

Review

# Blue Gold: Advancing Blue Economy Governance in Africa

Henrietta Nagy <sup>1,\*</sup>  and Siphesihle Nene <sup>2</sup>

<sup>1</sup> Department of Business and Management, Kodolányi János University, 1139 Budapest, Hungary

<sup>2</sup> Department of Regional Science, Hungarian University of Agriculture and Life Sciences, 2100 Gödöllő, Hungary; Nene.Siphesihle.Carol@phd.uni-szie.hu

\* Correspondence: henriettanagydr@gmail.com

**Abstract:** In Agenda 2063, the African Union focused on making the use of ocean resources a priority in the new frontier of its blue economy. However, most African countries are still lagging in taking the initial steps of identifying and prioritising blue economy sectors and understanding the risk to sea and ocean health. Many have not developed integrated blue economy strategies and road maps, and this delays the progress and vision for an African blue economy envisaged by Agenda 2063 and 2050 Africa's Integrated Maritime Strategy. For Africa, however, the blue economy offers greater opportunity beyond the economy and the environment. It presents Africa with a unique opportunity to achieve its national objectives, to improve regional integration, and to exert influence in the global setting. In this review, we agree with Schot and Steinmueller (2018) that we need to develop new framings and begin to experiment with new policy practices to address social and environmental challenges. Furthermore, we maintain that existing theories and knowledge based on innovation studies in Africa may be significant for designing and implementing policies towards climate change mitigation, blue economy governance, and sustainability transitions. Finally, we conclude by highlighting how experimentation is the key feature of transformative innovation policy that Africa has to employ in its blue economy while emphasizing how Africa (and the Global South generally) are in a unique position to develop their own transformation models that are different from those of the Global North.

**Keywords:** blue economy; ocean governance; policy development; transformation



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## 1. Introduction

The definition of the “blue economy”, in the Charter on Maritime Security and Safety and Development in Africa (Lomé Charter), includes aquatic and marine spaces (seas, coasts, lakes, wetlands, floodplains, rivers, and underground water) while also covering a variety of production sectors like fishing, aquaculture, tourism, shipbuilding, underwater mining, transport, bioprospecting, and related activities [1]. Africa has embraced the concept of the blue economy and adopted the blue economy narrative; however, understanding the developments of the continent's blue economy requires an understanding of the blue growth agenda [2]. African governments are progressively implementing a blue or ocean-based economy as an approach for generating economic growth to better improve social welfare and equity and to reduce environmental and ecological concerns on the continent [3].

Thirty-eight of the 54 states in Africa are coastal and they fall under maritime zones under African jurisdiction [4]. In addition, it is estimated that the lake zones on the continent cover approximately 240,000 sq. km, while 64% of the continent land area is covered by transboundary river basins [5]. The continent is rich in natural living and non-living resources such as water, flora and fauna, wildlife, fish, minerals, and hydrocarbons. In addition, Africa has a potential to further develop its blue economy. Over 90% of Africa's imports and exports are transported by water, which emphasizes the great geographical position the continent has to advance regional and international trade [6]. The presence

of vast ocean and lake resources creates sufficient opportunity for African countries to diversify their economies [5]. However, despite Africa's abundant natural resources and blue economy, the continent is plagued with poverty (46% of the population lives in extreme poverty). The high levels of poverty increase the vulnerability to climate change and environmental degradation [7]. The majority of the African population is poor, and they are the most vulnerable to environmental degradation and the least able to survive. The result of prolonged human-induced degradation of ocean and aquatic resources is deteriorating human welfare and health. These environmental hazards are responsible for approximately 28% of the disease burden in Africa [8].

The concept of the blue economy originated in 1992 during the Earth Summit in Rio and was later featured in the international agenda at the 2012 Rio+20 Summit in Brazil [8]. Decades later, the African Union's (AU) Agenda 2063—the main policy framework towards transforming Africa's socio-economic development—referenced the concept in 2014 [2]. The African Union defines the blue or ocean economy as “sustainable economic development of oceans using such techniques as regional development to integrate the use of seas and oceans, coasts, lakes, rivers and underground water for economic purposes, including, but without being limited to fisheries, mining, energy, aquaculture and maritime transport, while protecting the sea to improve social well-being” [9]. This definition emphasizes the features that characterize the blue or ocean economy as one that is local and more resilient to better reduce the likely impacts such as economic or environmental instabilities developing into regional or even global crises, as is the case currently [10].

