic backwater to an arena of potentially competitive geopolitical interest and a security hotspot.

On July 19, 2022, the ministerial committee of the Southern African Development Community (SADC) adopted the Integrated Maritime Strategy for the region to address broad maritime threats and the general governance of the ocean space in the region encompassing both security and developmental sectors. Additionally, the committee resolved to establish a task force dedicated to countering transnational organised crime in Mozambique and neighbouring areas. This approach seeks to complement military approaches which effectively contribute to sea protection, but tend to resemble narrow initiatives similar to those observed in Somalia and are therefore insufficient to foster sustained security in the region (Walker and Reva, 2022). Such approaches often overlook local conditions, including real or perceived grievances related to the overexploitation of natural resources and broader human security concerns. These factors contribute to the emergence of insecurity at sea. The exclusive emphasis on a naval approach to maritime security obscures various other forms of insecurity noted earlier that hold significance in the Western Indian Ocean (WIO) region. The effects of climate change, ecological changes, and environmental changes extend beyond traditional hard security problems that cause violent conflict for states but also to broader risks that endanger individuals and society (De Coning, 2022).

Over the past few decades, there has been growing scholarly recognition that climate change and other environmental factors are interdependent with various dimensions of human security (Clover, 2005; Kostova and Sidova, 2022), necessitating deeper investigation into the linkages

between human well-being and that of the environment. People's health and livelihoods are adversely affected, while social-ecological systems are disrupted, resulting in displacement, deaths and injuries. For example, a recent assessment of the ecosystem in the Western Indian Ocean by Obura and Samoily (2021) shows that coral reefs in the region are 'critically endangered' and face the risk of total collapse by 2050 if the climate crisis is not reversed.

This is exacerbated by mounting pressures from pollution from oil spills, such as the 2020 grounding of the Japanese oil tanker *Wakashio*, subsequently spilling over 1,000 tons of oil along the biodiverse coast of Mauritius (Swanepoel, 2020). To date, only 10 per cent of the oil spills have been cleaned up, threatening the biodiversity in Mauritius's south-east coasts food security and the health of coastal populations with reports of health issues such as respiratory and skin diseases (Moss and Pigeon et al., 2022).

Human security fundamentally shifts our understanding of security from a military state-centric conception to a people-centred one (Pettman, 2005: 138). The evolving trends and problems highlighted above raise questions about the nature of security required in terms of the oceanic dimension of human security.

This study aims to explore the connection between the ocean and human security against the backdrop of various international initiatives and policies (though the focus is very specifically on the Great Blue Wall initiative). Notable examples include efforts such as Australia's protection of the Great Barrier Reef and the recent resolution at the 2022 United Nations Biodiversity Conference of the Parties (COP 15). The resolution, endorsed by 96 countries, aims to safeguard 30 per cent of the ocean by 2030, a commitment made during the Post-2020 Biodiversity Summit held in Montreal, Canada, in December 2022. This commitment underscores the urgent need to reverse the threats posed to ocean biodiversity (International Union for Conservation of Nature (IUCN), 2022). One such initiative is the Great Blue Wall (GBW) initiative. The GBW is an African initiative designed to adapt to and mitigate climate change impacts. This initiative aims to restore ocean health, safeguard marine biodiversity, and support sustainable economic practices (Willima, 2022). Sberna and Oulmane (2022) posit that the GBW initiative aims to conserve marine biodiversity in the Western Indian Ocean through the creation of interconnected seascapes across the region's ten African countries, with an open invitation for more countries to join.

The primary objectives of the initiative are to contribute to the conservation of 30 per cent of global oceans by 2030, acquire crucial blue ecosystems such as mangroves, corals, and seagrasses by the same timeframe, and generate employment opportunities by offering financial support, training, and technical assistance to local communities for the development of a regenerative blue economy (IUCN, 2022). The question does arise, though, whether this initiative speaks to human security issues in a maritime context.

## **1.2. Literature Overview**

To explore the relationship between the ocean and human security, two main bodies of scholarship are explored:

1. The Evolution of Human Security
2. The growing importance of the ocean in relation to human security.

Chapter two of this study provides an in-depth literature review aimed at developing a framework that is utilised to analyse the extent to which the Great Blue Wall initiative has the potential to address ocean-based human security.

## **1.3. The evolution of human security as a concept.**

This overview briefly discusses the two schools of thought, namely, the broad and the narrow theoretical approaches, starting with a brief overview of the evolution of the concept in the literature.

Following the 2005 Report of General Secretary Kofi Annan to the UN General Assembly, examining the evolution of human security emphasises the nexus and distinction between human security and development. Annan, who in listing human rights as one of the three principal goals of the United Nations alongside development and security, views development and security as interconnected, describing them as two sides of the same coin. According to Annan, security enables development, and development is essential for sustaining security (Annan, 2005: 5).

The increasing scholarly focus (Sen 1999; Ghali 2002; Zartman 2010) has contributed to the growth and evolution of the concept of human security since its inception in the 1990s. Human Security fundamentally shifts our understanding of security from a dominant military state-centric conception to a people-centred one (Pettman, 2005: 138). The United Nations Commission on Human Security defines human security as protecting "the vital core of all human lives in ways that enhance human freedom and fulfilment" (1994: 4).

The discussion of the evolution of Human Security follows two main approaches to understanding human security: the broad and narrow definitions. A broad approach is premised on the concept of "freedom from want," and the narrow approach is based on "freedom from fear" (Sen, 1999: 28).

Through the work of (Liotta and Owen, 2006; Alkire 2016), the first school focuses on a narrow perspective of human security that focuses on specific threats. The narrow approach emerges as a more focused approach centred on violent threats. The narrow approach reduces the parameters of human security to eradicate fear from violent threats against the human being/individual emanating from a range of issues such as state failure or genocide.

Secondly, Human Security, in a broader sense, is defined as "freedom from want," echoing the 1994 Human Development Report published by the United Nations Development Program (UNDP). Proponents of the broader approach support a wider understanding of human security that transcends just violent threats, including protection from natural disasters, hunger and economic insecurity (Sen, 1999).

Despite its broad principles and conceptual approaches, this broad conception from the Japanese school of thought on human security has converged with the Canadian appeal for "freedom from fear". These two approaches heavily influenced Kofi Annan's 2000 speech at the Millennium Summit and its final declaration.

Contrasting the human security concept with the traditional national security concept reveals the utility of this concept. Rather than a particular state's military or strategic interests, human security focuses on the welfare of human beings worldwide. This is supported by Ghali (2002:6), who argues that both human security approaches depend on noncoercive measures, such as reform of the security sector and sustainable economic development.

Globally, intrastate conflicts remain a major concern, as seen in the Russian invasion of Ukraine. Yet, internal conflicts are often driven by scarcity, resources or climate change, causing even greater insecurities than interstate conflicts. This is especially important in the African context, where history shows that inter-state conflict is highly unlikely but the continent is plagued by human security elements such as poverty, disease, insurgency and climate change. Thirdly, recognising a bridge between narrow and broad conceptions of human security creates an avenue for understanding the link between human security and ecological security.

Colidicott and O'Brien (2012) explain that environmental security refers to the protection and safety of environmental and ecological concerns. Social, economic, political, and global factors impact these environmental concerns and security strategies. Environmental issues play a pivotal role in influencing both state and human security and align with the broad approach Human Security approach as espoused by the 1994 UNDP human development report.

Clover (2005) argues that some of Africa's greatest security threats are the lack of access to resources and the growing pressure on natural resources due to the loss of land, overfishing and biodiversity loss. These environmental changes pose significant human security challenges making the integrity of the environment a security referent and a goal to avoid conflict. They are reflected in Mary Kaldor's *New Wars* thesis, arguing that the so-called "new wars" will be fought over resources (Kaldor, 2012).

However, in answering 'what is to be secured', Clover (2005: 5) argues that environment-security nexus debates still prioritise the state's survival and are traditional insofar as environmental threats threaten national interests as seen in the maritime security operations in Somalia and more recently, Mozambique. Alternatively, Clover (2005) suggests that because environmental issues are embedded in everyday struggles with poverty and food security, human-centred ecological security is needed to effectively mitigate, adapt and manage the causes of environmental insecurities emanating from climate change by advocating the sustainable use of resources in a manner that integrates human, state and environmental security.

Human security safeguards humans from violence, conflict, disease, harm, hunger, repression etc. (Yasmeen,2021). It entails protecting individuals and providing economic, food, health, environmental, personal, political, and communal security as part of a larger ecosystem (Johns, 2014). Kostova and Sidova (2020) define ecology as the relationship between living organisms and their environment. Ecological security, therefore, entails protecting the relationship or interaction between the environment and the people living within the environment—changes to any one ecological factor result in an imbalance or instability of this system. For instance, water scarcity results in drought, and food instability, leading to increased hunger, poverty, illness, and death. Therefore, ecological security aims to preserve equilibrium and security between organisms and their environment.

This study will use the concept of human-centred ecological security, which is similar to the concept of environmental security in that both pertain to the security of life processes and the distribution of resources related to the environment and its wellbeing; however, they differ in the way in which environmental components interact.

#### **1.4. Growing Importance of Oceans to Human Security.**

In 2018, the UN General Assembly adopted the resolution, Oceans and the Law of the Sea (A/73/L.35), with 121 Member States voting in favour, one voting against (Turkey), and three abstaining (Colombia, El Salvador, and Venezuela). The resolution describes efforts to develop a legally binding instrument on marine biodiversity conservation and sustainable use under the United Nations Convention on the Law of the Sea (UNCLOS) adopted in 1982.

Further, the ocean is increasingly an arena for geopolitics and is responsible for carrying 90 per cent of the world trade volume (UNCTAD, 2022). Otto (2020: 4-6) defines geopolitics as how states organise themselves to advance their interests utilising geographical and political advantages to pursue their interests. States thus factor geography into their strategic thinking. Otto (2020: 5) provides an example of the Chinese string of pearls or the Maritime Silk Road, which is part of the Chinese Belt and Road initiative, illustrating their strategic and geopolitical thinking. This is particularly evident as 30 per cent of Chinese sea trade, for example, transits through the Indian Ocean, leading to significant investments in countries like Kenya (port of Lamu) and a military base in Djibouti.

States increasingly invest in securing maritime space to advance their national interests. Bueger (2015: 159) thus argues that Maritime security has a political and traditional military security aspect. Bueger (2015: 162) identifies Maritime Domain Awareness (MDA), which includes surveillance through radar and satellites and conducting patrols in a state's Exclusive Economic Zones (EEZ), an area 200 nautical miles within a state's territorial waters where a state has jurisdiction as important to maritime security. This requires securitisation of the EEZ by identifying threats such as foreign vessels involved in IUU fishing and employing legal tools such as arrests, interdictions and inspections. Naval warfare and naval diplomacy are sometimes utilised to secure national maritime spaces as hubs of stock and flow resources.

Notably, maritime security is still too often understood in traditional military security terms that do not consider human security leaving climate, food security and biodiversity issues on the periphery. Walker (2022:51) argues that Maritime security entails preventing maritime crime and enabling states and their communities - both littoral and non-littoral - to achieve greater levels of human security. This weakness in understanding maritime security as being more than the product of military security has yet to be fully explored and, undergirds the focus of this research.

### **1.5. Problem Statement.**

This study examines the inadequacy of current human security concepts, which do not sufficiently incorporate aspects of 'oceans' or 'the maritime.' Despite facing continuous threats from climate change, pollution, and maritime crime, these crucial areas are not adequately addressed in existing human security frameworks, leading to serious implications for overall human security.

### **1.6. Research Question**

To what extent can nature-positive initiatives such as the Great Blue Wall fill the gap in the literature and in practice (the so-called 'real world') to link the ocean and human security?

The study explores the connection between human security and the ocean, employing the Great

Blue Wall as a case study. Therefore, the overall research question is: To what extent does the GBW initiative address issues of ocean-linked human security?

### **1.6.1. Sub questions: yes**

1. What is Human Security?
2. How does Human Security link to ocean/maritime security?
3. What is the Great Blue Wall initiative?
4. To what extent does the Great Blue Wall initiative correspond with the elements required to achieve ocean-centred human security?

### **1.7. Objectives:**

In the wake of maritime threats becoming more apparent due to the growing realisation of the importance of the ocean to human sustenance and survival, this study aims to.... This study aims to:

1. Refine the concept of Human Security to make it applicable to maritime security.
2. Develop an ocean-related human security framework and apply it to the maritime domain.
3. Assess whether initiatives such as the GBW can contribute to the realisation of human security.

### **1.8. Contribution of the study:**

1. This study raises scholarly awareness of the importance of having a refined conception of human security relevant to the ocean.
2. This study provides a detailed account of the Great Blue Wall initiative- an Africa-led initiative to promote the sustainable use of ocean resources to address maritime security.

### **1.9. Limitations of the study:**



The study acknowledges potential limitations, mainly related to its reliance on desktop research and not set on empirical studies. Nevertheless, within the constraints of a minor dissertation and time limitations, a literature-based research study has explored the concepts of ocean security and human security through the Great Blue Wall initiative, holding potential benefits for the 70 million inhabitants of the WIO region.

### **1.10. Methodology**

Focused on the link between human security and the ocean using the GBW initiative in the Western Indian Ocean Region, the study employed a qualitative desktop research design. Primary sources including speeches, UN resolutions and press releases (UNGA, 2018; Seychelles State House, 2022 and IUCN, 2022), were used alongside secondary sources, including scholarship on human security and ecological security such as Sen (1999) and Kostova and Sidova (2020).

The qualitative methodology used in this study facilitated the identification of diverse and often conflicting conceptions of security through a comprehensive examination of various sources.

The preference for a qualitative approach, specifically desktop research, was grounded in several considerations. Firstly, accessing information sources in the public domain ensured the utilisation of reliable data without necessitating extensive fieldwork—an impractical endeavour within the confines of the University of Pretoria Master of Security Studies thesis timeline. Secondly, the subject under investigation, the GBW initiative, is relatively novel, implying that its tangible impact on the ground is not yet pronounced.

Consequently, an exhaustive field study may be deemed premature at this stage. Instead, desktop research allows for garnering preliminary insights into the initiative, facilitating an initial understanding to assess its potential impact. The focus of this investigation revolves around the concept of human security, and the analytical framework developed through this approach will be instrumental in evaluating the extent to which the GBW initiative addresses human security issues within the maritime domain.

Finally, the choice of desktop research fits into the limitations of a mini dissertation, which typically has a shorter time frame and limited resources. Therefore, relying on desktop research provided a practical and efficient approach to gathering information for the study.

### **1.11. Chapter Outline**

Chapter 1: Briefly introduces the study and defines the research problem based on an overview of the relevant literature. It presented the core research question and sub-questions, explaining the methodology applied to explore these questions and briefly set out the study's aims, its contribution, and the limitations of the methodology employed.

Chapter 2: Provides an in-depth analysis of the concept of human security to develop a working definition and identify the core elements of maritime-focused human security that guide the analysis of the GBW initiative.

Chapter 3: Provides a discussion of the GBW initiative, its origins, scope, actors and aims concerning human security.

Chapter 4: Provides a critical analysis of the GBW initiative against the analytical framework developed in Chapter 2 to assess the extent to which the initiative achieves ocean-related maritime human security in the WIO.

Chapter 5: The concluding chapter summarises and evaluates the research and identifies areas for further investigation.

## **Chapter 2: Conceptual Framework**

### **2.1. Introduction**

This chapter aims to provide an in-depth analysis of the concept of human security, develop a working definition and identify the core elements of a maritime-focused human security framework to provide a theoretical foundation for the analysis of the GBW Initiative. By defining and identifying the core elements of a maritime-focused human security framework, the chapter aims to guide the analysis of the initiative and provide a framework for evaluating its effectiveness in promoting human security in the maritime domain. This chapter is important because it helps to establish an understanding of the concept of human security and provides a conceptual framework for evaluating the potential of policies and initiatives in the maritime domain to contribute to human security.

The discipline of international relations focuses on the political interactions between international actors (Hough, 2004). Realism has traditionally been the dominant perspective in this field. According to classic realists, states are the most significant actors in the international arena, and their self-interest and pursuit of power constantly drive them. Consequently, this perspective has been widely accepted by all other areas of international relations, including security studies, which examine international interactions with a focus on maintaining actors' security (Hough, 2004).

Security studies have traditionally concentrated on the state, military defence, and strategic alliances. As a result, traditional Security Studies did not address issues such as food security or climate change. The 20th century saw an overemphasis on state security, while issues such as the protection of human rights and environmental security were overlooked (Williams, 2004).

Focusing solely on military threats disregards the fact that non-military threats can also weaken states. Critics of traditional Security Studies, including Booth, Krause, Vale, and Williams, have pointed out the limitations of state-focused security perceptions and presented a valuable critique. They argue that this narrow focus neglects other critical dimensions of security, such as economic stability, environmental sustainability, and social cohesion, which are essential for the overall resilience and security of states (Booth, 1991; Krause and Williams, 1997; Vale and Booth, 1997; Vale and Swatuk, 1999; Booth and Wheeler, 2008; Owen, 2013; Clarke and Humphreys, 2017 and Sharma and Mordi, 2018).

Williams (2004) applies a broader brushstroke to security studies by defining security as a state of being free from threats or dangers, whether these threats come from external or internal sources. Williams argues that the concept of security is not universal, and what constitutes a security threat depends on context, interests, and values.

Williams (2004) then attempts to answer the critical question, “Whose security matters?” to shed light on the idea that different actors have different perceptions of security based on their identity, interests, and position in society. For example, the security concerns of a state may differ from those of a non-state actor, such as a multinational corporation or an individual. Williams argues that security threats can take many forms, ranging from military challenges and threats to territorial integrity to non-military challenges such as terrorism, transnational crime, environmental degradation, and economic instability.

Therefore, proponents of critical security studies, such as Peoples and Vaughan-Williams (2020), posit that security protects a state's territory from external threats and examines the underlying power relations and inequalities that shape security policies and practices. Critical security studies suggest that traditional approaches to security focus too narrowly on military threats and fail to address broader issues such as economic and social injustices, environmental degradation, and human rights violations (Peoples and Vaughan-Williams, 2020). Instead, critical security studies aim to challenge dominant security narratives and practices by

analysing the multiplicity of underlying causes of insecurity and exploring alternative ways of ensuring a broader sense of security.

## **2.2. Human Security**

Human security, insofar as it reveals the insufficiency of traditional security studies and questions the primacy of the state as the primary security referent, builds upon critical security studies as a multidimensional concept that focuses on the protection and well-being of individuals and communities. It was first introduced in the 1994 United Nations Development Programme (UNDP) Human Development Report, which defined human security as "safety from chronic threats such as hunger, disease and repression, and protection from sudden and hurtful disruptions in the patterns of daily life" (UNDP, 1994: 22). Since then, the concept has evolved to encompass a broader range of threats and challenges that affect human well-being.

## **2.3. Human Security as a multidimensional approach**

The end of the Cold War marked a significant shift in the field of international relations and security studies. In his famous essay, Francis Fukuyama hailed the decline of communism and the end of the Cold War as the "end of history" (Fukuyama, 1989:1). Indeed, with the benefit of hindsight and application of analytical energy, Fukuyama's declaration seems to have been a case of *selection bias* that only viewed the world and security in terms of hegemonic realist perceptions of power but was also a prophecy of the opening of the curtain to the liberal world order that would succeed the cold war era. Prior to the collapse of the Soviet Union, the dominant paradigm in these fields was realism, which emphasised the importance of power and the pursuit of national interests in international affairs (Waltz, 2000). However, the post-Cold War era saw the emergence of broader notions of security emerging beyond traditional military concerns.

Buzan (1983) argues that security is not merely about military threats but also economic, environmental, and societal threats. Sen (2000) emphasises the importance of human security, which focuses on protecting individuals from violence, poverty, and disease. Alkire (2003) highlights the multidimensional nature of security, including physical and environmental, social, economic, and political security. In her famous *New Wars* thesis, Kaldor (2006) argues

that security is more about protecting people than states because conflict has evolved, and the targets of security threats have become individuals rather than states.

Hough (2004) argues that the end of the Cold War led to a rethinking of security that emphasised non-military threats such as environmental degradation, economic instability, and transnational crime. This shift was reflected in the adoption of new security agendas by international organisations such as the United Nations, which began focusing on issues such as human security and sustainable development following seminal works by scholars such as Buzan (1997 and Waever; Williams 1998).

Booth (2007) notes that the broadening of the understanding of security is reflected in the UN Security Council Resolution 1674, which emphasises the responsibility to protect individuals from genocide, war crimes, ethnic cleansing, and crimes against humanity (United Nations, 2006). The resolution recognises the fundamental right of individuals to live in peace and security, free from fear and want, non-traditional threats and crimes against humanity.

Environmental threats, such as climate change, deforestation, and water scarcity, have emerged as significant security challenges in the post-Cold War era. These threats can cause widespread social, economic, and political instability and exacerbate existing conflicts and tensions. However, conventional security studies have largely ignored these threats, focusing instead on traditional military threats; as Naidoo and Gulati (2022) argue, traditional security studies have failed to recognise the interconnectedness of security threats and the need for a more holistic approach to security.

Human security is a concept that emerged in the 1990s as a response to the limitations of traditional security approaches that focused solely on state security and military defence (UNDP, 1994). The concept of human security broadens the scope of security to include the protection of individuals and communities from a range of threats, including poverty, disease, environmental degradation, and political violence (UNDP, 2012). The United Nations Development Programme (UNDP) defines human security as "a condition for individuals and communities to live in freedom, dignity, and peace, with access to basic needs and human rights, protected from harm and with opportunities to realise their potential" (UNDP, 2012: 15).

The relevance of human security has become increasingly apparent in recent years as the world faces a range of complex and interconnected security challenges. These challenges include climate change, pandemics, terrorism, and economic inequality (UNDP, 2022).