The direction Africa has taken in adopting blue economy approaches reveals a broader awareness of its importance at the global level. This creates avenues to establish international, regional, and bilateral cooperation and partnerships, including public, private, and public–private partnerships (PPPs) [6]. However, Africa needs to coordinate policy and chart its own path identifying, defining, and understanding what prosperity and progress is for the continent, while encouraging innovative thinking and practices that will enhance human and ecological growth [11]. While doing the above in connection with the AU Agenda 2063, there is an opportunity for Africa to develop a blue economy narrative that is best suited for the continent and the development goals, co-operations, and societal needs that are important to move further into the 21st century. Weber and Rohrer (2012) claim that policy transformation change only starts when policies for transformative change begin to acknowledge these four types of failures: “directionality, policy coordination, demand-articulation, and reflexivity” [12]. This is a particularly useful concept which we would like to draw upon in this review, mainly focusing on policy coordination [13]. Because of the limitation of this being a desktop study, the authors contribute an overview of the current African blue economy. Our attention to the blue economy in this review briefly highlights the challenges that exist on the continent while discussing opportunities that exist. This review aimed to raise awareness and provide a basis for further research. Further in-depth analysis using case studies would help contribute to ongoing research in this area.

This review focuses on the role of ocean governance policies in the context of opportunities and challenges created by the blue economy. The first part provides an overview of the blue economy in Africa and the potential of advancing the blue economy on the continent. The second part covers a review of dominant policies regarding the challenges in advancing the blue economy. We further investigate how policies must be employed to maximize opportunities and benefits provided by the blue economy and to eliminate/decrease the challenges it faces. Our research draws mainly on the concept of transformation defined by Schot and Steinmuelle (2018) [13]. The results of the discussion reveal that the African Union will need to focus on experimentation to embrace its innovation policy.

## 2. Methodology

To fully address the aims of this review, various pieces of accessible “grey” literature were explored using a content analysis. This primary method of data collection included

analysing documents that made reference to the “blue economy”, the “blue agenda”, or “ocean governance”. This method was adapted from Bueger (2015), who used a three-tier approach to examine a governance “buzzword”. This process entailed the examination of three crucial aspects of the blue economy: the way the term is seen and used in comparison to other concepts (blue economy as an ideology), what is considered as a component of the blue economy (determining the scope of the blue economy), and best practices in the blue economy (adopting the blue economy) [14]. The majority of the literature that was analysed consisted of policy documents, conference proceedings, position papers, academic articles, and governmental reports, which were derived from two primary methods:

1. A broad web search for scholarly literature using the terms “blue economy” and “blue agenda.”
2. A targeted web search of known agencies, organizations, and non-government organizations actively involved in blue activities (e.g., the African Union, the United Nations Economic Commission of Africa, etc.).

Nonetheless, this is not the complete list but an attempt to show the ongoing dialogues in the blue economy grey literature from Africa. In total, 43 policy documents from the AU blue economy were used in this analysis. To better address the identified gaps in this review, the findings were further supported by examining published scholarly literature from academics researching the development of the blue economy in other regions of the world. The different ways that the term “blue economy” is utilized and understood in different scholarly literature was examined by means of a content analysis. This process involved repeat coding and grouping recurring themes or concepts found within abstracts and introductions of each document [8]. A preliminary thematic analysis identified five common themes found across various grey literature, which were previously identified by Keen et al. (2017), as fundamental for the blue economy: “economic, environmental, social, innovation and technical capacity, and governance tools or approaches” [15].

### 3. Results and Discussion

#### 3.1. Potential for Blue Economy

The blue economy is one of the main focuses for AU Agenda 2063 and 2050 Africa’s Integrated Maritime Strategy (2050 AIM Strategy). In Agenda 2063, it is viewed as the catalyst towards achieving socio-economic change. In the 2050 AIM Strategy, the blue economy is mentioned in the Africa’s Integrated Maritime Strategy and is prioritised as the “new frontier of African Renaissance” [16]. By adopting the 2050 AIM Strategy in 2014, the AU were committing to a shared continental vision and strategy to guide relevant responses to maritime insecurity [17]. These initiatives direct and advance efforts towards the continent achieving an integrated and multidimensional blue or ocean economy. The African Union has identified the blue economy as the engine of the structural transformation for Africa on many fronts. For instance, the International Energy Agency estimates that, in Africa, the ocean renewable energy power potential can provide up to 400% of current global energy demand [18]. In 2010, it was estimated that the total annual economic value of maritime-related activities reached 1.5 trillion Euro. In 2020 the predicted economic value was 2.5 trillion euro per year. In 2030, the estimated total annual economic value will reach EUR 3 trillion per year [19].

The 26,000 km African coastline is important for industrial, environmental, developmental, and security purposes. There are approximately 100 ports in Africa, and 52 of them handle containers and transnational trade, which is important for the continent’s maritime economy [19]. It is estimated that the output of these African ports will increase from 265 million tons in 2009 to 2 billion tons in 2040. The maritime industry is approximately valued at USD 1 trillion a year. By having just and effective economic policies, the value of the industry could triple in just two years [4]. With 90% of Africa’s imports and exports being transported by sea, the growth potential of Africa is dependent on improving ocean–land connections, which are currently lagging in other regions [20]. The majority of the

countries in Africa rely on the ocean economy, and it could be an engine for economic growth if fostered well.

In the past decade, there have been new emerging industries within the blue economy, namely, “aquaculture; marine renewable energy technologies for wind, wave, and tidal energy; bioproducts (pharmaceutical and agrichemical); blue or ocean carbon (carbon storage in mangroves, seagrass, and saltmarsh); and desalination” [3]. This further highlights the various opportunities that exist for industrialization and economic development. Over 200 million African people depend on fresh water and marine fish for food security, and about 10 million people derive an income from these sources. According to the African Union (2014), the approximate first-sale value of African fisheries (marine, inland, and aquaculture) was USD 19.7 billion per annum. They also forecasted that an additional USD 2 billion would be available annually for African economies if there is sustainable management of the fisheries sector (AUC, 2015). These are some of the main reasons Africa requires holistic and comprehensive approaches to harness this potential and opportunities [5].

### 3.2. *Governance of Africa’s Oceans to Advance a Sustainable Blue or Ocean Economy*

Garland et al. (2018) explain the importance of governance, politics, and governments in mitigating and managing the repercussions of failing or rising industries and the wider effects it has on the regions, employees, and owners based on any system change resulting from transitioning to low-carbon or to the development of marine cluster economies [20]. Consequently, for years now we have seen the growing need for governments to acknowledge the importance of aligning social and environmental problems with innovation objectives. Schot et al. (2018) assert that climate change, the eradication of poverty and pollution, and increasing inequality “have been transformed into challenges and opportunities for science, technology and innovation policy.” For example, through African initiatives like the AU Agenda 2063, the AU envisions innovation to address the most pressing societal challenges and transition to a low-carbon and inclusive economy [13]. Governance in Africa greatly influences the management and coordination of natural resource wealth. To a degree, good ocean governance could unleash the full potential of the oceans towards reaching the desired outcomes in a sustainable blue economy [4]. However, the AU need to identify gaps in existing frameworks for ocean governance to support the path towards achieving a blue economy.

The blue economy in Africa is aligned and directly linked to United Nations Sustainable Development Goals (UN SDGs), specifically SDG 14, which promotes the “sustainable use [of] oceans, seas and marine resources for sustainable development” (UNECA 2016: 9). Understanding the blue economy within the African perspective is fundamental for developing policy. There is a growing need to link Africa’s blue economy to the continent as a “global powerhouse of the future” narrative, where the blue economy is perceived to have a major influence towards the growth and transformation of the continent [6]. The former executive secretary of United Nations Economic Commission for Africa (UNECA), Carlos Lopes, reiterates this idea by saying that the blue economy “is a timely contribution to help the continent harness its ‘new frontier’” (UNECA 2016: xii). However, such notions of “frontiers” and “progress” require a thorough interrogation into blue economy governance (e.g., how blue economy “resources” create new governable spaces and support certain ways of governing). The narrative of the African blue economy provides the impression of a homogenous continent, which is not the reality [6].