There are several schools of thought on human security, each with its approach and emphasis. The European School of Human Security emphasises the importance of human rights and democracy in promoting security (Buzan and Hansen, 2009). This approach recognises that human rights violations, such as political repression, discrimination, and violence, can undermine the security of individuals and communities. Therefore, the European school advocates for protecting and promoting human rights as a critical component of security policy. This approach has been influential in shaping European Union policies on human rights and democracy promotion and in international efforts to address human rights abuses in conflict zones (Manners, 2002).

The Asian School of Human Security focuses on the role of economic development and regional cooperation in enhancing security. This approach recognises that economic insecurity, such as poverty, unemployment, and inequality, can contribute to conflict and instability (Caballero-Anthony, 2011). Therefore, the Asian school advocates for policies that promote economic growth and development and regional cooperation and integration, as seen in regional initiatives such as the Association of Southeast Asian Nations (ASEAN).

The Canadian school of human security was first articulated in the 1990s by a group of scholars and policymakers, including Andrew Mack (1993), John Sewell (1996), and Lloyd Axworthy (2001), who proposed a more comprehensive approach that would prioritise the protection of individuals and communities from a range of threats, including poverty, disease, environmental degradation, and human rights abuses.

According to Axworthy (2001), the Canadian School of Human Security has been influential in shaping international policy and practice, particularly in peacekeeping, humanitarian intervention, and development assistance. This approach recognises that security is not only about military defence but also about protecting people from various threats, including poverty, disease, and environmental degradation. It has also been the subject of ongoing debate and critique, with some scholars and policymakers arguing that it is too broad and diffuse to be effective in practice.

The narrow approach to human security is a concept that focuses on the protection of individuals from direct physical violence and threats to their safety. Realists and neo-realists, such as Hans Morgenthau and Kenneth Waltz, advocate for a narrow approach to human security, emphasizing a traditional state-centric view which prioritises the protection of state sovereignty and territorial integrity (Morgenthau, 1948; Waltz, 1979). This approach highlights military power and the use of force to defend against external threats such as military aggression or terrorism (Mearsheimer, 2001; Walt, 1987).

Williams (2004) also discusses the narrow approach to security, which he defines as a focus on protecting state interests and using military force to achieve this goal. He argues that this approach is limited in addressing the complex and interconnected security challenges of the 21st century, such as terrorism, climate change, and economic inequality.

Paris (2001) similarly critiques the narrow approach to human security, arguing that it fails to address the root causes of insecurity, such as poverty, inequality, and environmental degradation. He suggests that a broader approach to human security, which considers the social, economic, and environmental dimensions of security, is needed.

Owing to its emphasis on the importance of state sovereignty and the role of military force in protecting individuals from external threats, critics of the narrow approach argue that it fails to address broader issues such as poverty, inequality, and environmental degradation, which can also have significant impacts on human security. As such, many scholars have advocated for a more holistic approach to human security that considers a wider range of factors and recognises the interconnectedness of different forms of insecurity.

This study builds on the works of Krause and Williams, 1997; Sen 1999; Alkire, 2002; Buzan and Hansen, 2009, who argue that a broad conceptualisation of human security is essential for addressing the complex threats and challenges facing individuals and communities. Buzan and Hansen (2009) suggest that the evolution of international security studies has led to a broader understanding of security, including human security. This approach recognises that traditional security concerns, such as military threats, are not the only threats to individuals and communities. This argument is further expanded by Alkire (2002), who argues that human security has multiple dimensions, including economic, political, social, and environmental factors. This approach recognises that individuals and communities face a range of threats that require a comprehensive response.



Chenoy (2007) also emphasises the importance of a people-centred approach that prioritises the well-being of individuals and communities. This approach recognises that security is not just about protecting states but also about protecting people. Gasper (2005) argues that the global economy significantly impacts human security, both positively and negatively, considering that economic policies and practices can profoundly affect the well-being of individuals, communities, and the environment.

As such, Krause and Williams (1997) suggest that broadening the agenda of security studies to include human security requires a shift in politics and methods. This approach recognises that traditional security studies have focused on state-centric approaches and that a broader approach is needed to address the complex challenges facing individuals and communities.

Sen (1999) argues that development and freedom are closely linked and that a focus on human security is essential for promoting both. This approach recognises that individuals and communities must be empowered to make choices and pursue their goals to achieve true security. The United Nations Development Programme's (UNDP) Human Development Report (2012) emphasises the importance of human progress in a diverse world and highlights the need for a comprehensive approach to human security that addresses a range of threats and challenges.

One counter-argument to the critics of the broad approach to human security is that it is precisely because security threats are interconnected and multidimensional that a comprehensive and integrated approach is necessary. Addressing the root causes of insecurity, such as poverty, inequality, and environmental degradation, can prevent and mitigate security threats before they escalate into violent conflict or other forms of crisis.

To better understand the security concerns of the African continent for this study, we can refer to Owen's (2004) definition of human security: Human security is the protection of the vital core of all human lives from critical and pervasive environmental, economic, food, health, personal and political threats (Owen, 2004:383). However, it is imperative to synthesise this understanding with a broader discourse that incorporates viewpoints from different scholars. The African context offers unique security issues that require an inclusive approach, which considers regional specificities. Therefore, the section below first gathers and evaluates

the inputs provided by 'wideners' in the realm of human security. By integrating these perspectives, the paper aims to seamlessly shift towards a concentrated discourse on African security issues. This approach will ensure a holistic understanding that aligns with the broader discourse, thus enhancing the relevance and depth of the subsequent Africa-focused analysis.

Furthermore, the broad approach to human security does not neglect traditional security concerns, such as military defence. Instead, it recognises that these concerns are often intertwined with other security threats and require a multidimensional response. For example, addressing poverty and inequality can help to reduce the risk of violent conflict and terrorism, while promoting sustainable development can enhance economic and social stability (Williams, 2004).

## **2.4. Securitisation of Maritime Security in Africa**

Okafor-Yarwood and Onuoha (2023) shed light on the securitisation of maritime security in Africa and the associated underlying interests it serves. The authors contend that while securitisation is frequently positioned as a strategy to address piracy and other maritime threats, a critical examination is imperative to discern whose interests are being prioritised and at what cost. Okafor and Onuoha emphasise the potential adverse repercussions of securitisation, including the militarisation of coastal regions and the marginalisation of local communities. Consequently, this chapter aligns with this perspective to highlight the imperative of adopting a comprehensive approach that considers all stakeholders' interests, specifically of local communities, to establish sustainable maritime security in Africa. To accomplish this, it is essential to initially trace the origins of securitisation theory and its application to the maritime domain.

### **2.4.1. Traditional State-Centric Approach to Maritime Security**

Securitisation theory is a theoretical framework that explains how political actors and institutions construct specific issues or phenomena as security threats. The Copenhagen School of International Relations first developed the theory in the 1990s and has since been widely used in the study of security and international relations (Williams, 2004).

According to Buzan, Waever and de Wilde (1998), securitisation involves a process by which an issue is transformed into a security threat through the speech act of securitisation. This involves using language and rhetoric by political actors to frame an issue as a security threat to a particular community or society. The speech act of securitisation is successful when the audience accepts it as a legitimate security concern, which justifies extraordinary measures to address the threat.

Securitisation theory has been applied to a wide range of issues, including terrorism, migration, climate change, and health pandemics. For example, Huysmans (2006) used securitisation theory to analyse the European Union's response to migration, arguing that the securitisation of migration has led to the militarisation of borders to demonstrate how securitisation works as a framework for understanding how security issues are constructed and how they shape political discourse and policy-making. It highlights the role of language and rhetoric in shaping our understanding of security threats and the implications of securitisation for societal, human, and international relations.

To achieve this, speech acts refer to the performative power of language to create social realities. Buzan and Waever (1998) define a speech act as a type of communicative action that seeks to bring about a particular outcome or change in the world. It involves using language to act rather than convey information. Speech acts can be explicit or implicit, ranging from making a promise to declaring war. In other words, speech acts can be used to create a sense of urgency and mobilise resources to address perceived security threats (Williams, 2011).

In maritime security in Africa, speech acts can be used to create a sense of urgency and mobilise resources to address perceived security threats. For example, political leaders may use language to frame piracy as a threat to national security, which can lead to increased funding for maritime security initiatives (Bueger, 2015).

Securitisation theory and speech acts are often used to determine African maritime security threats. Securitisation theory suggests that security threats are not objective but are socially constructed through the speech acts of political actors who frame certain issues as security concerns. In the context of maritime security in Africa, certain actors may use language to frame piracy, illegal fishing, or other maritime crimes as security threats that require a securitised response (Murphy, 2018).

For example, framing piracy off the coast of Aden or the Gulf of Guinea as a security threat can be seen in the language used in UN resolutions on piracy. For example, UN Security Council Resolution 1816, adopted in 2008, refers to piracy off the coast of Somalia as a "threat to international peace and security" (UN, 2008). This language frames piracy as a serious and urgent issue that requires a coordinated international response.

Similarly, UN Security Council Resolution 2018, adopted in 2011, refers to piracy off the coast of Somalia as a "grave threat" to the safety and security of seafarers and international navigation. This language emphasises the potential harm piracy can cause individuals and the global economy, further framing piracy as a security threat. The language used in these resolutions also highlights the need for a coordinated international response to piracy. For example, UN (2011) Resolution 1816 calls on "states whose naval vessels and military aircraft operate on the high seas and airspace off the coast of Somalia to be vigilant to acts of piracy and armed robbery and, in this context, encourages, in particular, States interested in the use of commercial maritime routes off the coast of Somalia, to increase and coordinate their efforts to deter acts of piracy and armed robbery at sea in cooperation with the Transitional Federal Government of Somalia (TFG)", while Resolution 2444 (2018) emphasises the importance of prosecuting and imprisoning pirates. The issue of piracy in Africa has been addressed through various policy measures and speeches. One example is the adoption of Resolution 2039 by the United Nations Security Council in 2012. The resolution called for greater international cooperation to combat piracy in the region, emphasising the need for regional states to take action and urging the international community to provide support and assistance.

In addition to policy measures, securitisation has been reinforced through media coverage of piracy incidents in the Gulf of Guinea. Western media outlets have often portrayed piracy in the region as a threat to global security, highlighting the potential impact on oil prices and the global economy. Bueger (2015) identifies key elements that drove the UN's actions: the direct threat to international shipping, the economic implications for global trade, the humanitarian impact on seafarers, and the potential for regional instability. By framing piracy as a significant security issue, the UN justified the mobilisation of substantial international resources to address the threat comprehensively.

However, scholars such as Bueger (2015) and Okafor-Yarwood and Unouha (2023) have also criticised the securitisation of piracy in the Gulf of Guinea, arguing that it has led to a militarisation of the region and a focus on law enforcement rather than addressing the root causes of piracy, such as poverty and lack of economic opportunities. They argue that a more holistic approach is needed, one that addresses the social and economic factors that contribute to piracy in the region. Okafor-Yarwood and Unouha (2023) argue that securitisation has promoted global elitist interests in framing African maritime security at the expense of African coastal communities. Citing UN Resolutions 1816 and 2018 as examples, the authors argue that the framing of maritime threats, particularly piracy in Africa, follows an elitist approach by extra-regional powers such as the United States, the European Union, China, Denmark, India, and Japan. These powers rely on African waters for navigation because Africa lies at the centre of global trade and sea lanes of communication (SLOC), making it pivotal for advancing their geo-strategic interests. Major sectors of the continent's Blue Economy, such as shipping and port infrastructure, oil and gas exploration, and distant water fishing, are dominated by foreign nations. According to Okafor-Yarwood and Unouha (2023), this is demonstrated by the findings that 25 per cent of all fishing catches are made by non-African vessels, many of which engage in IUU fishing activities and are supported fisheries subsidies by foreign governments such as China, Spain, Japan and other countries, which threatens the livelihoods and food security of African coastal communities who suffer from decreased catches and ecosystem imbalance.

Securitisation plays an important role in this process. Despite IUU fishing, mainly by state-sponsored foreign vessels being a threat to the socio-economic development of African states, the European Union and African Union have different perceptions of the issue (Reva and Willima, 2023). The EU does not perceive IUU fishing as a maritime security threat but rather as an economic and environmental issue (European Parliament, 2017). On the other hand, the AU perceives IUU fishing as a security threat to its maritime domain, as it undermines the livelihoods of local fishing communities and threatens food security (African Union, 2014 and 2016).

The difference in perception can be explained by the different securitisation processes that have taken place in the EU and AU. The EU has securitised terrorism, migration, and cyber threats, while the AU has securitised issues related to piracy, terrorism, and maritime security (ABES, 2019 and PSC, 2022)

This mismatch in securitisation frameworks and encroachment in the African maritime domain caused the overexploitation and depletion of African fish stocks. This is supported by the World Wildlife Fund (WWF,2023), which reported that European Countries France, Portugal and Spain engaged in IUU fishing in the Western Indian Region between 2014 and 2021, amounting to nearly 50 per cent of all tuna catches between this period translating to a loss of roughly US \$ 95.8 million annually each year for the region. The EU vessels also engaged in illegal fishing outside their coastal zones, which contributes to the depletion of local resources and further burdens already overfished stocks, resulting in food insecurity for coastal communities.

This brief synopsis gives a snapshot of the challenges that African states face in their maritime domain that inhibit their ability to maintain maritime security and maximise the benefits of their Blue Economy due to a range of factors that call for a reframing of maritime security; it's constitutive threats and the policies and initiatives to be employed for protection and conservation of marine resources and economic growth.

#### **2.4.2. Broadening of the maritime security concept**

As highlighted in this study, maritime security has traditionally also been viewed through a narrow state-centric lens, with a focus on protecting national interests and territorial waters, which are defined as "the belt of the sea extending twelve nautical miles (22.2 kilometres) from the baselines of the coastal State" (UNCLOS, Article 3: 1982). However, in recent years, there has been a shift towards a broader perspective that encompasses non-traditional threats such as piracy and illegal, unreported, and unregulated (IUU) fishing (Cordner, 2018).

This section will explore the evolution of maritime security from a traditional state-centric approach to a broader security perspective and the implications of this shift for global governance and cooperation.

The traditional state-centric approach to maritime security is rooted in the concept of sovereignty, which asserts that states have exclusive control over their territorial waters and resources. Within its territorial waters (a coastal state has sovereignty over the seas, including the airspace above and the seabed and subsoil below (Bueger, 2015).

The United Nations Convention on the Law of the Sea (UNCLOS) is the international treaty that governs the rights and responsibilities of states in the world's oceans, including territorial waters. The convention also outlines the rights of coastal states within their territorial waters, including the right to regulate and exploit natural resources, enforce laws and regulations, and control foreign vessels entering their waters. This approach focuses on military power and using force to protect national interests. For example, states have used naval patrols and military interventions to combat piracy and protect their shipping lanes within and beyond their territorial waters..

However, this approach has limitations in addressing non-traditional threats to maritime security. For example, IUU fishing is a transboundary issue that requires cooperation and coordination among states. Similarly, piracy is a global phenomenon that affects all states, regardless of their territorial waters. In the Gulf of Aden, piracy has been embedded in the political economy of Somalia and state disintegration and is not merely a criminal act; therefore, a purely militaristic approach to combating piracy obscures the broad human (ins)security conditions that give rise to the scourge (Samatar, 2014).

There has been a shift towards a broader perspective on maritime security encompassing non-traditional threats in recent years. This shift is driven by a recognition that the ocean's health is critical to the well-being of all people and that non-state actors such as civil society organisations and the private sector have a role to play in addressing maritime security challenges (Bueger, 2015).

One example of this broader perspective is the concept of the blue economy, which emphasises the sustainable use of ocean resources for economic development. The blue economy recognises that the ocean is a source of food, energy, and minerals and that these resources can be harnessed to benefit both people and the environment (Bueger, 2015).

Another example is the growing recognition of the importance of marine biodiversity and ecosystem services. The United Nations Convention on Biological Diversity has set targets for protecting marine biodiversity, and there is increasing awareness of the role that healthy marine ecosystems play in mitigating climate change and providing other benefits such as coastal protection and tourism (United Nations Convention on Biodiversity (UNCB), 2010).



Therefore, this study adopts Walker's (2019: 2) definition of maritime security, "the prevention and absence of maritime crimes for African communities – both state and non-state – as well as enabling African communities to achieve greater levels of human security". This offers a holistic definition of human security which covers both extrinsic and intrinsic dimensions of maritime security with links to human security. Onouha (2020) argues that the intrinsic dimension of the maritime aims to maintain the innate completeness of the fundamental elements that constitute the maritime domain. Threats to this dimension encompass various factors, such as the deterioration of the natural state of the marine ecosystem due to the disposal of hazardous waste, contamination from oil exploration and shipping activities, and illegal, unreported, and unregulated fishing. The primary beneficiaries here are the local communities whose livelihoods are protected through the conservation and protection of ocean ecosystems. The extrinsic dimension of maritime security refers to external factors and influences impacting the maritime security environment (Onouha, 2020). In the African context, this can be illustrated by the recent Red Sea Crisis, where Houthi rebels have disrupted shipping traffic as part of an anti-Israel campaign during the Israel-Hamas war since November 2023 and was still happening at the time of writing (Vrey and Blaine, 2024). This situation led to the establishment of the multilateral Operation Prosperity Guardian, a security initiative led by the US, and the UK to counter Houthi attacks. This operation was mandated by UNSC Resolution 2722, passed on January 10, 2024, allowing international parties to protect their vessels by any means necessary while passing through this strategic chokepoint (Walker, 2024).

Maritime security mainly deals with criminal activities that happen across different countries, such as piracy, illegal dumping of waste, and smuggling of weapons through sea routes. There is also a growing concern about terrorism, especially after the 9/11 attacks. It is believed that non-state terrorist organisations use maritime travel to carry out global terrorist activities (Onouha, 2020). The primary threats to maritime security are piracy and terrorism, and the beneficiaries are states, state-owned multinational corporations, and shipping companies.

As a result, piracy has been seen as a key threat leading to the global securitisation of the maritime domain. This has led to maritime security framing in Africa favouring international shipping companies and foreign navies and interests at the expense of local communities and coastal states who struggle to secure their waters against non-traditional maritime security threats such as environmental threats stemming from pollution and IUU fishing (Okarfor-



Yarwood and Onouha, 2023). This phenomenon can also be seen in the Red Sea crisis as highlighted by (Vrey and Blaine, 2024) who argue that the escalating attacks on shipping in the Red Sea by the Houthi militia in Yemen have exposed the vulnerability of African maritime security, triggering profound economic and environmental consequences. (Vrey and Blaine, 2024) posit that the 133 reported incidents since November 2023, including vessel strikes and hijackings, disruptions have reverberated across global shipping routes. The threat extends beyond economic ramifications, with damage to subsea cables and pollution from debris exacerbating environmental degradation along Africa's Red Sea coastline. This insecurity not only disrupts trade and raises consumer prices but also threatens the livelihoods of millions, exacerbating food insecurity and economic fragility across the continent.

This view is also supported by an account by Willima (2024) that attacks on shipping traffic in the Red Sea have not only affected global shipping routes but have also had significant repercussions for Red Sea adjacent African states and those in the Western Indian Ocean region. As shipping traffic is rerouted away from the conflict zone, the absence of maritime safety infrastructure in the region raises concerns about environmental degradation and humanitarian consequences. Despite the clear environmental impact of the conflict evidenced by attacks on oil tankers causing pollution and most notably, the Belize flagged MV Rubymar which sank while carrying 21,000 metric tonnes of ammonium phosphate sulfate potentially damaging the Red Sea's reef ecosystem which provides food security and livelihoods for 28 million coastal inhabitants (Willima, 2024). While the waters are the battleground, the environmental and humanitarian underscore the urgent need for concerted international efforts that do not take into account the environmental and humanitarian aspects of war.

Further, the ocean faces numerous threats that undermine its ability to support human well-being, including overfishing, pollution, climate change, ocean acidification, and habitat destruction. (UN, 2017). Overfishing has led to depleted fish stocks and harmed people who rely on fishing for income and food security (FAO, 2018). Pollution, which includes plastic waste and chemical contaminants, harms both human health and the environment. (United Nations Environment Programme (UNEP), 2018). Climate change and ocean acidification are causing rising sea levels, ocean warming, and changes in ocean chemistry, which threaten marine ecosystems and the services they provide. (Intergovernmental Panel on Climate Change (IPCC), 2019).

Global ocean governance is becoming increasingly important as our oceans face various threats and challenges that impact human well-being as highlighted above. Bueger and Mallin (2023) emphasize the significance of ocean governance in addressing these issues. They highlight how the ocean supports human life by providing food, energy, and other resources, and by regulating the earth's climate and weather patterns. Effective ocean governance involves the collaborative management of ocean resources to ensure their sustainability and the protection of marine environments for the benefit of present and future generations. Bueger and Mallin (2023) argue that the new 'blue paradigms'—maritime security, blue economy, ocean health, and blue justice—have made the oceans a new area of priority. Each of these paradigms drives global ocean politics in different directions, highlighting the multifaceted nature of ocean governance. Maritime security focuses on the safety and stability of ocean use, the blue economy emphasizes sustainable economic growth, ocean health advocates for the protection and restoration of marine environments, and blue justice addresses the fair distribution of ocean resources and benefits. However, these different paradigms also imply risks of fragmentation and conflicts, necessitating a comprehensive and integrated approach to ocean governance to ensure cohesive and effective management of the world's oceans. This holistic approach is critical for maintaining the health of the oceans and the services they provide, which are essential for the survival and prosperity of human societies.

## **2.5. Challenges to Maritime Security**

The ocean is a vital stock and flow resource for the world's population, providing food, climate stability, energy, and transportation. However, the ocean is facing numerous challenges that threaten its security.

According to the Food and Agriculture Organisation (FAO), overfishing significantly challenges maritime security and health. The FAO (2016) reports that 34 per cent of fish stocks are overfished, and another 60 per cent are fully exploited. Overfishing threatens the sustainability of fish populations and affects the livelihoods of millions who depend on fishing for their income. Plastic pollution is another significant challenge to maritime security. The United Nations Environment Programme (UNEP, 2018) estimates that 8 million tons of plastic waste enter the ocean each year, causing harm to marine life and ecosystems. Pollution such as Toxins, eutrophication, acidification, oil, and sewage pollution also affects the health of people who rely on the ocean for food and recreation.

Climate change is also a significant challenge to maritime security. The Intergovernmental Panel on Climate Change (IPCC, 2019) reports that the ocean has absorbed 20-30 per cent of the carbon dioxide emitted by human activities, leading to ocean acidification. Climate change also affects ocean temperatures, sea level rise, and ocean currents, which can significantly impact marine ecosystems and coastal communities.

In Africa, the challenges to maritime security are particularly acute. According to the African Union (2019), Africa has one of the longest coastlines in the world; the continent has 16 landlocked countries that do not have direct ocean access. The other 39 accounts for 26,000 nautical miles and 13 million square kilometres of exclusive economic zones bordering the Mediterranean, Red Sea, Atlantic and Indian Oceans (Surbun, 2021). However, as indicated previously, African countries face numerous challenges to maritime security, including illegal fishing, piracy, and maritime terrorism.

According to the United Nations Office on Drugs and Crime (UNODC, 2018), the Gulf of Guinea, off the coast of West Africa, is one of the most dangerous regions in the world for piracy and armed robbery at sea. Piracy and armed robbery at sea in the Gulf of Guinea cost the region an estimated US\$ 818 million in 2017 (UNODC, 2018).

Illegal fishing is another significant challenge to maritime security in Africa. The FAO (2016) reports that illegal, unreported, and unregulated fishing accounts for up to 40 per cent of the fish caught in West Africa, costing the region an estimated US\$2.3 billion annually. Overall, Africa faces persistent maritime security threats such as piracy, armed robbery at sea, maritime terrorism, illegal oil bunkering, and other environmental crimes that degrade ocean health and contribute to the breakdown of good order at sea. The Gulf of Guinea alone accounted for over 95% of global kidnappings at sea in 2020, with 130 out of 135 seafarers kidnapped worldwide (International Maritime Bureau, 2021). Additionally, the region saw 35 piracy incidents in the first half of 2021, emphasising the ongoing threat (International Maritime Bureau, 2021). Illegal oil bunkering is another significant issue, with Nigeria losing an estimated \$1.5 billion annually to oil theft (Nwokoma, 2019), which also causes severe environmental damage through oil spills. Furthermore, maritime terrorism poses a substantial risk, with extremist groups like al-Shabaab in East Africa targeting port facilities and shipping routes to fund their operations (UNODC, 2020). These threats, along with other environmental crimes such as

habitat destruction and maritime wildlife trafficking, contribute to the broader concept of bad order at sea, underscoring the need for a comprehensive approach to maritime security to protect both human lives and the marine environment that will require a coordinated and sustained effort from governments, civil society, and the private sector.

This is particularly important in the WIO region, home to some of the world's most diverse and productive marine ecosystems, including coral reefs, mangroves, and seagrass beds. According to the WWF (2021), the region's coral reefs are home to over 1,700 species of fish and over 600 species of coral. This is corroborated by a report by the Indian Ocean Tuna Commission (IOTC), indicating that 30 per cent of tuna stocks in the Indian Ocean are overfished, and 60 per cent are fully exploited, partly due to IUU fishing by European vessels (IOTC, 2021).

Overfishing significantly threatens the region's marine biodiversity and food security. According to the Food and Agriculture Organisation (FAO), over 30 per cent of the region's fish stocks are overexploited, and another 50 per cent are fully exploited (FAO, 2020). Pollution is another major threat to the region's marine ecosystems and human health. According to the United Nations Environment Programme (UNEP, 2018), the region's coastal waters are heavily polluted with nutrients, sediment, and plastics.

The WIO region is also vulnerable to maritime security threats such as piracy, armed robbery, and. According to the International Maritime Bureau (IMB) (2020), the region accounted for 43 per cent of all reported piracy incidents in 2020. The region is also one of the busiest shipping routes via Africa, connecting the Far East to Europe. The region is not immune to the trafficking of drugs, arms, and people. The region's unique geography and climate dynamics make it susceptible to criminal activities, with localised trends observed in drug trafficking (Ummenhofer et al., 2009). Additionally, the smuggling of individuals, including refugees seeking safety and asylum, poses complex challenges along migration routes in the region (Mildenberger et al., 2018). The proliferation of firearms among criminal groups engaged in international smuggling contributes to increased criminal activities, impacting public safety (Willima and Ramachela, 2023).

Further, the region is particularly vulnerable to the impacts of climate change, including sea-level rise, ocean acidification, and coral bleaching. According to the Intergovernmental Panel on Climate Change (IPCC, 2021), sea-level rise in the region is projected to be higher than the global average, with significant implications for coastal infrastructure and human settlements.

Finally, the WIO region is characterised by high levels of poverty, unemployment, and inequality, which can exacerbate the impacts of ocean-related challenges such as overfishing, pollution, and climate change on coastal communities and their hinterlands. According to the World Bank (2020), the region has some of the highest poverty rates in the world, with over 60 per cent of the population living on less than US\$3.20 per day.

Addressing these notably interconnected challenges will require a broad and holistic approach to security anchored in ensuring that maritime security translates to the security of the 200 million people who depend on the ocean for their livelihoods in Africa, including 70 million in the WIO to reduce the impacts of climate change, food insecurity and poverty. Here, a human security-anchored approach to maritime security comes into play if the notion of clean and productive oceans for future generations is maintained.

## **2.6. Linking Human Security and Maritime Security**

The linkages between human security and maritime security are complex and multifaceted. The ocean plays a critical role in supporting human well-being, but the threats and challenges facing the ocean also pose risks to human security. A conceptual framework for linking human security and maritime security should recognise the interdependence of these two domains and the need for a holistic approach to addressing the challenges they pose.

Human security and maritime security are closely linked, as the well-being of individuals and communities depends on the ocean's health and sustainability. As highlighted above, a plethora of evidence supports the argument that the ocean provides food, livelihoods, and transportation for millions of people worldwide, and its resources are essential for economic development and growth. However, the ocean faces many non-traditional threats, which can significantly impact human security.

The concept of the blue economy, which refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and conservation of the marine environment (Bueger 2015) dovetails with human security's two domains of freedom from threats and want.

The term "blue economy" denotes a novel concept in global environmental governance, stemming from discussions at the 2012 UN Conference on Sustainable Development (Rio+20). It encompasses various perspectives on sustainable ocean resource management for economic development while preserving marine ecosystems (Silver et al., 2020).

The emergence of the blue economy is influenced by four competing discourses according to (Silver et al., 2020):

1. **Oceans as Natural Capital:** Viewing the ocean primarily as a source of economic wealth and advocating for the valuation and sustainable management of marine ecosystems.
2. **Oceans as Good Business:** Emphasizing the exploitation of ocean resources for commercial gain alongside sustainability measures, focusing on industries like maritime transport and tourism.
3. **Oceans as Integral to Pacific Small Island Developing States:** Recognising the ocean's significance for the livelihoods and cultures of small island nations, urging strategies to support their sustainable development.
4. **Oceans as Small-Scale Fisheries Livelihoods:** Prioritising the needs of small-scale fishers and coastal communities, advocating for policies that protect traditional fishing practices and promote equitable resource access.

Despite differing viewpoints, the blue economy aligns with Rio+20's theme of a "green economy." However, various stakeholders shape and define the term to reflect their priorities, challenges, and interests (Silver et al., 2020).

The blue economy's utility lies in integrating economic development with environmental sustainability, addressing challenges like overfishing and marine pollution. Engaging stakeholders and incorporating multiple discourses, facilitates policies promoting marine ecosystem health and community prosperity (Silver et al., 2020).

In Africa, the blue economy is particularly relevant due to the continent's extensive coastline and rich marine resources. Okafor (2020) notes that the African Union (AU) has developed a blue economy strategy to harness the potential of the ocean for economic growth and job creation while ensuring environmental sustainability. The United Nations Economic Commission for Africa (UNECA) has also identified the blue economy as a key driver of economic transformation and sustainable development in Africa.

The African Union (AU) has also recognised the potential of the blue economy for sustainable development in Africa. The AU's Agenda 2063 includes a focus on the blue economy as a means of promoting economic growth and social development in Africa. In 2015, the AU launched the African Integrated Maritime Strategy (AIMS) 2050 to promote sustainable development and security in Africa's maritime domain through the blue economy. The AIMS

2050 strategy includes a range of initiatives, such as promoting sustainable fisheries, developing maritime infrastructure, and enhancing maritime security and safety.

The AU Blue Economy Handbook and the 2019 AU Blue Economy Strategy constitute comprehensive frameworks aimed at sustainably harnessing Africa's maritime resources. The strategy delineates a multifaceted approach encompassing policy, governance, and investment to foster economic growth while conserving marine ecosystems. It underscores collaboration among African nations, regional bodies, and international partners to promote maritime security, sustainable fisheries management, marine biodiversity conservation, and equitable access to maritime resources. Additionally, the strategy identifies the five priority sectors of the blue economy: fisheries and aquaculture, maritime transport and connectivity, tourism and leisure, renewable energy, and marine biotechnology (AU, 2019). The handbook offers practical guidance on implementing these principles, providing tools for policy development, stakeholder engagement, and capacity building tailored to the diverse contexts of African coastal states. Through these initiatives, the AU aims to unlock the economic potential of Africa's vast ocean resources whilst ensuring their responsible utilisation for the benefit of present and future generations.

The AU Blue Economy Handbook and the 2019 AU Blue Economy Strategy are crucial frameworks for Africa's maritime development. However, their effectiveness depends on being implemented at national and regional levels to turn continental goals into real progress. Despite the importance of these initiatives, there have been challenges in implementation, and progress has not met expectations (African Development Bank, 2020). Therefore, it is important to make concerted efforts to adapt and integrate blue economy policies into local contexts, ensuring that they can be practically applied and have a sustainable impact on African coastal states.

The blue economy differs from the traditional ocean economy in that it seeks to balance economic growth with conservation and sustainability, which when realised, achieve environmental security, economic security, and other elements of Human Security. As Bueger (2015) explains, the blue economy approach recognises that the ocean is a finite resource that must be managed carefully to ensure its long-term viability. This requires a shift from the traditional extractive model of the ocean economy towards a more sustainable and inclusive approach that considers the needs of local communities and the environment.

(Attri & Bolher- Muller) Further add that sustainable ocean-based activities can drive economic growth, create employment opportunities, and alleviate poverty while addressing the challenges posed by climate change and environmental degradation. Additionally, the handbook highlights the importance of adopting innovative technologies and implementing



effective policies to ensure the conservation and responsible management of marine resources in the face of evolving environmental threats.

Okafor-Yarwood et al.'s (2020) analysis of the blue economy in Africa highlights the importance of ecosystem conservation and human security in achieving sustainable development in the ocean and coastal areas. The blue economy approach emphasises the need to balance economic development with environmental sustainability and social equity and recognises the interdependence of economic development, cultural livelihoods, and ecosystem conservation.

Ecosystem conservation is essential for maintaining the productivity and resilience of marine ecosystems, providing a range of ecosystem services essential for human well-being and sustainable development. These services include carbon sequestration, nutrient cycling, and coastal protection, which are critical for mitigating the impacts of climate change and protecting coastal communities from natural disasters (Okafor-Yarwood et al., 2020).

Furthermore, Okafor-Yarwood et al. (2020) highlight the importance of human security in achieving sustainable development in the ocean and coastal areas. Human security refers to protecting individuals and communities from threats to their well-being, including poverty, food insecurity, and environmental degradation. The blue economy approach recognises that economic development must be inclusive and equitable and prioritises coastal communities' needs and well-being.

To paint a more region-specific picture, Charak, Tantray, and Sudhakar (2023) delve into the multifaceted impact of non-traditional maritime security threats on human security in the WIO region. From instances of piracy to the looming spectre of maritime terrorism, the authors shed light on how these challenges extend beyond conventional military concerns. Through the lens of human security, the study illustrates the profound repercussions on the livelihoods of coastal communities, exemplified by the plight of fisherfolk whose sustenance is jeopardised by illegal fishing practices. (Charak, Tantray, and Sudhakar, 2023) thus advocate for a holistic strategy involving collaboration among governments, international bodies, and local stakeholders to address these issues and foster sustainable development. They stress the crucial role of effective governance mechanisms and regional cooperation in maintaining peace, stability, and prosperity in the WIO.



This scholarly analysis underscores the importance of acknowledging and tackling the human security implications of non-traditional maritime security threats to safeguard the well-being and economic stability of those residing in the WIO region.

## **2.7. Conceptual Framework for linking human security and maritime security**

The concept of human security can be incorporated into maritime security by recognising the interdependence between human well-being and the ocean's health. The ocean provides a range of ecosystem services that are essential for human survival and well-being, including food, livelihoods, climate regulation, and cultural values (IPCC, 2019).

Biermann and Boas (2010) argue that human security is a multidimensional concept that encompasses a range of issues, including economic, social, political, and environmental factors. They suggest that maritime security is an important component of human security, as it is closely linked to issues such as food security, livelihoods, and climate change that are essential elements of the notion of freedom from want and threat.

Chircop, Coffen-Smout, and McConnell (2013) highlight the importance of ocean governance in ensuring human security. They argue that effective governance of the oceans is essential for protecting the rights and well-being of coastal communities and ensuring sustainable use of marine resources. Ocean governance is crucial to attaining human security as it relates to the responsibility to protect citizens from threats such as environmental degradation and food insecurity.

Gjerde and Lang (2018) emphasise the importance of marine biodiversity in ensuring human security. They argue that the loss of ocean biodiversity can significantly impact food security, livelihoods, and the overall health of coastal communities.

The UN (Division of Ocean Affairs and Law of the Sea, 2011) advocates for the need for a rights-based approach to ocean governance that considers the needs and perspectives of coastal communities. They suggest that this approach should be based on principles of equity and participation. Leary et al. (2009) highlight the importance of adaptation to climate change in ensuring human security in coastal areas. They argue that effective adaptation strategies must consider human security's social, economic, and environmental dimensions.

Okafor-Yarwood et al (2020) emphasise the importance of community-based management approaches in ensuring the sustainable use of marine resources. She suggests that effective management of the oceans requires the participation and engagement of local communities and the development of institutional frameworks that support the sustainable use of marine resources.

Finally, the United Nations (2015) stress the importance of sustainable development in ensuring human security in coastal areas. They suggest that sustainable development requires a coordinated approach that considers the social, economic, and environmental dimensions of human security and the needs and perspectives of local communities.

Drawing from the above considerations and the discussion on the securitisation of maritime security, a conceptual framework for linking human security with maritime security is a complex and multifaceted area of research. Such a framework should incline towards a holistic approach to ocean governance that considers human security's social, economic, and environmental dimensions. Key human security elements linked to maritime include food security, livelihoods, environmental security, and sustainable development.

### **2.7.1. Environmental Security**

Environmental security means protecting the environment from various threats, including pollution, climate change, and overexploitation. The ocean is particularly vulnerable to environmental threats, with pollution and climate change significantly impacting the ocean's health. For example, plastic pollution in the ocean has reached alarming levels, with an estimated 8 million tons of plastic entering the ocean each year (Tekman, Walther, Peter, Gutow, and Bergmann, 2022). The impact of climate change on the ocean includes rising sea levels, ocean acidification, and changes in ocean currents, which have significant implications for the global ecosystem (Dahir and Willima, 2023).

### **2.7.2. Economic Security**

Economic security refers to protecting individuals and communities from economic threats, including poverty, unemployment, and economic instability. The ocean provides significant economic benefits to communities worldwide, with the global fishing industry alone employing over 59 million people (FAO, 2018). However, overfishing and pollution have significant implications for the ocean's economic potential. For example, overfishing has led to the depletion of fish stocks, with some estimates suggesting that the ocean could be depleted of fish by 2050 (Tekman et al., 2022).

### **2.7.3. Food Security**

Food security refers to the availability and access to sufficient, safe, and nutritious food. The ocean provides a significant food source for millions of people worldwide, particularly in developing countries. However, overfishing and pollution significantly affect the ocean's ability to provide food. For example, overfishing has led to the depletion of fish stocks, significantly impacting food security in many coastal communities (FAO, 2018).

Food security in the WIO region faces unique challenges, exacerbated by pollution, climate change, and criminal activities. For instance, pollution from industrial discharge, agricultural runoff, and plastic waste significantly affect marine ecosystems in this region. In places like the coast of Kenya, where urbanisation and industrialisation have intensified, pollutants enter coastal waters, contaminating seafood with heavy metals and toxins, posing health risks to consumers (WWF, 2019).

Climate change impacts are evident in the, with rising sea temperatures leading to coral bleaching events. In island states such as Seychelles and Madagascar, for example, coral reefs are vital for fish habitats and coastal protection. However, increased sea surface temperatures have caused widespread coral bleaching episodes, reducing fish biodiversity and threatening the livelihoods of local fishing communities (Cinner et al., 2018).

Criminal activities, including overfishing and illegal, unreported, and unregulated (IUU) fishing, further strain fish stocks in the region. The coastal waters of Somalia are notorious for pirate activities, which have disrupted fishing activities and hindered efforts to enforce fishing regulations. IUU fishing operations, often carried out by foreign vessels, undermine the sustainability of fisheries resources, impacting local communities' ability to access nutritious seafood (WWF, 2020).

#### **2.7.4. Health Security**

Health security entails safeguarding individuals and communities against health hazards, encompassing infectious diseases, environmental threats, and other health-related risks. The ocean plays a pivotal role in human health by supplying vital nutrients and sustaining the global ecosystem. However, pollution and climate change pose significant challenges to the ocean's well-being, with issues such as plastic pollution and ocean acidification profoundly impacting marine life and human health (Chircop et al., 2013). In the WIO region, for instance, the health of local populations is intricately linked to the ocean's condition. Pollution from coastal development, industrial activities, and shipping can contaminate seafood, leading to adverse health effects among communities that rely on marine resources for sustenance (Smith et al., 2016). This is evidenced by events such as the Wakashio oil spill in Mauritius. The spill resulted in severe ecological damage, harming marine life and threatening the health of local populations reliant on the ocean for sustenance (Swanpoel, 2020).

Rising sea temperatures and coral reef degradation threaten fisheries, disrupting food security and livelihoods for coastal populations (United Nations Environment Programme, 2019). Thus, addressing the nexus between ocean health and human well-being is essential for ensuring health security in coastal regions.

Moreover, the WIO region has seen increased shipping traffic as ships reroute from the Red Sea attacks by Houthi rebels. This poses a grave risk of oil spills due to a lack of maritime safety infrastructure and bad weather patterns, akin to the Wakashio incident (Willima, 2024). Such spills could have catastrophic consequences, endangering marine ecosystems and the health of coastal communities. Thus, addressing the nexus between ocean health and human well-being is paramount for ensuring health security in the face of escalating shipping activity and associated risks.

#### **2.7.5. Political Security**

Political security refers to protecting individuals and communities from political threats, including conflict, violence, and instability. The ocean is a critical component of global security, providing transportation, communication, and other essential services. However, terrorism, crime, overexploitation and pollution stemming from weak or absent security governance have significant implications for the ocean's resources, which could lead to conflict and instability in many coastal communities (Biermann and Boas, 2012).

## **2.8. Implications for Ocean Governance and Human Security.**

Unmitigated maritime insecurity is posing a serious threat to human security in Africa. This risk is not solely from the ocean itself but from the interplay of marine risks and stressors with socioeconomic, environmental, and political factors. A re-evaluation of ocean governance and diplomacy is necessary to mitigate these dangers, along with investments in regenerative blue economies, inclusive initiatives, and nature-positive programs. This will contribute to the sustainable governance of the oceans and advance human security.

Climate change exacerbates these challenges, with rising sea levels, ocean warming, and extreme weather events leading to increased vulnerability and insecurity for coastal communities. The Intergovernmental Panel on Climate Change (2019) predicts that sea levels could rise by up to 1.1 meters by the end of the 21st century, causing significant damage to coastal infrastructure and communities. Moreover, socio-economic, environmental, and political factors such as poverty, weak governance, and conflict can exacerbate the impacts of climate-related stressors on coastal communities. To address these challenges, it is necessary to take ocean action by investing in regenerative blue economy initiatives. According to the UNEP (2018), sustainable fisheries and aquaculture can provide food and livelihoods for millions of people in Africa while promoting environmental sustainability.

International collaboration is also crucial in addressing the insecurity of the ocean in Africa. The African Union's Agenda 2063 (AU, 2015) recognises the importance of sustainable ocean management and calls for increased cooperation among African countries to address ocean-related challenges. The United Nations' Sustainable Development Goal 14 also emphasises the need for international cooperation to conserve and sustainably use the ocean and its resources. A holistic approach to maritime governance is becoming important on the global agenda, as demonstrated by UN member states' adoption of the treaty to protect biodiversity in areas beyond national jurisdiction in June 2023 (Kanu, 2023). Reva and Willima (2023) argue the new agreement promoting a rules-based environment for the High Seas shows promise in addressing the impact of human activities, scarcity of marine resources, higher weather risks, and maritime crime.