The Global South, which, in this context, is Africa, should be able to experiment instead of following transformation models from the Global North [13]. South Africa, Mauritius, and the Seychelles are the top countries in terms of implementing national blue economy strategies [21]. These countries are in a position to achieve best practices that other African countries can emulate. Countries like Ghana, Nigeria, and Kenya are also making progress towards developing their blue economy [22]. Following Schot and Steinmueller (2018), this review also calls for transformative change to address the

current global social and environmental challenges such as the AU Agenda 2063 and SDGs, where transformation is defined as “socio-technical system change”, which is used mainly in the sustainability transitions literature [13]. The AU needs to explore different transformative innovation policy options towards making the use of ocean resources a priority in the new frontier of its blue economy [17]. Experimenting is a key feature in achieving any level of transformation, and it is a concept that is supported by different sustainability transition scholars (Kemp et al., 1998; Schot and Geels, 2008) [13].

Currently, the AU has the task of driving the region towards successful economic development with its various institutions and organisations being important for the advancement of the blue economy. However, the existing frameworks and approaches fail to highlight the importance of the continent’s coastal and marine resources for trade and economic development [23]. In this context, transformative change needs to address policy coordination failure by including integrative coordination in the initial stages of transformative change development. Attention should be on development and multi-faceted coordination in a process of working together towards transformative change [24]. The concept of tentative governance advanced by Kuhlmann and Rip (2014) describes this framework. It is understood as an “approach which is provisional, revisable, dynamic, and open and includes experimentation, learning, reflexivity, and reversibility” [25].

### 3.3. Building on Existing Policy

In policy development, experiments are recognised as short-term spaces used by various actors to collaborate on different possible avenues [26]. This includes policy actors, scholars, business owners, community members, and private donors. This is defined as strategic niche management, which is able to combine policy development and action with transformative governance. Ensuring that these spaces do not become pilots projects that employ traditional (top-down approaches) requires experimentation [24]. Challenging goals like Agenda 2063 require that actors understand that this process is unpredictable and that failure is a learning curve [26]. The goal should be on sharing new common prospects and ideas, forming new bonds and networks, and influencing new markets (niches) that will compete with existing mainstream markets and institutions [27]. However, the biggest challenge for transformative innovation policy in Africa is how it encounters significant uncertainty, quid pro quo, and corruption to serve interests and visions of certain factions both regional and international [28].

Global initiatives like the Paris climate agreement set ambitious goals to reduce greenhouse gas emissions to limit the increase of global temperatures in this century, and the United Nations (2015) formulated 17 SDGs that are interlinked to promote a balance between economic, social, and environmental needs, which allows sustainable ways of economic growth. The question of how important innovation is for creating a better world is based on the assumption that science, technology, and innovation contribute to the betterment of the world [24]. Innovation policy focuses on advancing research development and building national systems of innovation. Consequently, it is assumed that these policies can result in green growth where governments can invest in clean technology, reduce pollution, and clean up the environment. Furthermore, assumptions are made about how these policies will reduce inequality through creating employment opportunities resulting from growth and income distribution. These assumptions can only be a reality if nation states, despite globalization, have enough resources to invest in clean technology for longer periods of time, address tax avoidance, and are not plagued by corruption or captured by other interests to distribute and direct investment in certain directions [28]. Schot et al (2018) pose a fundamental question about whether states are in the position to deliver on this. As the discussion in this review shows, in Africa, there is evident erosion of the power of nation states, but even if there was the presence of a strong state, the more challenging issue is how externalities like climate change can be regulated using clean technology and distributional measures [24].



Public policies are generated from identifying past experiences and actions, reflecting on existing challenges, and predicting future potentials for action (Table 1). The African Union policy scholars and practitioners have, over recent decades, drawn from past, present, and future experiences (mainly from the Global North's development paradigms) to guide analysis and action [24]. Table 1 summarizes a non-exhaustive list of linkages between the blue economy development and the SDGs and Agenda 2063 aspirations that mention the blue economy [6].