The High Seas Treaty marks a change in international law from the *mare liberum* (freedom of the seas) principle that has been in place for a long time towards collective responsibility for the global commons (Reva and Willima, 2023). Prior to the treaty the idea of 'free seas' implied that they could be used without any regulations. However, the current treaty demonstrates that nations understand the importance of working together to safeguard the 'common heritage of humankind' for the benefit of current and future generations, as outlined in the UN Convention on the Law of the Sea (UNCLOS, 1982).

## **2.9. Conclusion**

Human security is a complex concept that oscillates between narrow and broad definitions. However, at its core, human security is about securing the safety of human life. This study chapter followed a broad definition of human security as espoused by Owen (2004), which considers the environmental, political, social and health aspects of human security and links these to maritime security to develop an ocean-centred conceptual framework of human security. The conceptual framework for linking human security and maritime security provides a useful tool for understanding the interdependence of these two domains and the need for a holistic approach to addressing the challenges they pose. By recognising the linkages between human security and maritime security, policymakers and practitioners can develop more effective strategies for promoting sustainable development and protecting human well-being.

## **Chapter 3: The Great Blue Wall Initiative: Enhancing Governance and Human Security in the Western Indian Ocean Region**

### **3.1. Introduction**

This chapter aims to zoom in and explore the significance of the WIO region, particularly in the context of the GBW initiative. The GBW was introduced as a collaborative approach among WIO countries in their shared maritime domain by delving into the background of the initiative, its stakeholders, target industries and policy orientation, governance structure, policy framework, and coordination mechanisms. This chapter, therefore, aims to provide a comprehensive overview of the significance of the Western Indian Ocean region, the inception of the Great Blue Wall Initiative, and its key milestones.

### **3.1.1. State of play in the Western Indian Ocean Region**

The WIO region is relatively less affected by human activities than other parts of the world's oceans (Halpern, Walbridge, Selkoe, Kappel, Micheli, D'Agrosa and Fujita 2008; Stojanovic and Farmer, 2013). However, many people in the region who depend on the ocean for their livelihoods are experiencing increasing economic challenges due to the deterioration of their resource foundation. This is mainly due to the rising demands from infrastructure development, extractive industries and population growth.

For example, the FAO estimates that approximately 33 per cent of global fish stocks are overfished (FAO, 2020). In the WIO region specifically, a report by WWF states that overfishing is a significant problem, with 55 per cent of fish stocks being fully exploited and 30 per cent being overexploited (WWF, 2015). The region is also heavily affected by plastic pollution. The United Nations Environmental Programme estimated that the region contributes around 11 per cent of global marine plastic pollution (UNEP, 2016). The UNEP reports that approximately 8 million tons of plastic waste enter the oceans yearly, with a significant portion coming from coastal states bordering the Western Indian Ocean region (UNEP, 2016).

Incidences such as the Wakashio oil spill that occurred in July 2020 off the coast of Mauritius in the Western Indian Ocean have worsened the pollution reality. The bulk carrier ship, Wakashio, ran aground and leaked approximately 1,000 tons of oil into the ocean (BBC, 2020). The oil spill devastated the marine ecosystem, including coral reefs, mangroves, and marine wildlife. It also impacted local communities that rely on fishing and tourism (UNEP, 2020).

The situation is becoming increasingly dire as the region is experiencing a rise in sea levels, resulting in more frequent flooding events. According to the Intergovernmental Panel on Climate Change (IPCC, 2022), sea levels in the region have risen by an average of 2.3 mm per year between 1993 and 2010. A study published in the Nature Climate Change journal revealed that the frequency of extreme sea level events has increased in the WIO region, particularly along the coasts of East Africa (Vousdoukas, Mentaschi, Voukouvalas, Verlaan, Jevrejeva, Jackson and Feyen, 2018). This has resulted in flooding, coastal inundation and degradation in the region.

A study conducted by Obura and Samoilys (2021: 4-9) confirms that the condition of the ocean is worsening. The study examined 11 subregions within the WIO and revealed that four of them are in a "critically endangered" state (being?), meaning that they are on the verge of collapse. Due to projected climate change within the next 50 years, three subregions (being?) were categorised as "endangered," while four subregions (being?) were determined to be "vulnerable" to collapse due to overfishing over the past 50 years. As a result, all the reefs in the western Indian Ocean are at risk of collapsing. The Great Blue Wall Initiative was established to recognise this region's urgent need for conservation and sustainable management.

### **3.1.2. Significance of the Western Indian Ocean Region**

The WIO region's ten African countries are Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa, Tanzania, and France (because of its overseas departments of Mayotte and Reunion islands). Five of these are located on the mainland, while four are small island states (Nairobi Convention, 2023). Below is a map (figure 1) of the WIO adapted from Mwachireya, Ndagala, Mattan-Moorgawa, Sushma, Ali, Hutheifa, Randrianandrasana, Kimirei, Ismael, Vishwakalyan and Bhoyroo. (2018):





**Figure 1: Map of WIO (adapted from Mwachireya et al., 2018)**

The region's projected population is estimated to be 220 million, out of which circa 25 per cent (70 million) reside within a 100km radius of the coastline. Many countries in this area have a long-standing history of fishing, maritime trade, and exploiting marine resources for centuries. However, due to the rapid increase in population and significant geopolitical and cultural changes in the past five decades, the ocean's traditional practices and ancient norms have been weakened (Western Indian Ocean Marine Science Association (WIOMSA), 2021).

### **3.1.3. Geostrategic and military significance**

The WIO holds significant strategic importance for Africa and the world, particularly regarding economics, security and geopolitics. According to Otto (2020: 4), geography plays a crucial role in the strategic thinking of countries. From this perspective, the sea serves as a geostrategic area for countries to pursue their interests. This is true for the WIO where the region's seascapes are essential for international trade. The Bab El-Mandeb Strait connects the Mediterranean and the Red Sea with the Gulf of Aden and the Arabian Sea in the Indian Ocean. Along with the

Strait of Hormuz, this strait serves as a transit route for oil and natural gas exports from the Persian Gulf to the Suez Canal (Willima and Ramachela, 2023)

The WIO is one of the world's busiest trade routes, with 25 per cent of global maritime traffic carried through the region's seascapes, and more than half of the world's sea-borne oil giving it strategic economic significance (Ministère des Armées, 2016). However, the region is also vulnerable to maritime crimes due to the fragility of the states surrounding it. According to the 2023 Fragile States Index, several countries in the region, including Somalia and Yemen, rank among the most fragile states globally, with Somalia scoring 111.9 and Yemen scoring 108.9 on the index (1<sup>st</sup> and 2<sup>nd</sup> highest globally), highlighting their vulnerability and the associated risks of maritime crime (Fund for Peace, 2023). States, independently and in partnerships, have been compelled by maritime threats like piracy to carry out military operations and establish a maritime corridor to protect commercial fleets (Maritime Security Transit Corridor, 2020).

Over the years, several foreign military initiatives aimed at enhancing maritime security have been established within the region. One notable initiative is Operation Atalanta, led by the European Union (EU) which was launched in 2008 to combat piracy off the coast of Somalia. It involves naval forces from various EU member states and contributions from other countries such as the United States, China, and India. The operation focuses on escorting merchant vessels, conducting patrols, and apprehending pirates. It has expanded its mandate to fight other forms of maritime crime, such as the trafficking of arms and drugs, according to the UN Convention on the Law of the Sea, Vienna 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, UNSCR 2662 (2022) on the Weapons Embargo and Charcoal Exports on Somalia (EU, 2022).

Several countries have established naval bases in the region. Djibouti is a significant location due to its hosting of military bases from several countries, including the United States, France, China, and Japan. In Djibouti, the United States has Camp Lemonnier, a major military hub for its regional operations, including counterterrorism efforts and maritime security (Walker and Reva, 2022). Additionally, the United Kingdom has a strategic base in Diego Garcia, part of the British Indian Ocean Territory and has leased it to the U.S. and hosts a major U.S. military base. The United States established a naval support facility on the island during the Cold War, and it has since been used for various military operations and activities (Bueger and Stockbruegger, 2022). Melvin (2019) adds that the WIO hosts a significant foreign naval

presence. This includes the French Naval Forces, which maintain a presence in their Indian Ocean overseas territories, such as Réunion and Mayotte, and operate bases in Djibouti. Similarly, Italian naval forces also maintain a presence in Djibouti. The Indian Naval Forces are increasingly active in the region, and Russian naval forces have shown interest and conducted sporadic deployments. Additionally, the European Union Naval Force (EUNAVFOR) conducts anti-piracy operations, known as Operation Atalanta, based out of Djibouti.

However, it is worth noting that there has been a maritime delimitation case between Mauritius and the United Kingdom (which administers Diego Garcia) at the International Court of Justice (ICJ, 2019). The case revolves around the legality of the UK's claim to sovereignty over the Chagos Archipelago, which includes Diego Garcia. While the ICJ ruled in favour of Mauritius in 2019, the implications of the ruling for the presence and operations of the U.S. military on the island are yet to unfold at the time of writing, as London still contends that it has sovereignty over Chagos.

The presence of foreign naval bases and military initiatives in the WIO has undoubtedly contributed to reducing piracy incidents in the region. However, as Walker and Reva (2022) argue, this strictly militaristic approach does not reflect the evolving security realities of the region and further reinforces the conditions that create maritime crime. This argument is supported by Bueger and Stockbruegger (2022), who discuss the role of regional organisations such as the Indian Ocean Rim Association (IORA) and the AU, as well as the involvement of external powers like the United States, China, and India. The authors argue that while these actors have contributed to enhancing maritime security, their military presence raises concerns about potential militarisation and regional power struggles.

Bueger and Stockbruegger (2022) further explore the implications of militarisation in the WIO, highlighting the risks of an arms race, increased tensions, and the potential for unintended escalation of, for instance, The Quadrilateral Security Dialogue (QUAD) that was established by the United States, India, Australia, and Japan after the 2004 Indian Ocean tsunami became a more formalised grouping by 2021 to counter China's influence in the Indo-Pacific region, which includes Indian and Pacific Ocean littoral states. The QUAD members also discuss the impact maritime insecurity on regional stability, economic development, and the environment,

emphasising the need for a balanced approach that combines military capabilities with diplomatic efforts, regional cooperation, and sustainable development initiatives.

#### **3.1.4. Economic value of marine resources in the WIO**

The WIO region is home to a rich array of marine biodiversity, including coral reefs, seagrass beds, mangroves, and various marine species. These ecosystems provide numerous services, such as coastal protection, carbon sequestration, and fisheries resources, which are crucial for the well-being of both local communities and global populations. The region has a minimum ocean asset base worth US\$333.8 billion. The "gross marine product", or the annual economic output of all sectors related to the sea of this region, is valued at a minimum of US\$20.8 billion. (Obura, Gudka, Rabi, Gian, Bijoux, Freed, Maharavo, Mwaura, Porter, Sola and Wickel, 2017).

The economic value of the ocean is determined by the various outputs it generates, including fisheries, marine tourism, and benefits associated with the coasts, such as carbon sequestration. Among these, coastal and marine tourism is the most profitable, accounting for 69 per cent of the total ocean output. Carbon sequestration and fisheries account for 14 per cent (US\$2.9 billion) and 9 per cent (US\$1.9 billion) of the gross marine output, respectively (Obura et al., 2017). It is worth noting that the figures presented here only account for the tangible benefits of the WIO. The WIO also plays a critical role in regulating the climate, producing oxygen, and enriching our spiritual and cultural lives, which are difficult to quantify. Furthermore, activities like subsistence fishing that do not involve commercial transactions, but represent an existential activity to communities cannot be accurately valued in monetary terms. Therefore, the numbers provided in this paper are conservative estimates.

#### **3.1.5. Importance to the sustainable development agenda**

This geographical area also holds significant importance as a pivotal arena for validating and implementing strategies to attain sustainable development within maritime regions. The UN has multiple agreements to assess the ocean's linkages to sustainable development, including the Aichi Biodiversity Targets under the Convention for Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, the United Nations Convention on the Law of the Sea, and the World Trade Organisation

(WTO) Fisheries Subsidies Agreement and UN Sustainable development goals acknowledge the significance of the ocean in attaining sustainable development and mitigating climate change. Specifically, SDG 14 (Life below water) aims to preserve and responsibly utilise oceans, seas, and marine resources to achieve sustainable development measured by way of the ten targets and outcomes as outlines by (UNDESA, 2023):

1. **Target 14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution.
  - **Outcome:** Reduced levels of marine debris and pollutants, leading to healthier marine ecosystems and biodiversity.
2. **Target 14.2:** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration to achieve healthy and productive oceans.
  - **Outcome:** Enhanced resilience and restoration of marine and coastal ecosystems, contributing to biodiversity conservation and sustainable use of marine resources.
3. **Target 14.3:** Minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
  - **Outcome:** Reduced rate of ocean acidification and improved scientific understanding to mitigate its effects.
4. **Target 14.4:** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported, and unregulated fishing and destructive fishing practices, and implement science-based management plans to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
  - **Outcome:** Sustainable fish stocks and marine ecosystems, ensuring long-term viability of fisheries.
5. **Target 14.5:** By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
  - **Outcome:** Protected marine areas covering at least 10% of the oceans, preserving biodiversity and ecosystem services.
6. **Target 14.6:** By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognising



that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

- **Outcome:** Reduced harmful fisheries subsidies, leading to more sustainable fishing practices.
7. **Target 14.7:** By 2030, increase the economic benefits to Small Island Developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.
    - **Outcome:** Enhanced economic benefits from marine resources for Small Island Developing States (SIDS) and least developed countries.
  8. **Target 14.a:** Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, to improve ocean health and enhance the contribution of marine biodiversity to the development of developing countries, in particular, Small Island Developing States and least developed countries.
    - **Outcome:** Improved scientific knowledge and marine technology transfer, enhancing ocean health and marine biodiversity contributions.
  9. **Target 14.b:** Provide access for small-scale artisanal fishers to marine resources and markets.
    - **Outcome:** Greater access to marine resources and markets for small-scale artisanal fishers, promoting their economic well-being and sustainable fishing practices.
  10. **Target 14.c:** Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources.
    - **Outcome:** Strengthened implementation of international laws for the conservation and sustainable use of ocean resources.

While these goals, mostly set to be met by 2020, have not yet been fully achieved, the success of the GBW initiative should still, partly be measured against the extent to which it can achieve most of these targets by 2030. By aligning its efforts with the SDG 14 targets, the initiative can

ensure that its actions contribute effectively to the health and sustainability of ocean ecosystems, ultimately benefiting both marine life and human communities.

Further, among other things, SDG14 relates to and positively affects other SDGs (Cernev and Fenner, 2020; David, 2017), highlighting the importance of a thriving ocean for our environment and our well-being (Ntona and Morgera, 2018; Singh et al., 2018). According to a study by the High-Level Panel for a Sustainable Ocean Economy, authored by Hoegh-Guldberg and Northrop (2023), ocean-based climate solutions could contribute up to 35 per cent of the annual reduction of greenhouse gas emissions (SDG 13) required by 2050 to limit global temperature rise to 1.5°C. This is a significant increase from earlier predictions of 21 per cent. This 2023 study reinforces the importance of ocean-based solutions in addressing climate change.

However, Willima (2023) argues that while increased attention has focused on maintaining healthy seas and the interlinkages of a healthy ocean towards a sustainable future, it has not translated into effective action and programmes to counter the ocean's degrading condition. This has resulted in the prevalence of 'seablindness'- a phenomenon describing a lack of awareness of the importance of the oceans among both policymakers and the public at large which too often, leads to the oceans' importance to development being a low policy priority (Walker, 2015; Martin, 2019).

The 'seablindness' thesis is supported by the most recent UN Sustainable Development progress report (United Nations Department of Economic and Social Affairs (UNDESA), 2023), which finds that, at the halfway mark (2023) of the UN's Agenda 2030 for sustainable development, SDG 14 remains the least funded SDG with just 3.5 per cent of total SDG financing allocated to it, and approximately only 0.01 per cent or US\$ 980 million of climate finance going toward ocean-based solutions relative to US\$23 billion for terrestrial solutions, according to (UNDESA, 2023).

Further, according to the Marine Conservation Institute (2020), only eight per cent of the world's territorial waters (39 per cent of the ocean) are under legal protection - a far cry from achieving the SDG target of 14.5 and the Aichi target of 11, both of which aimed to conserve at least 10 per cent of coastal and marine areas through Marine Protected Areas (MPAs) and other effective area-based conservation measures by 2020. Mongabay (2021) report that only

about 8% of the WIO marine area is under legal protection through MPAs. Of that, only around 3% is considered "fully or highly" protected from fishing impacts (Mongabay, 2021).

In years subsequent to the 2015 SDGs, there has been a heightened sense of urgency for the conservation of marine areas on a large scale. In 2022, the Kunming-Montreal Global Biodiversity Framework (GBF) was adopted off the back of collaboration between UN member states, organisations, academia, and faith-based groups to combat biodiversity loss and its impact on the environment and human health (GBF, 2022). The GBF aims to address the ongoing decline of biodiversity and its potential harm to the environment and human health. The goal is to restore 30 per cent of degraded terrestrial and coastal marine ecosystems to enhance biodiversity and improve ecosystem functions, services, ecological integrity, and connectivity. The GBF acknowledges the ocean's contribution in limiting the global average temperature increase to 1.5 degrees Celsius. This reduction has a positive effect on preserving the biodiversity of the sea and the livelihoods of those who depend on it, and it calls for international cooperation for the conservation and sustainable use of the oceans.

Effective ocean management needs to be scaled up at an unprecedented level to achieve ambitious global goals such as establishing a GBW in the WIO. The Seascape approach is one such way that enables the protection and management of the ocean and coast at a large scale (Murphy, Farmer, Katz, Troëng, Henderson, Erdmann, Corrigan, Gold, Lavoie, Quesada, Díazgranados and Cadelo, 2021). Seascapes are "large, multiple-use marine areas, defined scientifically and strategically, in which government authorities, private organisations, and other stakeholders cooperate to conserve the diversity and abundance of marine life and to promote human well-being" (Atkinson, Esters, Farmer, Lawrence, and McGilvray, 2011: 24). Murphy et al. (2021) further describe the Seascape approach as a practical framework for implementing Ecosystem-Based Management (EBM) practices. This is an essential step towards achieving long-term marine conservation (Foley et al., 2010) and meeting the human security needs of coastal populations.

In conclusion, the utilisation of ocean resources for sustainable development and human well-being is of utmost importance. The oceans cover more than 70 per cent of the Earth's surface and play a crucial role in regulating the climate, providing food, supporting livelihoods, and offering numerous economic opportunities. However, the increasing pressures on the oceans and ocean grabbing through overfishing and limiting access to marine resources alongside



pollution, and climate change, pose significant threats to the health and the well-being of both marine ecosystems and human societies.

Harnessing the potential of the sustainable use of ocean resources can ensure the long-term viability of these ecosystems through the seascape approach and secure the well-being of present and future generations. Sustainable practices, such as responsible fishing, marine protected areas, and the development of renewable energy sources, can help mitigate the negative impacts on the oceans and promote their resilience. Furthermore, the sustainable use of ocean resources can contribute to economic growth and poverty reduction. The oceans offer immense opportunities for industries such as fisheries, aquaculture, tourism, and renewable energy, which can generate employment and income for coastal communities. Increasing investments in sustainable ocean-based industries can create a blue economy that balances economic growth with environmental protection.

### **3.2. The Great Blue Wall Initiative**

Despite the WIO's rich marine ecosystem and ocean assets, the region is also beset with challenges emanating from the unsustainable use of marine resources such as illegal unregulated and unreported (IUU) fishing, pollution from oil spills, shipping??, dumping of plastic and chemical waste and destructive extractive activities like sand mining and causing significant damage to the health of the ocean and exacerbated by climate change effects such as coastal flooding due to rising sea levels.

This deteriorating state of the ocean is consistent with the findings of a study by (Obura and Samoilys, 2021) on the vulnerability of coral reefs in the WIO. The study found that reefs in four of the 11 subregions of the WIO were "critically endangered" and on the verge of collapsing, three subregions were "endangered" due to predicted climate change in the next 50 years, and four were "vulnerable" to collapse due to the effects of overfishing over the previous 50 years. The indicators referring specifically to the condition of the reefs within the subregions suggest that none of the reefs in the WIO were deemed immune from the vagaries of degeneration without urgent action to restore them.

Further, in 2023, the oceans had their hottest-ever ocean temperatures at 20.96°C (69.73F) (Washington Post, 2023), meaning that temperatures are high enough to destroy coral reefs and

cause sea level rise (IUCN, 2023). The impact of rising temperatures on marine life and the food security of coastal communities is significant and concerning. As the ocean temperatures continue to increase, it leads to changes in the distribution of marine species, decreased abundance of certain fish stocks, and a rise in ocean acidity (IUCN, 2021). This directly impacts the livelihoods of coastal communities that rely on fishing as a primary source of food and income. Additionally, rising sea levels due to climate change have increased erosion, loss of coastal habitats, and higher frequency and severity of coastal flooding. This has put many coastal communities at risk of being displaced and inundated, further impacting their food security and overall well-being (Dahir and Willima, 2023).

This study argues that the reciprocal influence between the ocean and human security is discernible at a global level and in the WIO. Over time, inadequate governance of marine resources has contributed to climate change, yet the converse also holds. It is crucial to undertake tangible measures to protect, rehabilitate, and sustainably govern marine ecosystems. This is expected to enhance the ocean's capacity to mitigate climate change, facilitate adaptation, and enhance societal resilience.

Against this background and in response to climate change impacts in the region, WIO nations collaborated on establishing the "Great Blue Wall" of MPAs to enhance climate adaptation. States such as Seychelles utilise tools like the 'blue bond' for innovative financing; the initiative promotes investments in the blue economy for ocean restoration, biodiversity protection, and sustainable economic practices.

According to IUCN (2021), the GBW aims to establish equitable seascape governance to protect 30 per cent of oceans in the WIO by 2030. This would be realised through a series of efforts, including empowering local communities, scaling nature-based solutions for ecosystem preservation, and promoting a regenerative blue economy through entrepreneurship. These objectives promise sustainable blue economies, marine biodiversity conservation, and increased climate resilience for coastal communities.

The Great Blue Wall Initiative covers a vast expanse of the Western Indian Ocean, encompassing the coastal and marine areas of the previously mentioned ten WIO countries. The total area covered by this initiative is approximately 2.5 million square kilometres (UNEP, 2015). This ocean region is characterised by diverse ecosystems, including coral reefs,

mangroves, seagrass beds, and deep-sea habitats all of which seem to require protection from further degradation.

The Great Blue Wall Initiative in the WIO region is a collaborative effort to promote sustainable marine and coastal resource management, biodiversity conservation, and climate change adaptation. The initiative was officially launched at the 26th United Nations Climate Change Conference (COP 26) in Glasgow by the International Union for Conservation of Nature (IUCN) and the ten WIO countries, namely Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, Tanzania, and South Africa (IUCN, 2021).

### 3.2.1. Objectives of the GBW Initiative

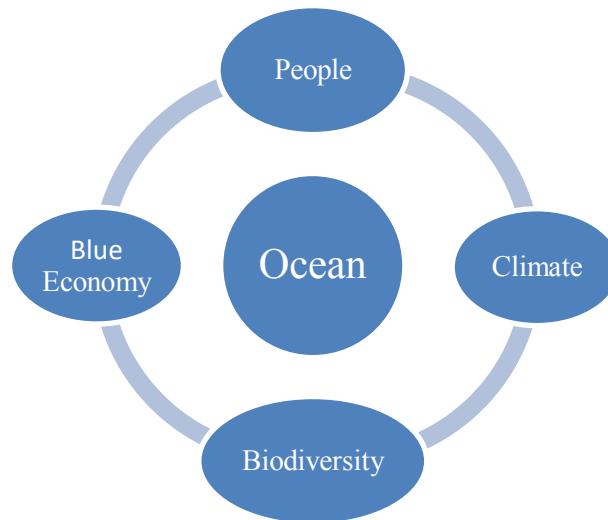
The main objective of the GBW initiative is to strengthen conservation efforts and promote the creation of a sustainable blue economy that enables nature-based recovery activities. The initiative encourages political leadership and secure financial support through innovative financial instruments such as the Blue Bond (IUCN, 2021). Pivotal to these efforts will be blue ecosystems, such as mangroves, seagrass, and corals, which the initiative targets to preserve and rehabilitate to create seascapes linked by a vibrant blue barrier, forming a regional ecological corridor (GBW, 2021).

To achieve this, the GBW initiative aims to enhance the resilience of marine and coastal ecosystems in the WIO region by promoting integrated ocean governance and sustainable development to address the three interrelated crises of biodiversity loss, climate change, and economic decline (GBW, 2023). The GBW aims to do this at three levels:

- **Biodiversity:** The objective is to protect 2 million square kilometres (30 per cent of the WIO) equitably and efficiently by 2030 while assisting at a Pan-African scale to achieve complementary outcomes such as climate change mitigation and adaptation and livelihood diversification.
- **Climate Action:** The Great Blue Wall aims to conserve and restore over 2 million hectares of vital blue ecosystems by 2030, relative to 2020, to achieve a net gain guided by a roadmap of Zero Net Loss of Nature from 2020, achieving Net Positive status by

2030, and Full Recovery of marine ecosystems by 2050. It also targets sequestering over 100 million tonnes of carbon by 2030.

- **Blue Economy:** To manage the interconnected network effectively, indigenous people and local communities will play a crucial role. They will receive assistance in utilizing natural resources responsibly and deriving benefits from them.



**Figure 2: Objectives Great Blue Wall Initiative**

The researcher developed figure 2 above to illustrate the objectives of the GBW initiative placing the ocean at the centre of human well-being, blue economy growth, climate action, and biodiversity.

Collectively, these goals aim to improve the livelihoods of coastal communities, enhance food and water security, and safeguard the region's rich biodiversity. The initiative seeks to achieve these objectives through collaborative and integrated approaches involving various stakeholders, including governments, non-governmental organisations, local communities, the private sector, and academia (IUCN, 2021).

### 3.3. Target Industries and Policy Orientation

For the GBW to effectively achieve its ecosystem restoration and climate action goals while advancing the blue economy, it is important to prioritise investments in sectors that do not

damage ocean health. This section details the various sectors that are included in the GBW framework.

### **3.3.1. Identification of Target Industries**

The initiative focuses on key industries and activities impacting marine and coastal environments, including fisheries, tourism, shipping, and offshore oil and gas exploration. To achieve its objectives, the initiative calls for adopting and implementing policies and regulations that promote sustainable practices in these industries, such as sustainable fisheries management, marine spatial planning, establishing marine protected areas, and scaling of blue entrepreneurship in the WIO region.

In March 2023, a group of GBW stakeholders, including IUCN, UNECA, Friends of the Ocean Action, Western Indian Ocean Marine Science Association (WIOMSA), and Ocean Hub Africa, launched the Great Blue Wall challenge. This challenge was aimed at youth-led ocean-positive start-ups and social enterprises that contribute to the sustainability and resilience of the Western Indian Ocean. The challenge aligns with the Great Blue Wall Initiative and seeks to benefit both people and nature by providing financial support to seven start-ups. Further, UNECA (2023) identifies the following sectors as being critical to the implementation of the GBW:

#### **3.3.1.1. Fisheries and Aquaculture**

The fisheries and aquaculture sector plays a vital role in the Great Blue Wall Initiative. It involves managing marine resources sustainably, ensuring the long-term survival of fish stocks, and promoting responsible fishing practices. This study argues that this is essential for ensuring food security through the establishment of marine protected areas, the enforcement of fishing quotas, and the promotion of sustainable fishing techniques.

#### **3.3.1.2. Tourism and Coastal Development**

Tourism and coastal development are integral components of the GBW Initiative. FAO (2022) underscores that this sector has the potential to generate economic growth, create employment

opportunities, and raise awareness about marine conservation. However, it also poses significant challenges, such as habitat destruction, pollution, and overexploitation of natural resources.

The GBW initiative emphasises responsible planning and management to ensure sustainable tourism and coastal development. This includes the implementation of zoning regulations, the promotion of eco-friendly practices, and the development of sustainable tourism infrastructure (Okafor-Yarwood, 2020). By integrating conservation principles such as social inclusion ecosystem integrity and resilience into tourism activities, the sector can contribute to preserving coastal ecosystems and enhancing local communities' well-being.

### **3.3.1.3. Maritime Transport and Infrastructure**

Maritime transport and infrastructure are vital for the success of the GBWI against the background of increased productivity and trade among WIO countries due to the development of the blue economy and within the context of the African Continental Free Trade Agreement (AfCFTA), a historic initiative launched in 2021 to create a single market for goods and services across the African continent. The deal created an enormous single market, uniting 1.2 billion people across 54 states with a combined GDP of US\$3.4 trillion (AU, 2021).

AfCFTA aims to promote the expansion of intra-Africa trade, contributing to sustainable development, and the maritime sector through developed port infrastructure is poised to contribute significantly. This sector facilitates the movement of goods, services, and people, contributing to economic development and international trade. However, it also poses environmental risks, such as oil spills, pollution, and habitat degradation.

Swanepoel (2020) posits that to mitigate these risks, the initiative emphasises the importance of sustainable maritime transport and infrastructure development. This includes the adoption of cleaner technologies, the implementation of waste management systems, and the establishment of protected shipping lanes and safety standards.

### **3.4 Governance of the Great Blue Wall Initiative**

The Great Blue Wall Initiative has garnered significant political buy-in at both national and regional levels. It has received high-level endorsement at the AU level through the Comoros chairmanship of the AU and the Moroni Declaration and processes (UNECA, 2023). As the chair of the AU (2023-2024), the Comoros (an island state in the WIO) has been playing a crucial role in advocating for the initiative and mobilising support from other African countries. According to Adewumi (2023), the Comoros chairmanship has since provided a platform for raising awareness about the importance of marine conservation and sustainable development in Africa.

#### **3.4.1. High-level Endorsement and Institutional Framework**

In June 2023, the AU, in recognition of the vital role that the blue economy can play in the African continent's contribution to climate action, economic transformation, innovation, and socio-economic development, convened a ministerial conference under the patronage of the Comorian presidency of the African Union on "The Blue Economy and Climate Action in Africa: Island and Coastal States at the Forefront" with a focus on the Great Blue Wall initiative. This conference integrated expert sessions and a high-level segment convened by the AUC, the United Nations Economic Commission for Africa (UNECA), the International Union for Conservation of Nature (IUCN), the Indian Ocean Commission (IOC), the United Nations Development Programme (UNDP), the Institute for Security Studies and culminated in the Moroni Declaration that underlined the leadership of African island states on African ocean action for climate and blue economy development, and on the other hand, confirmed political support for the Great Blue Wall initiative and its operational roadmap (UNECA, 2023).

Therefore, this study contends that the Moroni Declaration reaffirms the commitment of African countries to the conservation and sustainable use of marine resources, recognises the significance of the GBW in achieving these goals and calls for increased collaboration among African countries to address common challenges in the marine sector. In Particular, article (g) states that "We encourage all regional and international stakeholders to align with already existing regional frameworks, institutions, networks, programmes, and projects in the Western Indian Ocean to build synergies and contribute to the achievement of the objectives of the Great Blue Wall initiative" (UNECA, 2023: 2).

This was followed by the Nairobi Declaration (Africa Development Bank Group, 2023) on Sustainable Blue Economy in Africa- an outcome of the inaugural Africa Climate Summit held in Nairobi, Kenya in September 2023, further underscoring the importance of integrated ocean governance and sustainable development in the WIO region. Section 37 of the Nairobi declares to “ Promote regenerative blue economy and support the implementation of the Moroni Declaration for Ocean and Climate Action in Africa, and the Great Blue Wall Initiative, whilst recognising the circumstances of Africa's Island States” (Africa Development Bank Group, 2023:6). These political declarations have paved the way for developing and implementing policies and strategies that align with the objectives of the Great Blue Wall Initiative (AUC, 2023). Table 1 provides a summary of the timeline for the implementation of the GBW strategy.

Year	Activity
2021	<p data-bbox="325 889 435 920"><b>Launch</b></p> <ul data-bbox="373 969 1409 1115" style="list-style-type: none"> <li data-bbox="373 969 1409 1115">• In November 2021, Western Indian Ocean states and partners, such as the International Union for Conservation of Nature (IUCN), launched the Great Blue Wall initiative at UNFCCC COP26 in Glasgow.</li> </ul>
2022	<p data-bbox="325 1167 707 1198"><b>Strengthening Partnerships</b></p> <ul data-bbox="373 1247 1409 1554" style="list-style-type: none"> <li data-bbox="373 1247 1409 1554">• IUCN signed a EUR 3M contract with the French Facility for Global Environment to support the GBW initiative, with a particular focus on accelerating seagrass conservation and restoration work in the WIO region. The Nairobi Convention, WIOMSA, and Pew Charitable Trust will play an instrumental role in this collaboration and in elevating the role of seagrass on the ocean/blue economy agenda (IUCN, 2022).</li> </ul>
2023	<ul data-bbox="373 1608 1409 2002" style="list-style-type: none"> <li data-bbox="373 1608 1409 1861">• The Government of Canada announced a groundbreaking funding commitment of CAD 30M to the GBW initiative for regional and national level activities in Kenya, Tanzania, Mozambique, Comoros, and Madagascar during the 5th International Marine Protected Areas Congress (IMPAC5) hosted in Canada, (IUCN, 2023).</li> <li data-bbox="373 1910 1409 2002">• IUCN signed a third phase of the Save Our Mangroves Now! Project with Germany for EUR 3.5M. This project, implemented in partnership with</li> </ul>



WWF and Wetlands International, will support the accelerated delivery of mangrove conservation efforts in the region, aligning with the GBW objective of achieving a net gain of critical ecosystems by 2030.

**Support to WIO countries**

- IUCN announced an extension of support to Cabo Delgado province and the Northern Mozambique Seascape, with a particular focus on Internally Displaced People (IDPs).
- Launch of the second phase of the Tanga-Pemba Seascape project (Bahari Mali project) in Tanzania, with the support of the Irish Embassy (EUR 1.8M), (IUCN, 2023).

**Ocean Innovation**

- During the Ocean Innovation Africa Summit in Cape Town, South Africa in 2023, IUCN announced seven new ocean ventures created through the first blue wave of the ocean ventures building programme in partnership with the TECA programme, (OIA, 2023).
- In March 2023, with the support of the Mitsubishi Foundation, IUCN launched the GBW Challenge in partnership with WEF – UpLink, UNECA, OHA, and CitiBank.

**Policy Engagement**

- In February, UN Secretary-General Antonio Guterres and President Azali of the Union of Comoros in his capacity as AU Chairperson acknowledged the critical importance of the GBW for the continent and pledged their full support and leadership.
- The Moroni Declaration was approved and adopted by African Ministers and high-level representatives from the Union of Comoros, the Republic of Cabo Verde, the Republic of Kenya, the Republic of Madagascar, the Republic of Mauritius, the Republic of Mozambique, the Republic of Sao Tome e Principe, the Republic of Seychelles, the Federal Republic of Somalia,

	<p>the Republic of South Africa and the United Republic of Tanzania, emphasising the importance of the GBW for WIO countries and beyond (UNECA, 2023).</p> <ul style="list-style-type: none"> <li>• Nairobi Declaration endorsed to, “Promote regenerative blue economy and support implementation of the Moroni Declaration for Ocean and Climate Action in Africa, and the Great Blue Wall Initiative, whilst recognising the circumstances of Africa’s Island State” (AU, 2023: 6 ).</li> </ul>
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**Table 1: The Great Blue Wall Initiative Timeline**

### 3.4.2. Policy and Legal Framework

The Great Blue Wall Initiative requires a robust policy and legal framework to guide its implementation. While some participating countries may have existing policies and legislation related to marine conservation and sustainable development, there is a need for harmonisation and alignment of these frameworks at the regional level. Adewumi (2023) suggests that the AU can play a crucial role in developing a regional policy framework that provides guidance and standards for implementing the initiative. This framework should address critical issues such as marine protected areas, sustainable fishing practices, coastal development regulations, and climate change adaptation.

### 3.4.3. Coordination Mechanisms

Effective coordination mechanisms are essential for the governance of the Great Blue Wall Initiative. These mechanisms ensure collaboration and cooperation among stakeholders, avoid duplication of efforts and facilitate sharing of best practices and resources.

Sberna and Oulmane (2022) suggest that the IUCN, designated by the participating countries as the lead Implementation organisation, should be a focal point for coordination and oversight of the initiative's activities. The IUCN should establish regular communication channels, organise meetings and workshops, and facilitate the exchange of information and experiences among stakeholders, particularly youth and women voices who comprise most of the WIO population but are often marginalised in ocean governance discussions.

Furthermore, regional organisations such as the IORA, UNEP, and the IOC can provide coordination support by facilitating dialogue, sharing knowledge, and mobilising resources. Willima (2022) highlights that these organisations should work closely with the IUCN and national governments to ensure effective coordination and implementation of the initiative. Finally, Africa has emerged as a beacon of leadership in the domains of oceans and the blue economy, despite prevalent sea blindness. The year 2023 witnessed a remarkable advancement in African maritime governance, with the Moroni Declaration for Ocean and Climate Action in Africa and the Nairobi Declaration on Climate Change. These aspirations need to translate into tangible actions, as outlined in the ABES (2019). To this end, the creation of an African Heads of States Panel for the Development of a Regenerative Blue Economy, led by the partner countries of the Moroni Declaration, will serve as the highest governing body for the Great Blue Wall initiative and aim to mobilise at least USD 15 Billion by 2030 towards GBW implementation (ADB, 2023).

### **3.5. Contribution to Human Security**

The Great Blue Wall Initiative is envisaged to contribute significantly to human security in the WIO region by addressing key challenges related to livelihoods, food security, and environmental sustainability. By promoting sustainable fisheries management, the initiative seeks to ensure the continued availability of fish stocks for coastal communities, thus enhancing their food security and economic well-being. Additionally, conserving and restoring marine and coastal ecosystems will help safeguard critical habitats and natural resources, ultimately contributing to the region's resilience to climate change and other environmental threats while providing blue economy jobs at scale and promoting human well-being (UNEP, 2018).

### **3.6. Conclusion**

In conclusion, the GBW Initiative is a ground-breaking African-led regional effort that aims to address the pressing climate-related challenges faced by the WIO. Launched at COP 26 in 2021, this initiative has set ambitious objectives to promote sustainable development and

conservation in the region's marine ecosystem by anchoring it around the key objectives of climate action, marine ecosystem restoration and the promotion of a thriving blue economy. This chapter explored the initiative's governance, focusing on the high-level endorsement at the AU level through the Comoros chairmanship of the AU and the Moroni Declaration and processes. It also examined the institutional framework, policy and legal framework, and coordination mechanisms in place or lacking for effective governance of the initiative.

One of the key strengths of the Great Blue Wall Initiative lies in its governance structure. The High-Level Panel on Blue Economy in Africa plays a crucial role in overseeing the initiative, ensuring that it remains aligned with the principles of sustainable development and inclusive growth. By involving primary stakeholders, such as coastal communities that primarily depend on the ocean, the initiative recognises the importance of local knowledge and expertise in achieving its goals.

The WIO region is home to a rich biodiversity and plays a vital role in supporting the livelihoods of millions of people. The Great Blue Wall Initiative acknowledges the significance of this region and aims to protect and restore its marine resources. By focusing on sustainable practices and promoting responsible economic activities, the initiative seeks to strike a balance between conservation and development.

Furthermore, the launch of the Great Blue Wall Initiative at COP 26 demonstrates the global recognition of the urgent need to address the challenges faced by the Western Indian Ocean region. This initiative serves as a model for other regions facing similar issues, showcasing the potential for international collaboration and collective action.

Finally, while the GBW promises to play a significant role in promoting sustainable ocean management and conservation, there is a need to investigate the extent to which it can achieve this and other human security dimensions. To comprehensively understand the extent to which the GBW can contribute to human security in the WIO, an assessment of its goals and the current trajectory is required against an ocean-centred conceptualisation of human security, as developed in chapter two.

## Chapter 4: Assessment of the GBW for Ocean-Centred Human Security.

### 4.1. Introduction

Against the backdrop of the changing nature of security, this study has thus far demonstrated that while traditional military security retains its relevance, contemporary security concepts that extend beyond conventional threats are equally important and can provide valuable policy insights (Cordner, 2018). This is evident in the broadening of the security agenda, particularly regarding the maritime domain.

This logic is consistent with the principle of the “common heritage of humankind”, which prescribes that while states have rights to use the seas, those rights are not absolute and require collective responsibility to protect the marine environment under international law as enshrined under (UNCLOS, 1982). It has also been reinforced as a cornerstone and guiding principle of the Biodiversity Beyond National Jurisdiction Treaty (BBNJ) adopted in June 2023 to protect marine biodiversity in areas beyond national jurisdiction (Kanu, 2023).

The concept of safeguarding the maritime space as the “global commons” provides the basis for cooperation among states and other actors. It provides an opportunity for positive inquiry from traditional collective security concepts such as the balance of power theory and deterrence as advocated by Kaplan, 2009; Rumley, Timothy, and Sanjay, 2012. Further, it calls for a broadened approach that emphasises the collective security of individuals that transcends national-state boundaries due to transnational threats emanating from interlinked issues related to economic welfare and climate change impacts (Waever, 1995). The WIO region, with its evolving dynamics and growing strategic significance is not insulated and faces these same issues.

Ocean-centred human security refers to the idea that the well-being and security of individuals and communities are intricately linked to the health and sustainable management of ocean resources. Scholars such as Paris (2001) and Voyer (2018), contend that the concept of security has become more complex due to the dilemma of mixing the objects of protection with the objects of offence. Similarly, the evolution of the security spectrum is equally problematic. Lipschutz (1995) maintains that applying the logic of security to the environment creates a paradox in that the very people seeking protection from the impacts of environmental

degradation are often the major threats to the environment. Ocean-centred human security sits at the centre of the paradox of applying security logic to the primacy of the ocean as an environment beset by security threats and vulnerabilities.

In an attempt to contribute to this debate, this study recognises and builds on the interlinkages between a holistic maritime security approach and human well-being in the WIO region. It advances the need for holistic maritime security in ensuring human security, as vulnerability to piracy, drug trafficking, illegal fishing, and climate change pose a complex threat to the well-being of individuals and communities in the region, (Cordner, 2018).

This study argues that maritime security forums in the Indian Ocean region have predominantly adopted militarised approaches to maritime security, thereby overlooking human security. The single-focused approach has neglected the local (regional) dynamics that give rise to insecurity, such as the depletion of living marine resources for coastal communities, climate change impacts, and negative socio-economic indicators such as high unemployment rates and poverty.

The GBW Initiative, which aims to promote sustainable ocean management and protect marine resources in the WIO region, therefore holds the potential to contribute substantially to ocean-centred human security across the five dimensions. This chapter thus draws from the developed definition and core elements of a maritime-focused human security framework (see Chapter 2) to assess the potential and extent to which the GBW can achieve these key human security elements that are linked to the ocean, namely environmental security, economic security, food security, health security, and political security.

## **4.2. Analysis of Five Dimensions of Human Security in the Western Indian Ocean Region.**

As developed in Chapter 2, this section aims to comprehensively analyse the five ocean-centred dimensions of human security in the WIO, paying attention to the region's human security threats and vulnerabilities and the potential for enhancing human security in the region.