**Table 1.** Linkages between development of the blue economy and SDGs and AU Agenda 2063 aspirations.

Potential POSITIVES of Proper Development of the Blue Economy	UN SDGs	AU Agenda 2063: Aspirations	Potential NEGATIVES of Improper Development of the Blue Economy
Transition to low-carbon economies Resilience to uncertain climate future	13 Climate change	7 Environmentally sustainable and climate-resilient economies and communities	Increased carbon intensity Coastal degradation leading to climate vulnerability
Enhanced health of aquatic and marine ecosystems Increased stock abundance supporting sustainable fisheries	14 Life below water	6 Blue/ocean economy for accelerated growth	Overexploitation of aquatic and marine resources Environmental degradation
Increased water security Enhanced sustainable transboundary water sharing	15 Life on land	7 Environmentally sustainable and climate-resilient economies and communities	Nutrient pollution Biodiversity loss
Improved governance Promotion of continental peace and security	16 Life on land	12 Capable institutions and transformative leadership in place	Resource conflict Failure to implement and enforce laws and regulation Dutch disease and resource curse

Adapted from UNECA, 2016 and AU Agenda 2063.

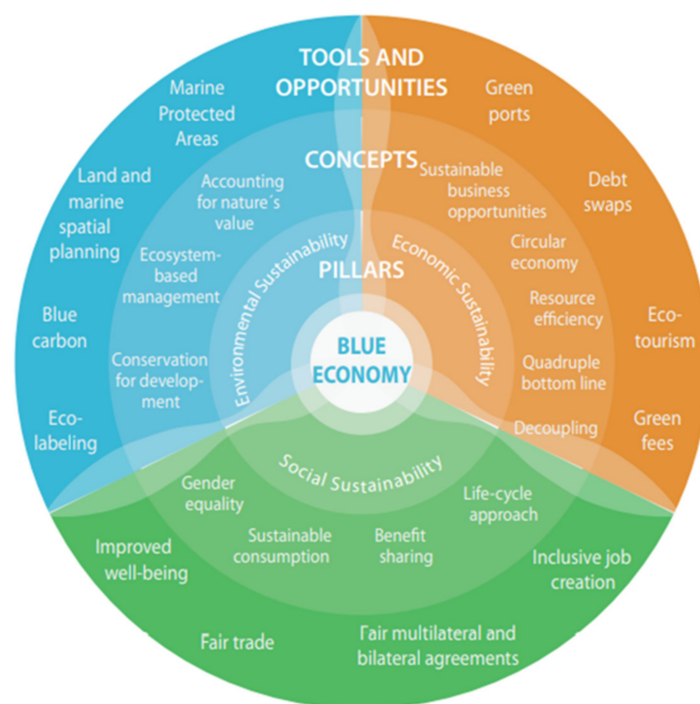
The economic growth of the blue economy in Africa, like in other parts of the globe, is characterised by industrial mass production and mass consumption that relies on fossil fuels, is energy- and resource-intensive, and produces large amounts of waste. The growing economic crises and inequality on the continent highlights how existing socio-technical systems employed to meet basic human needs are unsustainable [29]. These socio-technical systems in place need new policy framings to guide and manage the negative impacts and contributions of these systems. Science and technology framings that have evolved since World War II contribute very little to finding solutions to the socio-technical system of modern economic growth, which they are integral to and have contributed to [24].

### 3.4. Approach Transformation

Sustainability transitions scholars have highlighted the challenge towards providing good models for how policy can support the mobilization of transition towards sustainability. To deal with the challenges in blue economy in Africa, innovation and policy are key to addressing the existing issues of poverty, inequality, and exploitation of natural resources [28]. Like in many parts of the globe, the traditional supply-orientation of research and innovation policies is the most utilised in Africa. This linear approach needs to make way for more comprehensive and holistic approaches that use a wide range of policy instruments and that emphasise the important role of the demand for innovation [30].

Innovation policy making is dependent on having a holistic outlook and considering every factor that influences innovation; by doing this, the aims of the policy will be achieved [28]. The desired blue economy framework (Figure 1) illustrates the opportunities that exist when the system creates inclusive, holistic, intersectoral-linked develop-

ment spaces where economic growth is not the sole measure of development but where environmental, social equity, and governance/transparency are equally important [6]. This proposed blue economy framework promotes an “integrated, systemic, dynamic, inclusive, participatory, and ecosystem-based approach where sectoral barriers are reduced at the activity and governance level, and environmental, social, and economic factors are incorporated and achieved for all blue economy activities” [6]. Effective innovation towards achieving sustainable economic system relies on the active engagement of different stakeholders in various sectors, levels of society, and parts of the world [28].