### **4.2.1. Environmental Security**

Coldicott and O'Brien (2012) state that environmental security threats encompass environmental calamities and resource constraints. The severity of environmental disasters depends on the extent and duration of the damage caused, including dangers such as climate change, extreme weather conditions, and human-made catastrophes. Resource scarcity refers to the depletion or inadequacy of natural resources, leading to increased resource expenses, economic burdens, and global demands.

The nexus between environmental security and human security holds significant importance. This relationship is diverse and can produce a range of outcomes. The interaction between environmental security and human behaviour in the environment, as well as its impact on the military-industrial complex, is significant in the context of warfare. Kostova and Sidova (2020) additionally note that environmental alterations can potentially jeopardise human security, state security, world peace, and the integrity of natural marine and terrestrial ecosystems.

According to Parkin (1999), the deterioration of environmental security has resulted in the annual death of at least 20 million individuals in different regions due to the absence of a life-sustaining environment. Environmental threats have also triggered conflicts and social upheaval. Rising population sizes have led to escalated food consumption and garbage generation that is distributed across the atmosphere, land, and water. Consequently, there has been a surge in pollution, climate change, and other environmental hazards.

In 2009, the Secretary General of the United Nations (UN) referred to climate change as a 'threat multiplier' because it can exacerbate existing risks. Since then, the UN Security Council has increasingly focused on this issue (UNSC, 2021). The impact of climate change on security in Africa has become more significant in these discussions. Despite Africa only contributing 3.1 per cent of the global greenhouse gas emissions, it suffers the most from the impacts of climate change and faces disproportionate risks. Climate-related insecurity and other disasters have already led to conflicts and crises throughout Africa, hindering sustainable development and resilient livelihoods. Climate security concerns have been highlighted in Security Council resolutions relating to Darfur, the Lake Chad Basin, Mali, Somalia, West Africa, and the Sahel (Naidoo and Gulati, 2022).

This phenomenon can be seen acutely in the WIO region, known for its rich biodiversity, encompassing a wide variety of species and ecosystems, making it one of the world's most

diverse and captivating ocean regions. In the region, many countries have low-income levels, leading to a significant portion of the population relying on coastal and marine resources and ecosystem services. However, the exploitation of these resources and the deterioration of their habitats caused by human activities have a direct and indirect impact on the biodiversity of these systems. Additionally, the consequences and ramifications of global climate change further exacerbate the demands on local sources of disturbance (WIOMSA, 2020).

The western region of the Indian Ocean boasts a wide variety of species and ecosystems, making it one of the most biologically diverse ocean areas worldwide. According to Obura, Burgener, Nicoll, Ralison and Scheren (2015); and Veron et al. (2015), it holds the second-highest concentration of marine biodiversity globally. The existence of coral reefs, mangroves, salt marshes, seagrass beds, and aquatic and deep-sea habitats unequivocally leads to the development of a wide range of highly productive and diverse aquatic ecosystems. These ecosystems support economies and livelihoods (Samoilys, Pabari, Andrew, Maina, Church, Momanyi and Mibei, 2015).

However, the destruction of habitats and over-exploitation of resources pose significant risks to ocean ecosystems in the region. Furthermore, most countries have experienced a decrease in the extent of mangrove coverage. Over 25 years, both Kenya and Tanzania have lost almost 18 per cent of their mangroves, while Mozambique suffered a greater loss of 27 per cent over a shorter period (Obura et al., 2017). The decline of this ecosystem can be attributed to human-induced factors such as excessive harvesting of fuel, timber, and charcoal, land conversion for other purposes, pollution, sediment accumulation, and alterations in river flow (Bosire 2015). Climate change impacts have also contributed greatly to the degradation of marine ecosystems in the region. For example, Following the 1997-98 El Nino climate event, there was a significant 15 per cent decrease in coral reefs which is a cause for concern due to its severe implications for marine biodiversity, coastal communities' livelihoods, and the overall health of marine ecosystems. (Obura et al., 2015). The population of 161 Western Indian Ocean marine species, including corals, sea cucumbers, rays, sharks, marine turtles, marine mammals, and fish, is consistently declining and is classified as vulnerable by the IUCN Red List (IUCN, 2022). A significant number of these species rely on coastal ecosystems such as seagrass beds and coral reefs for habitat, food, breeding grounds, and protection against predatory species are deteriorating or being destroyed, putting them at risk. Additionally, many fish species are being excessively exploited.



The health of coral reefs is declining rapidly due to warming and acidic waters, as well as catastrophic climate-related events such as mass bleaching of corals. The Mozambique Channel, which accounts for around 33 per cent of global oil tanker transportation, also endangers marine ecosystems due to the potential for oil spills. Furthermore, almost 6 million square miles of mangrove forests have been lost over 25 years, and Mozambique has experienced a 27 per cent decline in mangroves over a shorter period. (Moss and Pigeon et al., 2022) argue that the depletion of coral reef biodiversity and biological function loss has significant consequences for the countries located along the Western Indian Ocean coastline. For example, the fisheries associated with coral reefs provide sustenance, ensure food security and contribute to the protein intake of numerous small-scale fishers in the region. Additionally, coral reefs serve as the primary resource for the coastal tourism industry, offering coastal protection, recreational spaces, and seafood that is valued at an annual sum of US\$18.1 billion (Obura et al., 2017).

Further, Climate change has been classified as a global issue arising from human-induced greenhouse gas emissions into the atmosphere (Barnett, 2007 and Veron, 2015). This is supported by the UN Security Council designating climate change as a global security threat as it has security implications on the livelihoods of individuals, economic development, population migration, illegal exploitation of minerals, and war (UN, 2021). This is particularly because climate change results in increased temperatures, melting polar caps and ice sheets, changes in rainfall, and increased sea levels (Barnett, 2007). Its impacts pose a risk to international, national, social, political, global, and human security. Climate change causes instabilities in social and ecological systems. For instance, low-lying coast areas that are sensitive to rising sea levels may sink over time, which could lead to the displacement of communities residing in these areas. Island states such as Seychelles and Mauritius which are highly vulnerable to climate change, leverage international forums, alliances, and global climate negotiations to advocate for stronger climate action and secure financial support. Their strategies include protecting marine environments and participating in regional cooperation for sustainable ocean resource management. These diplomatic efforts are crucial for enhancing their resilience and mitigating the economic and environmental impacts of rising sea levels (Otto, 2022).

Changes in rainfall in Somalia lead to drought, food instability, and conflict which is one explanation for the piracy surge off the Horn of Africa during the first decade of the 21<sup>st</sup> century (Samatar, 2010). McCabe (2023) further posits that environmental drivers are increasingly recognised as key factors in maritime insecurity and piracy in Somalia, where grievances over marine resource governance and the effects of climate change exacerbate tensions. This shift in narrative from isolated threats to a comprehensive approach highlights the nexus between environment, security, and development and necessitates the exploration of interconnected issues that drive maritime insecurity and the scaling up of efforts to build resilience among communities and states to address these challenges such as the Great Blue Wall initiative.

The degree of climate change's effects on social systems depends on a state or country's economic, technological, and political aspects and the quality of governance (Barnett, 2007). Colidocott and O'Brien (2012) highlight the impact of climate change is more prominent and drastic in developing countries than in developed countries due to the lack of resources and technologies to respond to these issues.

While addressing climate change is a global issue, WIO countries must take prompt action to safeguard the well-being of coral reefs. This involves mitigating the hazards within their jurisdiction, such as detrimental fishing practices and pollution, and adopting a proactive strategy to improve reef conditions and subsequently, the parallel marine biospheres they support. It is also essential to identify reef-specific management measures and alternatives to sustain the health and diversity of coral reefs (Obura et al., 2017). The GBW initiative can potentially enhance environmental security in the region by effectively protecting 2 million km<sup>2</sup> (30 per cent of the WIO) and advocating for complementary results at a Pan-African level as outlined in its objectives (GBW, 2023).

The GBW initiative aims to preserve the WIO marine and counteract the effects of climate change and global warming. Therefore, achieving environmental security is a crucial element of this initiative. (World Economic Forum, 2023). The WIO accounts for 38 per cent of the world's coral reef species. Unfortunately, only eight per cent of this marine environment is currently protected. As a result, this region is at risk of environmental degradation from overfishing, pollution, climate change, and extractive industries (World Economic Forum, 2023). These ecosystems in the Western Indian Ocean risk total collapse without restoration measures.

To effectively contribute to human security, the voices, concerns, challenges, and solutions of key populations who contribute to environmental degradation and utilise the oceans for various means, such as local communities, governments, and businesses, must be included in the conversations and decision-making processes of marine protected areas to ensure that across every level there is a goal to preserve marine and coastal environments (Vyawahere, 2022). The initiative's regional approach is key to achieving this. Vigorous efforts in one country may be hindered by weaker efforts in other countries within an interconnected ocean ecosystem. This regional seascape approach, led by WIO countries, promotes the coalition of partners to enable the regeneration of the WIO (World Economic Forum, 2023).

In conclusion, the GBW can effectively contribute to holistic environmental security in the WIO through a regional, whole-society approach that includes various coastal communities with strong ties to the ocean.

#### **4.2.2. Economic Security**

The ocean is a unique economic space. It is different from the conventional economic space because it is everyone's business, as we are all free to exercise its use and enjoyment (Global Environment Facility (GEF), 2017). According to Tuqa Jirmo (2023), the Western Indian Ocean is the backbone of the region's economy, as the ocean is used for economic activities such as fishing and resource extraction, marine tourism, and carbon sequestration. The negative of this 'free-for-all' nature of the ocean is that it is taken for granted as the ocean's contribution is not fully appreciated and recognised, and this is portrayed through the rapid degradation of the ocean due to human manipulation (WWF, 2017).

Three main factors are driving the overexploitation and degradation of coastal ecosystems: demand from distant markets, a high dependence on coastal and marine resources for livelihoods and sustenance, and a rapid increase in the human population. According to UNDESA (2015), the Western Indian Ocean (WIO) had 220 million people living there in 2015 across all ten African countries, representing a 288 per cent increase in population from 1975. Gerland et al. (2014) predict that the population will reach 306 million by 2030, which

is an increase of almost 50 per cent and is forecast to quadruple to 818 million by 2100 and continue to rise in the following century.

Approximately 70 million individuals live within a 100-kilometre radius of the coastline, spanning the entire WIO. This exerts further strain on coastal resources and near-shore fisheries, as populations depend on these resources for economic and food stability and their social and cultural identity. A population of about 130 million people significantly impacts the coastal zone because the major rivers in the area have drainage basins that extend thousands of kilometres into the continent. Global trade exacerbates the strain on coastal resources, such as fish and other living marine resources, since they are exploited to meet the demands of markets on different continents, as seen in the plundering of tuna stocks by subsidised large foreign vessels from Europe and Asia (Pigeon and Moss, 2022). The amount of economic activity, population size, and consumption levels affect how much demand people place on the environment.

The countries in the WIO region are projected to experience significant economic expansion due to their current low starting point, high population growth, and the availability of new energy resources (Africa Development Bank 2015). Projected population growth rates indicate that the workforce will experience a significant expansion in the upcoming decades, increasing from the current 42 per cent of the population to 51 per cent by 2100. This demographic shift has the potential to contribute to economic development and alleviate poverty in the affected nations, (Obura et al., 2017).

Corporate investment in the region and large-scale infrastructure and transportation projects are on the rise due to an expected increase in regional demand and consumption, along with a greater involvement in international trade. Simultaneously, attempts are being made to harness the petroleum and gas reserves in Eastern Africa. However, the sector's growth potential is challenging to forecast due to factors such as low pricing, volatility, the advancement of renewable energy sources, and promises to combat climate change (APP 2015).

Alternatively, countries can adopt the "sustainable blue economy" approach to balance sustainable economic development and conservation-minded economic management (ABES, 2019). This approach emphasises protecting natural resources and ecosystems while promoting industries dependent on ocean resources and habitats. It also aims to ensure a fair distribution

of resources among individuals and future generations. Investing in restoring deteriorated ocean assets and innovative technologies will provide benefits to the ocean and will ensure the presence of sectors with significant social value, such as artisanal fishing, which offers a stable safety net of income for coastal communities that have depended on the ocean for their livelihoods across generations (Okafor-Yarwood, 2020). According to the World Bank (2022), the blue economy generates US\$300 billion and supports circa 50 million direct jobs in Africa, 12 million of which are in the fisheries sector alone. By 2030, this annual blue economy output could increase to more than US\$400 billion, directly generating nearly 60 million jobs.

In the WIO, all countries have developed or are in the process of developing national blue economy strategies or policy plans as detailed. Table 2 below represents a comprehensive list of WIO countries and their ocean governance strategies. Table 2 (below) was created by the author as adapted from ABES (2019); Kirani, Failler, Gillau, NDede, and Diop (2022) and UNECA (2023; UNEP, 2021; U.S. Department of Commerce)

<b>Country</b>	<b>Blue Economy Strategy Name</b>	<b>Focus Area</b>	<b>Date of Adoption</b>
<b>South Africa</b>	Operation Phakisa: Oceans Economy	Marine transport and manufacturing, offshore oil and gas exploration, aquaculture, marine protection and governance	2014
<b>Mozambique</b>	Mozambique Policy and Strategy of the Sea (POLMAR) developed in 2017 to serve many initiatives related to the Blue Economy	Fisheries and aquaculture, marine tourism, offshore oil and gas exploration, marine research and technology	2017

<b>Comoros</b>	Strategic Framework for a Blue Economy National Police	Fisheries and aquaculture, marine renewable energy, marine transportation and logistics	2016
<b>Kenya</b>	Kenya Blue Economy Strategy	Fisheries and aquaculture, maritime transport, marine tourism, offshore oil and gas exploration	2018
<b>Seychelles</b>	Seychelles Blue Economy Road Map	Sustainable fisheries, marine tourism, marine renewable energy, marine research and technology	2018
<b>Tanzania</b>	Tanzania Blue Economy Strategy	Fisheries and aquaculture, marine tourism, marine renewable energy, marine research and technology	2019
<b>Somalia</b>	Somali Blue Economy Strategy	Fisheries and aquaculture, marine transportation and logistics, marine renewable energy	2020
<b>Mauritius</b>	Mauritius Blue Economy Strategy	Marine tourism, sustainable fisheries, marine renewable energy, marine biotechnology	2020
<b>France (Mayotte and Reunion)</b>	Stratégie nationale pour la mer et le littoral/	Marine renewable energy, sustainable fisheries, marine	2017

	National Strategy for the Sea and Coast	biotechnology, marine research and technology	
<b>Madagascar</b>	National Blue Economy Strategy 25 June 2022 Building on a National Blue Economy Strategy from the Madagascar National Development Plan 2015-2019	Fisheries and aquaculture, marine tourism, marine renewable energy, marine research and technology	2022

**Table 2: WIO strategies and their Blue/Ocean strategies.**

However, while many countries, particularly island states, have commendable blue economy strategies prioritising sustainability and conservation, others like Mozambique and South Africa seem to adopt an 'oceans economy' approach. This approach favours economic exploitation through extractive industries, such as gas and oil exploitation, which displace coastal communities and neglect conservation efforts (Nairobi Convention, 2024). For instance, South Africa's **Operation Phakisa**, meaning "hurry up" in Sesotho, reflects its urgency for economic growth but has been criticised for lacking effective implementation and neglecting environmental and community impacts (Loureiro et al., 2022; SANews, 2022).

Developing a regenerative blue economy across the globe and creating millions of jobs by supporting local communities through funding, training, and technical assistance are two of the key objectives of the GBW (World Economic Forum, 2023). According to the IUCN (2021), the GBW initiative aims to offer 70 million individuals in the Western Indian Ocean (WIO) region regenerative livelihood options by 2030. It also aims to create at least 2 million jobs related to marine activities and extend support to other African regions and beyond undertaking similar initiatives.

The GBW holds significant potential to achieve economic security, as a constituent element of human security, in the Western Indian Ocean region by promoting regenerative blue economy practices. By focusing on sustainable and regenerative practices, the initiative aims to harness the economic potential of the region's marine resources while ensuring their long-term viability. However, due to the blue economy still being a nascent sector in Africa, there is a need to prioritise bankable sectors that will lead to economic growth and do less damage to the marine ecosystem.

As such, this study proposes that in the absence of a comprehensive list of target blue economy projects of focus, the following sectors, as advanced by Barendse, Failler, Okafor-Yarwood and Mann-Lang (2023), can achieve economic security through regenerative blue economy practices, such as:

**a. Economic Diversification:** The Great Blue Wall initiative promotes the diversification of the economy by supporting new economic activities that focus on the sustainable use of marine resources. This will create new job opportunities and increase the resilience of the region's economy to external shocks.

**b. Sustainable Fisheries:** The initiative will support fishing practices, which will help to conserve fish stocks and ensure the long-term viability of the fisheries sector. This will help to secure the livelihoods of millions of people who depend on fisheries for their food security and income.

**c. Ecotourism:** The initiative will promote the development of ecotourism activities that are based on the use of marine resources. This will create new job opportunities and generate revenue for local communities while preserving the environment.

**d. Renewable Energy:** The initiative will promote the development of renewable energy sources, such as wind and solar power, reducing the region's dependence on fossil fuels and helping combat climate change.

The Blue Economy holds particular promise for developing nations dependent on marine resources and is recognised by the ABES (2019) as the "new frontier of the African renaissance" as it offers a substantial potential for advancing sustainable development,



including in the face of climate change challenges. At a governance level, the above-proposed sectors of GBW prioritisation align with the five priority areas listed by the ABES (2019) to guide the development of sustainable blue economy sectors in Africa:

1. Shipping/transportation, trade, ports, maritime security, safety and enforcement
2. Fisheries, aquaculture, conservation, and sustainable aquatic ecosystems
3. Coastal and maritime tourism, climate change, resilience, environment, infrastructure
4. Sustainable energy and mineral resources and innovative industries
5. Policies, institutions and governance, employment, job creation and poverty eradication, and innovative financing

Overall, the Great Blue Wall initiative has the potential to promote economic development and environmental conservation in the Western Indian Ocean region. By adopting sustainable and regenerative practices, the region can harness the economic potential of its marine resources while ensuring their long-term viability for future generations. Given the ocean's pivotal role in climate regulation, actions for its preservation are inherently linked to climate action. The African Blue Economy Strategy's five priority areas can serve as strategic focal points for synergising climate action, the blue economy, and African ocean governance within the GBW framework. This alignment amplifies positive economic and environmental outcomes, offering a holistic approach to navigating climate challenges and promoting sustainable development. However, as noted in Chapter 3, a key challenge is that SDG 14 remains the least funded SDG (Willima, 2023). The potential to which the GBW can contribute to economic security and human security in the WIO is determining and mobilising the magnitude of financial resources dedicated to the GBW initiative.

### **4.2.3. Food Security**

In the WIO region, the small-scale- artisanal fisheries sector is essential for the food security and livelihoods of coastal communities. However, these sectors face numerous challenges, including overexploitation by subsidised foreign industrial vessels (Obura et al., 2017). This has led to a decline in fish stocks and threatens the long-term sustainability of fisheries in the region. According to (Manyilizu, 2023), overfishing has resulted in a 20-30 per cent decline in fish stocks in the region. Further, In the WIO marine resources play a crucial role beyond

traditional fishing practices in ensuring food security and livelihoods. Besides fisheries, marine resources such as seaweed, mangroves, and coral reefs contribute significantly to coastal communities' resilience and food security. For instance, seaweed farming provides income and nutrition to communities in Tanzania and Zanzibar, where it supports over 25,000 livelihoods (FAO, 2017). Mangroves act as nurseries for fish species, enhancing coastal fisheries productivity and supporting biodiversity (UNEP, 2020). Coral reefs not only support tourism but also provide habitat for diverse marine species crucial for fisheries (Burke et al., 2011). Diversifying the exploitation of marine resources beyond fishing is essential for sustainable food security in the region, particularly in the face of environmental challenges and climate change impacts.

The GBW initiative holds significant potential to contribute to food security in the WIO, particularly through its support for artisanal fisheries sectors and aquaculture development. The initiative also aims to focus on marginalised groups such as women and youth, recognising their important role in the fisheries industry. The GBW initiative seeks to address these challenges by promoting sustainable fishing practices, improving governance of marine resources, and providing support for small-scale fisheries. By focusing on the artisanal fisheries sector, the initiative can help to ensure the long-term sustainability of marine resources and contribute to food security in the region (IUCN, 2023). In addition to supporting the artisanal fisheries sector, the GBW initiative also aims to promote aquaculture development in the region. Aquaculture has the potential to provide a sustainable source of protein and income for coastal communities while also reducing pressure on wild fish stocks. By supporting the development of aquaculture, the initiative can contribute to food security and economic growth in the region (World Economic Forum, 2023).

Furthermore, the Great Blue Wall initiative recognises the important role of marginalised groups such as women and youth in the fisheries sector. By providing support and training for these groups, the initiative can help create more inclusive and equitable fisheries industries while also empowering marginalised communities. For example, in 2023, IUCN launched the second phase of the Tanga-Pemba Seascape project (Bahari Mali or Ocean Wealth in English project) in Tanzania, with financial support from the Irish Embassy (EUR 1.8M).

This collaboration with the government of Tanzania Mainland and Zanzibar, WIOMSA, and local organisations aim to advance the development of a regenerative blue economy and

enhance biodiversity conservation and climate change resilience. The Bahari Mali program operates through four interconnected elements: livelihoods, governance, research, and advocacy. It focuses on promoting sustainable livelihoods for women and youth in local coastal communities in the long run. The programme also involves collaborating with local government authorities (LGAs), ministries, and research institutes engaged in the blue economy and preserving marine and coastal ecosystems. (IUCN, 2023).

To further support the development of the fisheries sector and contribute to food security in the region, it is important to focus on developing market value chains. The African Continental Free Trade Agreement (AfCFTA) provides an opportunity to expand market access for fishery products, linking small-scale fishers with regional and international markets as advocated for in the Moroni Declaration (2023). By developing market value chains, the initiative can help to increase the economic return for small-scale fishers and promote sustainable fisheries management.

The GBW initiative can potentially combat food insecurity within the Western Indian Ocean as it aims to protect 30 per cent of the ocean (World Economic Forum, 2023). The marine protected area is targeted to improve the health of the ocean by protecting and restoring marine habitats, this increases the ocean's resistance to environmental changes which protects species and rebuilds fish stocks (World Economic Forum, 2023).

In conclusion, the Great Blue Wall initiative holds significant potential to contribute to food security in the Western Indian Ocean region through its support for marine protected areas, artisanal fisheries sectors, aquaculture development, and marginalised groups. By addressing the challenges facing the fisheries sector and promoting sustainable practices, the initiative can help to ensure long-term food security for coastal communities in the region.

#### **4.2.4. Health Security**

Sack (2020) asserts that human health is interrelated with the environment as part of one complex ecosystem. The earth's living space is largely made up of water, and it is for this reason that we need to prioritise ocean health to ensure human health (Sack, 2020). Not only will the loss of fish cause malnutrition and health complications for many living in third-world

countries situated in the WIO region, but the ocean is also a source of lifesaving biomedical breakthroughs (Sack, 2020; Kanu, 2023). Tests that were used to diagnose the coronavirus were developed using enzymes found in marine genetic resources used in pharmaceuticals (Sack, 2020; Dahir and Willima, 2023).

Moreover, the ocean's most significant function is its ability to provide 50 per cent oxygen absorb 93 per cent of excess heat and reduce carbon emissions (Sack, 2020). The ecosystems in the ocean are important for the "healing" powers the ocean possesses; without them, the ocean would become warmer, more acidic, and devoid of oxygen (Sack, 2020). The GBW initiative's goal of protecting and conserving the ocean's biodiversity has the potential to help build the ocean's resistance to climate change and restore marine fauna and flora that are vital to the health of the ocean, marine ecosystems, and overall human health. Healthy oceans act as natural carbon sinks absorbing 90 per cent of the world's carbon dioxide emissions, most of which come from human-induced activities such as the shipping industry and extractives that produce dangerous greenhouse gas emissions (Oulmane and Sberna, 2022).

Further, the GBW initiative, focusing on sustainable ocean management and the promotion of regenerative blue economy practices, holds immense potential to contribute to health security in the Western Indian Ocean region. One crucial aspect of this initiative is the support for the restoration of mangroves and seagrasses, which act as natural barriers against coastal inundation from rising sea levels (Dahir and Willima, 2023).

Flooding in coastal communities poses significant threats to health security. Firstly, it leads to the salinisation of freshwater bodies, rendering them unfit for consumption and agricultural use. This scarcity of freshwater resources can result in waterborne diseases, malnutrition, and a lack of hygiene, thereby compromising the health of local populations. Additionally, flooding can cause the upswelling of sewage pipes, contaminating water sources and spreading waterborne diseases such as cholera and dysentery. Moreover, the erosion of limited land for agriculture, particularly in small island states, can result in a lack of food security, leading to malnutrition and weakened immune systems (IPCC, 2022).

Mangroves and seagrasses play a crucial role in mitigating the impacts of flooding and enhancing health security

Mangroves and seagrass ecosystems have unique characteristics and ecological roles in coastal environments. Mangroves, which are made up of salt-tolerant trees and shrubs, thrive in tropical and subtropical tidal zones, forming dense forests that protect coastlines from erosion and serve as important nurseries for marine life. They significantly contribute to carbon sequestration and water filtration, supporting biodiversity and sustainable fisheries. On the other hand, seagrasses are submerged flowering plants found in shallow coastal waters worldwide. They anchor in sediment to form meadows, providing crucial habitat and food for a diverse array of marine organisms. Additionally, they stabilize sediments and enhance water clarity. Both mangroves and seagrass ecosystems play essential roles in coastal resilience and ecosystem services, each uniquely adapted to their saline environments and contributing distinctively to biodiversity conservation and environmental stability. Furthermore, these coastal ecosystems act as natural filters, improving water quality and reducing the risk of waterborne diseases (IPCC, 2022).

The GBW initiative can significantly contribute to health security in the Western Indian Ocean region by supporting the restoration of mangroves and seagrasses. These coastal ecosystems act as natural barriers against extreme weather events and flooding, protecting coastal communities from the adverse health impacts of flooding. Restoring these ecosystems also reduces the risk of waterborne diseases and ensures the availability of freshwater resources for drinking and agriculture, promoting better nutrition and overall health. For instance, the IUCN's Global Seagrass Biodiversity and Conservation Working Group's 2023 GBW project, with financial support from Fonds Francais Pour l'Environnement Mondial, focuses on accelerating seagrass conservation and restoration work in the WIO region in partnership with The Nairobi Convention, WIOMSA, and Pew (IUCN, 2023). This collaboration will play an instrumental role in elevating the role of seagrass on the blue economy agenda.

Several recommendations can be considered to maximise the impact of the GBW initiative on health security. Firstly, it is crucial to prioritise the restoration and conservation of mangroves and seagrasses in vulnerable coastal areas, particularly in small island states. This can be achieved through collaborative efforts involving governments, local communities, and relevant stakeholders. Additionally, capacity-sharing (used purposely in place of capacity building to promote co-management) programs should be implemented to enhance local knowledge and skills in coastal ecosystem restoration and management. Furthermore, the initiative should

promote research and monitoring to assess the effectiveness of mangrove and seagrass restoration in reducing the impacts of flooding on the health sector.

#### **4.2.5. Political Security**

The WIO region is coloured by persistent historical, socio-economic inequalities that have contributed to the rise of political instability in the maritime domain. Piracy activity in the maritime areas of Somalia and the Gulf of Aden surged between 2005 and approximately 2013, with a few isolated instances occurring until about 2019 (Hamilton, 2010; Singh and Bedi, 2016; Walker and Reva, 2022). The Global Security discourse has merged maritime piracy in the Somali region with terrorism. American and European analysts, media outlets, politicians, policymakers, and financiers have exploited the sensitive public perception to classify Somali pirates as "maritime terrorists" associated with Al-Shabaab and, consequently, Al-Qaeda to be defeated through the US Global War on Terror (Singh and Bedi, 2016).

Although piracy activities have significantly declined (IMB, 2022), this military approach through UNSC resolutions and multinational naval operations to protect global shipping lanes crucial for the world economy ultimately obscures the true intentions of the pirates (Hamilton, 2010:27; Samatar, Lindberg, and Mahayni, 2010). Pigeon and Moss (2022) support this, arguing that Piracy is often linked to land insecurity. The root causes of Somali piracy are a poor socioeconomic situation that has been worsened by decades of conflict and vested clan interests. Additionally, there is a lack of law enforcement capacity and capabilities, an ineffective government and criminal prosecution system, and a high availability of weapons due to a regional influx (Willima and Ramachela, 2023). Somalia's ability to monitor and control the activities of illegal fishing vessels along its vast coastline (the longest in Africa) has been severely limited due to a lack of patrol vessels. This has allowed foreign commercial fishing vessels to engage in IUU fishing (Samatar et al., 2010).

IUU fishing has strained fish stocks, which has been used to justify piracy. However, it's worth noting that IUU fishing vessels were not the first to be stolen off the coast of Somalia. A significant number of Somali pirates were previously fishermen who experienced improved livelihoods during a period of peace and assistance from various European countries in the 1980s. However, their circumstances deteriorated due to the downfall of the Barre regime, the

ensuing civil war, and the arrival of foreign fishing fleets after Somalia's fishing industry collapsed. These factors compelled many former fishermen to resort to piracy (Joyner, 2009: 85).

Further down the coast of Somalia, there have been a series of violent incidents in the Cabo Delgado region of northern Mozambique since 2017. Over the following two years, more than 700 people died due to indiscriminate acts of violence, and over 100,000 people were internally displaced (Louw-Vaudran, 2022). In 2020, the local militant group Ahlu-Sunnah Wal Jama'a (ASWJ) increased their operations in Cabo Delgado, causing more instability and posing a direct threat to the blue economy. Many of the people recruited by militant groups are young people who are kept on the fringes of economic development, such as Liquid Natural Gas (LNG) deposits in Cabo Delgado, which remains Mozambique's poorest province and see insurgency groups as a lucrative alternative, at least in an economic sense than withering in the face of continued inequality. In August 2020, the ASWJ took control of the port of Mocimboa da Praia for the second time. In April 2020, the ASWJ started using small boats to attack islands along the Mozambican coastline, seizing sailing canoes carrying food between Pemba and Palma from the island (Pigeon and Moss, 2022).

Piracy can resurge intermittently as long as there is insecurity, poor governance, and poverty resulting from a lack of economic opportunities, especially when pirate networks remain dormant. Deploying armed security guards on ships and foreign navy patrols has effectively reduced piracy in maritime environments. Evidence suggests it is more important to disaggregate threats and use transformative ways that speak to human security in general instead of relying on traditional state-centric militaristic approaches. For example, efforts to stop IUU fishing and promote small-scale fisheries could gain the trust of the local people and pursue alternative sustainable livelihoods through the blue economy.

The Great Blue Wall initiative has the potential to contribute significantly to political security in the Western Indian Ocean region. This research explores how the initiative can address socioeconomic exclusion and neglect in coastal communities, particularly in Somalia and Mozambique, which have been associated with insurgencies. The initiative can empower these communities by providing livelihood options and entrepreneurship opportunities through regenerative blue economy activities, steer them away from illicit activities, and foster a sense



of ownership towards shared marine resources, ultimately contributing to peace, stability, and political security.

The Great Blue Wall initiative can address socioeconomic exclusion by promoting regenerative blue economy activities and creating entrepreneurship opportunities for coastal communities. The initiative can generate employment, income, and economic growth in these communities by supporting sustainable fisheries, aquaculture, coastal tourism, and marine conservation initiatives. This, in turn, can alleviate poverty, reduce inequality, and provide alternative livelihood options that steer individuals away from engaging in illicit activities.

Further, by developing regenerative blue economy activities, the GBW initiative empowers coastal communities by involving them in decision-making processes and fostering a sense of ownership towards shared marine resources. The initiative promotes social cohesion, trust, and accountability by including local communities in the planning, implementation, and management of these activities. This sense of ownership and responsibility towards marine resources encourages communities to protect and sustainably manage their coastal environments, contributing to peace, stability, and political security (Willima, 2022).

The Great Blue Wall initiative can contribute to peace and stability in countries like Somalia and Mozambique in the WIO by providing economic opportunities and empowering coastal communities. When individuals have access to sustainable livelihoods and feel included in the economic development of their communities, they are less likely to resort to insurgencies or engage in illicit activities. Instead, they become active economic agents, positive contributors to their societies, and advocates for peace and stability. This shift in mindset and behaviour can foster social cohesion, reduce conflict, and strengthen political security in the region.

#### **4.2.6. Geopolitics and conservation efforts in the WIO**

It is crucial to recognise the significance of geopolitics that could potentially affect marine conservation efforts like the GBW. The ocean is the most interconnected ecosystem on earth, and conservation efforts, as seen in the case of the GBW, are transboundary. However, the application of MPAs, while important for conservation, can create or exacerbate regional conflict where MPAs extend over contested territorial spaces or restrict the sovereignty of



others to responsibly utilise their rights over maritime spaces (UNCLOS, 1982). This is especially worsened in the absence of clear global guidelines on the balance between jurisdictional claims and conservation efforts, particularly as more states explore the seas for oil, gas and other resources.

Several such disputes exist in Africa, where maritime boundaries are still governed by old colonial regimes emanating from the "nation-state"/Westphalian Border system in Africa from the Berlin Conference of 1884-85, which partitioned the continent, including maritime spaces, into colonial territories (Okonkwo, 2017). The author further argues that African leaders maintained the status quo at the formation of the Organisation of African Unity, the predecessor of the AU, in 1963. As a result, Africa has 110 inter-state boundaries and numerous other intra-state borders, with only 30 per cent of disputes resolved.

This phenomenon is pertinent in the Western Indian Ocean (WIO) with high-profile cases such as Kenya vs Somalia (Walker, 2021), Mauritius vs Britain over the Chagos islands (Fabricius, 2023), Comoros vs France over Mayotte, and Mauritius vs Maldives (ITLOS, 2023) over parts of Chagos islands among others. These disputes with their connections with African states have political, security, environmental and economic implications. The ocean is the most interconnected ecosystem on earth, and conservation efforts, as seen in the case of the GBW, are transboundary. However, the application of MPAs, while important for conservation, can create or exacerbate regional conflict where MPAs extend over contested territorial spaces or restrict the sovereignty of others to utilize their rights over maritime spaces. This is especially worsened in the absence of clear global guidelines on the balance between jurisdictional claims and conservation efforts, particularly as more states explore the seas for oil, gas and other resources under the new frontiers banner for using the oceans.

Further, the geopolitical implications of the Red Sea crisis as highlighted above extend far beyond its immediate vicinity, impacting African countries in various critical ways. The Red Sea acquired substantial worldwide geostrategic significance as a maritime pathway, referred to as the Sea Lines of Communication (SLOC), following the completion of the Suez Canal in the late 19th century. Consequently, the travel distance between Europe and Asia was reduced by around 4000 kilometres. According to Hellenic Shipping News (2023), the Suez route is highly valuable as it accommodates over 17,000 ships annually, which accounts for 30 per cent of global shipping traffic. Additionally, the canal facilitates the transportation of 12 per cent of

total sea-borne oil and 8 per cent of global liquefied natural gas (LNG). The Suez route plays a vital role as a crucial passageway for global trade and the transit of energy resources.

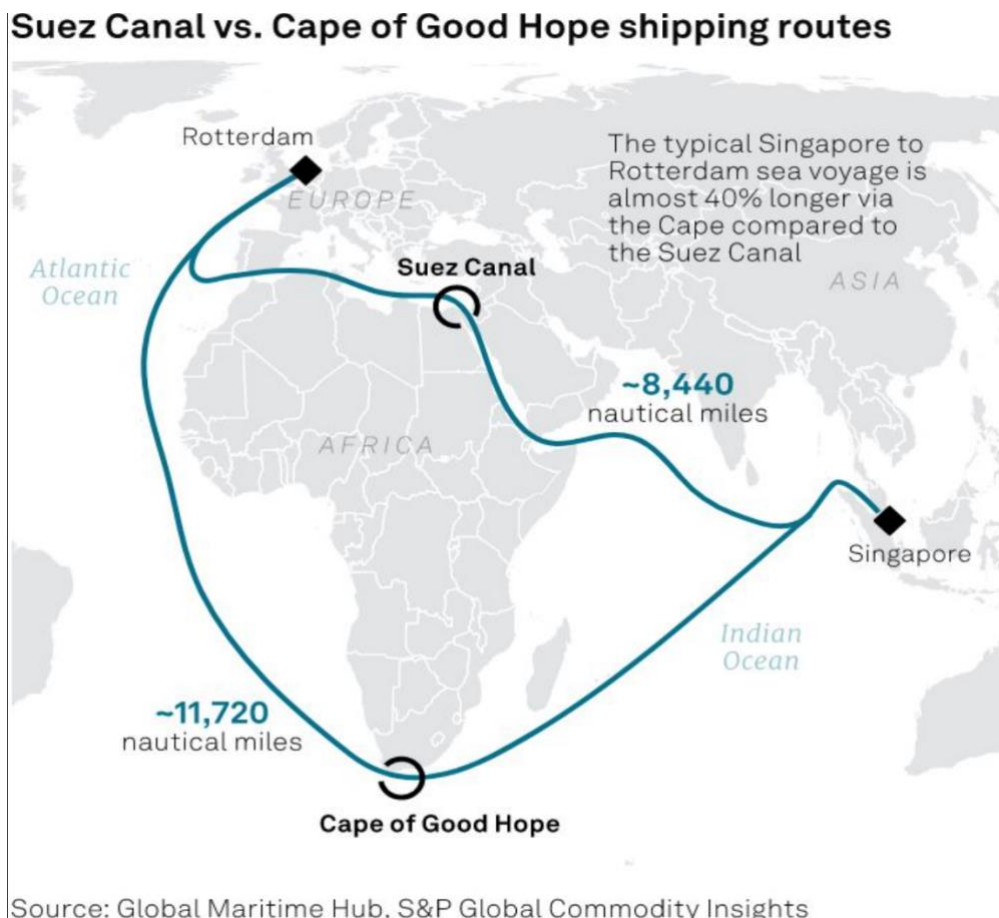
In 2019, Mahmood, in an Institute for Security Studies (ISS) report, cautioned that, even with this history of unimpeded passage, augmented recent attention towards the Red Sea is indicative of rising security concerns over the maritime context amid heightened tensions in an increasingly crowded space. In other words, recent developments reflect concerns that the relative safety of the Red Sea passageway should not be taken for granted and may become vulnerable to unprecedented disruption in the future. The overall stability and security of the region are at risk.

According to Mahmood (2019), the Red Sea region's geopolitical rivalry between Saudi Arabia and Iran has led to increased tensions in Yemen, with the conflict seen as a proxy war. The Houthi organisation in Yemen controlled coastal areas until a ceasefire agreement in 2018. The emergence of geopolitical dynamics obstructing maritime commerce by an Iran-aligned organisation has heightened concerns for the shipping industry, regional powers, and other nations.

In 2023, amid the ensuing Israel-Hamas war, which began on October 7, 2023, with broader regional implications, the Iran-aligned Houthi militant group has reemerged by conducting several attacks on merchant and commercial vessels, as well as several naval vessels in the Red Sea and Gulf of Aden (Davison and Stewart, 2023). The Houthi attacks on shipping in the Red Sea prompted a military coalition involving the US, UK, Bahrain, Australia, Canada, Seychelles, Norway and the Netherlands to launch operations on 11 January 2024 to counter Houthi attacks and capabilities, according to the US Department of defence (UDD, 2024). This response was in line with UN Security Council Resolution 2722, adopted on 10 January 2024. It marked the re-emergence of maritime security in the Red Sea and the Gulf of Aden as critical concerns in international geopolitics and trade (UNSC Report, 2024).

These emerging geopolitical security dynamics translate to the WIO experiencing a projected increase in shipping traffic. Firstly, the Houthi attacks have several far-reaching consequences for African countries. The most well-known has been that their attacks have caused many companies to send their vessels around the Cape of Good Hope, leading to increased transit times and costs. These disruptions have a ripple effect on global supply chains, affecting

everything from oil prices to the availability of goods. Increased shipping costs due to longer routes or heightened insurance premiums for vessels (carrying high-value goods) operating in these high-risk waters can cascade global trade and economies the longer this persists (Maritime Executive, 2023; IMO, 2023). This increase in expenditure ultimately trickles down to customers and imperils vital economic growth and recovery. The impact of Houthi attacks has an environmental dimension that extends around Africa. Attacks on oil tankers or accidents owing to navigational errors carry the risk of significant oil spills, which can devastate marine ecosystems and coastal communities' livelihoods (Walker, 2023). This is attributed to ships deviating from the Suez Canal and instead opting for the Cape of Good Hope despite incurring increased costs and longer days at sea due to security concerns arising from drone attacks on ships, increased risks of accidents, and piracy amid the Israel-Hamas conflict (Maritime Executive, 2023; IMO, 2023). Below (figure 3) is a map showing the rerouting of shipping traffic from the Suez Canal (a shorter route from Asia to Europe), to the Cape of Good Hope through the WIO:



**Figure 3: A screenshot from the Global Maritime Hub (2023).**

Another aggravating factor is the reduction in water levels at the Panama Canal, which is a vital passage for trade between the Americas, Asia, and Europe. The shift in shipping patterns is also a consequence of the decline in water levels in the Panama Canal due to the impacts of global warming. The author contends that the International Maritime Organisation (IMO) must work to complement the goals of the GBW initiative to speed up the process of shipping decarbonisation by 2030. To achieve this, GBW countries, its governance structure, and the African High-level Panel for a Regenerative Blue Economy should use channels such as the Indian Ocean Rim Association, whose principal mandate is to ensure maritime security and safety in the Indian Ocean region (IORA, 2023). This is projected to enhance GBW partnerships with other regional powers, such as India, Australia, and Saudi Arabia, to leverage the power of collective diplomacy, particularly after the agreement at COP28 to phase out fossil fuels (UNFCCC, 2023).

UNCTAD (2022) reported that international shipping accounted for around three per cent of global greenhouse gas emissions in 2022. In addition, the shipping industry accounts for 20.2 per cent of global Carbon Dioxide (CO<sub>2</sub>) emissions, positioning it as the second-largest contributor and a significant catalyst for the deterioration of oceanic health. The anticipated increasing trend of shipping activity in the Western Indian Ocean region underscores the pressing necessity to expedite endeavours to reduce carbon emissions in the shipping industry. The IMO, the worldwide governing organisation for the shipping industry, can contribute to making the GBW work by establishing robust benchmarks for reducing ships' greenhouse gas emissions. The shipping sector can substantially contribute to mitigating climate change and decreasing its environmental impact by attaining decarbonisation by 2030. Addressing these multifaceted challenges requires coordinated international efforts to bolster maritime safety, mitigate environmental risks, and foster diplomatic dialogue to prevent escalation and promote sustainable solutions.

On the one hand, where states are willing to cooperate through ad-hoc agreements in the absence of global frameworks, conservation efforts, as seen in the case of the GBW can be used as a tool to enhance cooperation between states rather than pulling them apart; therefore, contributing to regional stability, conflict resolution, and peacebuilding (Carius, Feil, Switer, Rekacewicz, Rucevska and Sevaldsen, 2003; Ali, 2007; and Mackleworth, 2016). On the other hand, political tensions remain simmering underneath these initiatives and will continue to arise as countries seek to exploit their marine resources for economic benefits as seen in the Kenya-

Somalia dispute which caused diplomatic tensions between the two countries (Walker, 2022). Therefore, it is important to be aware of possible hidden incentives of states involved in the GBW to establish or maintain their interests/ priorities in the manner in which these potentially disputed spaces are utilised and which ocean sectors are advanced in the context of geopolitical implications on the GBW initiative.

Several recommendations can be considered to maximise the impact of the Great Blue Wall Initiative on political security. Firstly, ensuring the active participation and representation of coastal communities in designing and implementing regenerative blue economy activities is crucial. This can be achieved through capacity-building programs, training, and the establishment of community-based organisations. Additionally, efforts should be made to address governance challenges, including corruption and weak institutions, to create an enabling environment for sustainable development and social inclusion. Lastly, international cooperation and partnerships should be fostered to provide technical assistance, financial support, and knowledge sharing to enhance the effectiveness and scalability of the initiative.

### **4.3. Conclusion**

In conclusion, the chapter provided an analysis of the potential of the GBW initiative to ~~achieve~~ promote human security in the Western Indian Ocean region using an ocean-based human security framework, which has revealed significant promise. By focusing on various elements of human security such as environmental security, economic security, food security, health security, and political security, the chapter offered a comprehensive approach to understanding the potential of the GBW to address the region's challenges.

The objectives of the GBW Initiative intersect across all these human security elements, which presents a unique opportunity to impact human security positively in the region. These instances exemplify only a fraction of the substantial potential inherent in this initiative. In the next chapter, the study will delve into the main findings of the research, provide recommendations for further study, explore specific strategies and actions that can be taken to maximise the initiative's impact and highlight areas where more research is needed to uncover the full potential of this transformative endeavour.

## **Chapter 5: Potential of the Great Blue Wall Initiative for Human Security in the Western Indian Ocean Region**

### **5.1. Introduction**

Maritime security in the Western Indian Ocean area has traditionally focused on military and naval strategies to combat piracy and ensure the safety of international shipping. However, this approach often neglects the human security challenges coastal communities face. Issues such as poverty, food insecurity, and environmental damage greatly impact the well-being and stability of these communities. Therefore, adopting a human security paradigm that accounts for ocean matters is essential.

This approach should consider ecological, social, and economic interdependence. Against this background, this study developed a human security framework that focuses on the ocean and acknowledges the root causes of insecurity in the Western Indian Ocean region. An ocean-centred security framework is an approach that focuses on addressing the well-being and stability of coastal communities in addition to traditional maritime security challenges such as combating piracy, which, in the case of WIO, are symptoms of neglected human insecurity conditions.

Unlike traditional military and naval strategies, the human security paradigm recognises the importance of also considering issues such as poverty, food insecurity, and environmental damage to achieve maritime security in the WIO region. This approach recognises the interdependence between human security and the overall health of marine ecosystems, underscoring the significance of managing resources sustainably and ensuring equitable access to marine resources.

Chapter Three of the thesis focused on an ocean-centric human framework and discussed the Great Blue Wall initiative, a comprehensive approach to sustainable development and ocean management in the WIO. The Great Blue Wall initiative is a comprehensive approach to sustainable development and ocean management in the Western Indian Ocean region. Its primary goal is to establish a marine protected area network that facilitates innovative initiatives for nature-based recovery such as ReSea, funded with \$30 million CAD from Global Affairs Canada, is executed by Mission Inclusion and the International Union for Conservation

of Nature in partnership with C-for-C and the Government of Madagascar. The project aims to directly benefit 275,000 coastal community members in Madagascar, Tanzania, Kenya, Mozambique, and Comoros by enhancing their resilience to climate change impacts. It focuses on strengthening marine protected areas, implementing nature-based climate adaptation strategies, and economically empowering women and youth in blue economy value chains. Specifically in Madagascar, the project targets communities in Antsiranana I and II, directly benefiting approximately 63,668 residents (IUCN, 2024). The GBW initiative recognises the crucial role of coastal ecosystems like mangroves and seagrasses in providing natural barriers against climate change impacts and enhancing the resilience of coastal communities. By 2030, the GBW initiative aims to establish a world where nature thrives and accelerates and expands ocean conservation efforts while enhancing ecosystems and the ability of communities to adapt. It advocates for strong political leadership and sufficient financial support to establish a sustainable blue economy.

Chapter Four assessed how the Great Blue Wall initiative can address the pressing human security challenges faced by coastal communities in the Western Indian Ocean region. It aligned the principles of the ocean-centred human security framework with the objectives of the GBW initiative. The findings highlighted the initiative's potential to enhance environmental and food security, promote economic opportunities, improve health security, and strengthen political security, thereby contributing to overall regional human security.

This concluding chapter of the study aims to combine the insights and data collected from the previous analysis to provide a comprehensive conclusion on the GBW to determine its potential to achieve human security in the Western Indian Ocean region and highlight areas requiring further research.

After conducting a thorough assessment of the Great Blue Wall initiative's potential to enhance human security in the western Indian Ocean region, several key findings have emerged.

## **5.2. Key Findings**

The Great Blue Wall initiative has the potential to significantly enhance environmental security in the region. Implementing marine protected areas and adopting sustainable fishing methods



are effective ways to preserve and safeguard marine ecosystems. These practices have several benefits for a healthy ocean, such as ensuring the long-term viability of marine resources, mitigating climate change, and maintaining biodiversity.

The initiative can potentially address the region's food security concerns. The GBW can improve the development of small-scale fisheries and support the livelihoods of coastal communities that rely on ocean resources. It does so by advocating for sustainable fishing practices and promoting and upscaling regenerative blue economy practices. Additionally, the potential of the Great Blue Wall initiative to improve health security in the region is evident through its linkages to food security and the restoration of vital marine ecosystems such as mangroves, which are essential natural barriers against flooding impacts.

The GBW has the potential to foster regional cooperation and harmonisation among coastal governments in the realm of political security. The initiative can enhance stability and peace in the region by tackling common challenges and advancing shared objectives, such as socio-economic factors leading to maritime (ins)security and the development of the blue economy. It can achieve this by offering viable alternative livelihood opportunities to coastal communities frequently excluded from economic benefits.

Regarding geopolitics and ocean conservation, this study has found that maritime boundary disputes still exist in the WIO due to maintaining the status quo of ocean boundary governance in Africa, rooted in colonial treaties espoused by Okonkwo (2021). The GBW Initiative and similar conservation efforts face significant geopolitical implications, particularly in regions with ongoing border disputes like the Kenya-Somalia conflict. These disputes are heightened when valuable minerals, oil, and gas reserves are found in disputed maritime zones. The tension between development and conservation is evident in countries such as Mozambique and South Africa, where economic priorities often favour marine resource exploitation over environmental protection and security concerns as highlighted in preceding sections.

This divergence in blue economy strategies highlights varying national agendas, where economic growth takes precedence potentially at the expense of conservation efforts and environmental sustainability. The Red Sea crisis further exacerbates these challenges, with increased maritime activities posing risks such as pollution and endangering marine



ecosystems. Geopolitically, these issues strain international relations and regional stability as countries contend with conflicting interests and vie for control over lucrative marine resources. Addressing these complex issues requires coordinated regional and international diplomacy to establish clear frameworks that balance economic development with conservation imperatives. This entails fostering dialogue among stakeholders to promote sustainable practices, enhance maritime security, and mitigate environmental risks. By aligning blue economy strategies with conservation objectives, it is possible to achieve sustainable development while preserving marine biodiversity and ensuring long-term environmental resilience across vulnerable regions like the Western Indian Ocean and beyond. Additionally, the GBW initiative's ambitious 2030 goals face significant challenges due to inadequate financing. SDG 14, which targets life below water, is notably the least funded, receiving less than 1% of global philanthropic contributions (World Economic Forum, 2021; United Nations Economic Commission for Africa, 2022).

In Africa, the scarcity of ocean finance is particularly acute. Although \$174 billion is needed globally to meet SDG 14, African nations are struggling to secure substantial investments. This financial shortfall impedes progress in ocean conservation and sustainable blue economy projects (World Economic Forum, 2021). The funding gap also jeopardizes the ambitious 30x30 goals, which aim to protect 30% of the world's oceans by 2030. Additionally, the region has already missed the Aichi Biodiversity Targets set for marine protection by 2020 (IUCN, 2021).

Seychelles stands out among WIO countries with its commitment to conserve 100% of its seagrass and mangrove ecosystems by 2030 under the GBW framework. Other countries, while supportive, have not yet made binding commitments to the Kunming-Montreal Global Biodiversity Framework's 30x30 goals. Tanzania has initiated the Tanga-Pemba Seascape, and Mozambique is expanding the Quirimbas Seascape to protect extensive marine areas (United Nations Economic Commission for Africa, 2022). Despite these initiatives, a more comprehensive regional commitment and increased financial support are crucial for realizing the initiative's full potential, ensuring the sustainability of marine ecosystems, and supporting the livelihoods dependent on them.

The GBW at its current stage of development and governance while it has the potential of strengthening cooperation in the region has not factored in the geopolitical challenges or how to navigate them and has yet to raise adequate funding for its ambitious targets. The author

argues that without proper governance frameworks in place, which are consistent with international law, there is a possibility of ocean-grabbing (Mackelworth, Seker, Vega, Marques, D'Anna, Giovanni, Goldsborough, Kyriazi, Pita, Portman, Rumes, Warr, Holcer and Draško, 2019). This term refers to the imbalance of power between ocean sectors, which benefits more powerful actors, usually in economic terms, over others. For example, government initiatives often deprive local communities of traditional resources through reallocations to benefit commercial sectors (Mackelworth et al., 2019). It is important to note that ocean-grabbing is consistent with ocean economies, which prioritise extraction over sustainability, rather than the sustainability models advanced by the blue economy framework (Jay, Alves, O'Mahony, Gomez, Rooney, Almodovar, Gee, de Vivero, Gonçalves, da Luz Fernandes, and Tello 2016). As highlighted in Table 2, some countries in South Africa have adopted ocean economy strategies while several others have developed blue economy strategies and/or policy plans.

The GBW initiative also has the potential to harmonise economic growth and conservation efforts according to the principles of the ABES (2019). Through strategic investments in the blue economy encompassing aquaculture, marine tourism, and renewable energy, the initiative aims to create additional employment opportunities, enhance livelihoods, and contribute substantially to the overall economic development of the Western Indian Ocean region. The outcomes of this study reveal the positive relationship between the GBW initiative and several elements of human security in the WIO region. However, it is crucial to acknowledge that there are still gaps in comprehending the full potential of the Great Blue Wall effort to achieve regional human security. Additional research is essential to comprehensively address these gaps and further enhance the effectiveness of the initiative. To strengthen our understanding of the potential impact of the Great Blue Wall initiative on achieving human security in the Western Indian Ocean region, future research endeavours could delve into various aspects. One significant area of investigation could be the initiative's efficacy in fostering the development of the blue economy within the region.

### **5.3. Gaps in Research and Recommendations for Further Studies**

The GBW initiative has the potential to bring significant benefits to human security in the WIO region. However, after evaluating the project, it has become clear that some areas require

further research. Specifically, more investigation is needed to explore the social and cultural aspects of human security under the GBW, focusing on the inclusion of marginalised groups such as women and youths, who comprise the region's largest demographic constituencies. Furthermore, more research is necessary to examine the impact of the GBW initiative on health security by monitoring the restoration of marine ecosystems and observing environmental changes. Food security will require improved coordination between the GBW initiative and the UN sustainable development agenda. This is an important aspect overlooked in the current body of literature. The GBW initiative has the potential to address IUU fishing-related issues, but further research is required to determine its effectiveness in this regard.

It is important to conduct a thorough analysis of the economic impacts of the GBW initiative. The initiative holds the potential to enhance economic stability in the region by concentrating on industries related to the blue economy and connecting them to wider markets through the African Continental Free Trade Area (AfCFTA).

Further, it is essential to explore the political and governance dimensions of the GBW plan in addition to the previously identified gaps. To ensure the GBW's long-term success and effectiveness, it is crucial to comprehend the political landscapes and regulatory environment of the nation-states and institutions that oversee its implementation. Lastly, understanding the influences of the social and cultural aspects of human security on the implementation of the GBW would provide crucial insights into the various communities' perceptions and experiences of the initiative and how these factors affect their sense of security.

#### **5.4. Recommendations and Strategic Engagement.**

It is important to note that the GBW initiative alone is not a panacea for overall human security, particularly regarding the effects caused by climate change in the region. The study has revealed that a lack of funds may hinder the implementation of the GBW. So far, the study has revealed that external donors such as the EU and the governments of Canada and France may raise questions about the ownership and true agency of this African-led initiative. Further, increased economic activities in the area may jeopardise potential gains in the initiative, given its significance as a key route for global maritime trade.

#### 5.4.1. Financing the GBW initiative

Regarding the lack of financing, this study proposes the following proven opportunities that can help assist countries in the region to obtain funds dedicated to the goals of the GBW initiative:

- Firstly, it is imperative that all countries in the region formally commit to the Kunming-Montreal Global Biodiversity Framework, targeting the protection of 30% of their marine areas by 2030. This could be achieved through regional agreements that promote a cohesive and collaborative approach under the GBW framework. Secondly, there needs to be a substantial increase in financial investment dedicated to ocean conservation. Governments should allocate more national funds and seek additional financial support from international organisations, development banks, philanthropic entities, and private investors. Strengthening public-private partnerships can also help attract the necessary investments and drive innovative sustainable blue economy initiatives. Furthermore, enhancing transparency and accountability in fund utilisation will build trust and encourage further investments. Lastly, engaging local communities and providing technical support will be crucial to ensure that conservation efforts benefit the local populations, fostering a sustainable and inclusive blue economy. By adopting these recommendations, the region can better achieve its conservation objectives and support the livelihoods dependent on marine resources.
- Blue Bonds: Land-based Green Bonds towards the energy transition are increasingly gaining traction. However, ocean-based finance has not yet attained similar buy-in. A Deloitte report written by (Barber et al., 2021) on ocean finance shows that while natural climate solutions already receive less than three per cent of all climate finance, the ocean receives less than one per cent despite billions of dollars in pledges by developed countries. Akin to green bonds, these funds are directed towards sustainable initiatives, only focusing on marine conservation. Despite the low interest, most likely from a lack of awareness, interest is slowly increasing in low-income countries that rely on the ocean and experience climate change effects such as flooding, which often divert investor interest.

The Republic of Seychelles launched the world's ever-sovereign blue bond in 2018 towards marine conservation and fisheries projects. The \$15 million blue bond from international investors through the World Bank demonstrates innovative financing instruments that go towards the sustainable use of the oceans (World Bank, 2018).

According to Horner (2023), in August 2023, Gabon became the latest African country to obtain blue bonds through a sovereign “debt for nature swap”. Gabon will issue a blue bond to preserve its biodiversity and climate resilience. The deal, backed by a US\$500 million political risk insurance policy from the US International Development Finance Corporation, will delay near-term dollar refinancing and liquidity risks, making the bond issuance less expensive than conventional dollar debt.

- Further, the Global Environment Facility (GEF) assembly, comprised of Ministers, government officials, business heads, leaders of GEF Agencies and the leading global environmental conventions, as well as civil society representatives and Indigenous peoples from all 185 GEF member countries, launched a new cycle of funding and programming in Canada in August 2023 (World Economic Forum, 2023). The establishment of the new Global Biodiversity Framework Fund, with initial contributions of \$200 and €10 million from the Canadian and British Governments, respectively, breathe new life into global biodiversity finance and will contribute to the achievement of the Kunming-Montreal Global Biodiversity Framework and the realisation of the 30x30 goal (World Economic Forum, 2023). The fund aims to boost global finance and synchronise international development with the GBF framework to counteract biodiversity decline. This will be achieved by endorsing Nature-based Solutions, climate finance, the involvement of indigenous populations and local communities in conservation efforts, gender equality and youth inclusion, and education on climate and environmental issues. The GBF fund dovetails with the priorities and goals of the GBW initiative. It presents an opportunity for GBW countries to promote public-private partnerships to advance ocean conservation and its positive trickle-down effects on human security.

#### **5.4.2. IORA as a Geo-Strategic Partnership**

Regarding strategic engagements, the IORA holds significant potential to contribute substantially to expediting decarbonisation in the shipping industry. Through collaborative diplomacy, GBW-affiliated countries can leverage their IORA membership to advocate for more stringent regulations and support initiatives to mitigate ship emissions. By strategically pooling their collective influence, IORA member nations can influence the IMO to prioritise activities focused on reducing carbon emissions and ensuring that maritime safety and preparedness centres are set up in the WIO to mitigate the likelihood and impact of maritime accidents, such as the Wakashio oil spill along the coast of Mauritius which causes pollution, kills marine life and threatens food security in the region. This collaborative effort would significantly advance the objectives of the GBW initiative for ocean health and sustainable development. Additionally, it aligns with the pursuit of human security by aligning environmental conservation with economic growth, consistent with the goals of the Blue Economy as outlined by the ABES (2019). Furthermore, this approach serves to give practical effect to the recent agreement at the Conference of the Parties on Climate Change (COP 28) in Dubai, United Arab Emirates, aiming to phase out fossil fuels by 2030 and transition to cleaner, more sustainable energy sources such as wave energy from the ocean, as articulated by the UNFCCC (2023). The author, therefore, argues that these emerging dynamics should prompt the need for further studies in the realm of international relations on moving from geopolitical competition to cooperation in the WIO to foster stability, sustainable development, and human security by harnessing the diplomatic cooperation potential of regional organisations such as IORA in steering ocean governance through initiatives such as the GBW.

As such, the Great Blue Wall initiative can function as a strategic foreign policy instrument for establishing maritime cooperation with other influential countries in the wider Indian Ocean region, such as India, as it aligns with India's Security and Growth for All in the Region initiative, which highlights the significance of ensuring a balance between maritime security and economic growth in the Indian Ocean domain. SAGAR is India's guiding principle for cooperation between the two initiatives (Gujjar, 2021).

Further, regarding the governance of maritime boundaries, at the global level, UNCLOS remains the most effective framework for ocean governance and maritime boundary dispute resolution. It requires states to settle border disputes through negotiation and, failing which, refer the dispute to either the International Tribunal of the Law of the Sea or the International Court of Justice. However, UNCLOS remains open to interpretation, which has led to several

persisting maritime boundary disputes in Africa. These disputes will likely worsen due to population growth, the discovery of economic resources, and climate change impacts such as rising sea levels, which alter land and maritime boundaries.

To address maritime boundary disputes the research suggests that the GBW initiative's governance structure should prioritise cooperation over competition as its primary guiding principle. Negotiation should be the second approach, while the overall governance regime should be anchored in the provisions of UNCLOS on boundary matters. This can only be achieved within a stable institutional framework, with leadership at the AU level being vital. The AU border program (AUBP) must deal with boundary disputes regionally before escalating them to ITLOS or the ICJ. However, the AUBP is not well-equipped to deal with maritime boundary disputes, which is why the African High-level panel should lobby to strengthen it with sitting judges and resources.

To mitigate the risk of ocean grabbing, it is recommended that the GBW countries align their ocean strategies within the AU ABES to exclusively emphasise the sustainable utilisation of ocean resources, as advocated by the African Union (AU). This would involve localising the ABES by adopting national Blue Economy Strategies and implementing regional governance strategies such as those suggested by AIMS 2050, the WTO fisheries subsidies agreement, and the High Seas treaty (Dahir and Willima, 2023). These strategies would contribute to the sustainable use of ocean resources through global ocean governance.

### **5.3. Concluding Remarks**

The theoretical framework articulated in this study underscores the potential of the GBW initiative in addressing the multifaceted aspects of human security within the WIO region. The initiative is committed to advancing human security by acknowledging interconnectedness with environmental, food, health, political, and economic security dimensions. Despite these positive attributes, a more comprehensive understanding of the initiative's potential and impact is imperative. While the GBW holds much promise in promoting human security in the Western Indian Ocean region, it is still nascent, making it difficult to assess and quantify its impact comprehensively. Several gaps persist, necessitating further research and exploration.



Firstly, forthcoming research should adopt a political ecology framework to examine the specific impact of the initiative on vulnerable coastal communities. It should evaluate its efficacy in enhancing their livelihoods and socioeconomic circumstances, including access to resources. Moreover, given its growing prominence and transnational character, additional research is required to appraise the effectiveness of the methods employed to address IUU fishing.

It is also necessary to analyse the measures implemented to tackle pollution and climate change, specifically their effects on health security and the overall resilience of the region. While the GBW recognises the significance of political security, it is necessary to conduct a more comprehensive examination of its influence on governance structures and collaboration among regional actors, particularly emphasising the local indigenous communities' vernacular understanding and language of security and their solutions.

The GBW initiative is essential to address the diverse and interconnected challenges linked to environmental, food, health, political, and economic security in the WIO region. The initiative promotes sustainable marine industries and creates economic opportunities for coastal communities. It aligns with the overall goal of enhancing human security. To achieve this, regional cooperation across all sectors must increase. Strong political support and leadership will also ensure the initiative's sustainability, inclusivity, and transformative impact.

In conclusion, this study has demonstrated the importance of adopting a human-centred approach to ocean security in the WIO region. The Great Blue Wall initiative offers a promising pathway toward achieving human security by recognising the interconnectedness of ecological, social, and economic factors and prioritising the well-being of coastal communities. While it offers a promising pathway towards achieving better human security in the WIO, it is crucial to ensure its effective implementation. This involves addressing governance challenges, fostering regional cooperation, and forging strategic partnerships with other Indian Ocean partners to meet the initiative's objectives. By doing so, the initiative can significantly impact enabling a more sustainable, inclusive, and secure future for the region, by ensuring holistic ocean security practices.



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