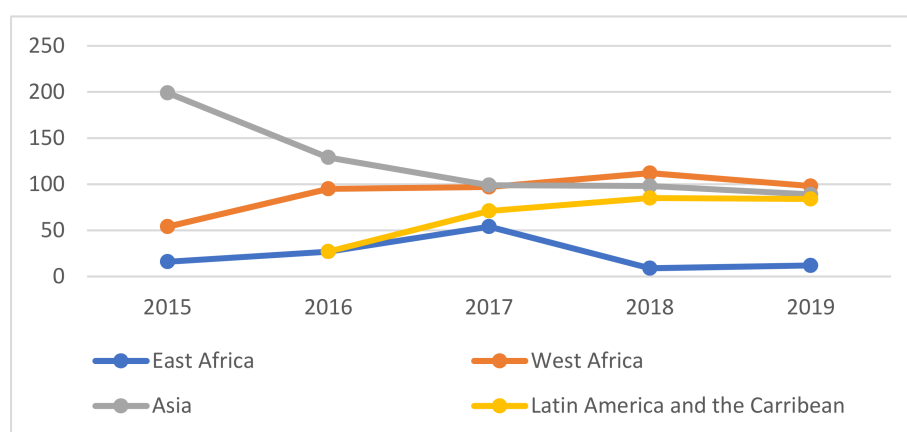
**Figure 1.** Tools, concepts, and pillars of the blue economy (adapted from UNECA, 2016) [31].

In the African context, there is ample talent, knowledge, and resources to achieve successful transformation within the blue economy [32]. In Africa, if the countries would embrace the potential offered by the renewable energy revolution, it would enable policy makers to promote green innovation, boost productivity, create new employment, and speed up the transition to a sustainable economic system [28]. As mentioned before, Africa has enormous renewable energy resources that are untapped (including wind, tidal, and wave energy). Energy development is one challenge in blue economy development in Africa. In 2020, about 592 million Africans had no access to electricity, thus Africa needs to explore options to meet the UN’s target of electricity for all by 2030 [33]. The energy development potential from the sea and ocean is greatly unacknowledged, planned for, or mirrored in existing policies related to sectors such as transport and tourism. Thirty countries in African have developed policies that reflect the potential to integrate nuclear energy into the future energy mix [34]. Currently, only South Africa has an operational nuclear plant, while Egypt is expected to construct a 4.8 GW power plant. Other Africa countries are expected to be ready by 2030, and these include Algeria, Kenya, Ghana, Morocco, Nigeria, Sudan, and Tunisia [5].

Establishing a multisectoral and land–sea holistic approach would lead to the awareness of countless opportunism in the blue space. Knowledge and awareness of blue economy development policy is inadequate, and this needs greater awareness and knowledge-broadening attempts at the policy scale. A well-planned and integrative framework demands an innovative method of formulating new sources of development opportunities. This further highlights the importance of fostering transformative policy thinking and

promoting creative and workable policy instruments. The traditional linear top-down approaches restrict stakeholder participation and community-level and context-specific responses. This makes this approach the least favourable towards a sustainable transition and awareness creation [24].

In UNECA (2016), it is explicitly stated that “criminal activities such as Illegal, Unreported and Unregulated (IUU) fishing; piracy and armed robbery at sea; illicit trafficking of goods and people; and environmental crimes also pose an acute threat to the sustainable use of blue economy resources and have a negative impact on security, social development, and economic growth of the continent” [35]. As illustrated in Figure 2, West Africa has the highest and most frequent number of piracy and armed robbery incidences globally. In 2018 and 2019, there were 112 and 98, respectively, of such incidents in West African waters largely because those countries on the west coast are oil rich. There has been a gradual decline in piracy and robberies in East Africa since 2011. This is largely because of multi-national initiatives to increase security and patrol these waters to reduce piracy. In addition, building strong legal capacity to prosecute criminals has helped reduce the numbers. However, policy development in the region has been focused more on security policies than on the economy. The AU member states need to find a balance to achieve the goals set out in 2050 Africa’s Integrated Maritime Strategy [36].



**Figure 2.** Worldwide piracy and armed robbery at sea incidences (2015–2019). Source: The state of Maritime Piracy, One Earth Future. \* Data for 2015 only counted incidents in Southeast Asia.

As seen in East Africa, enhanced security could then serve as a catalyst to attract high investment and develop new business opportunities in key sectors to boost the blue economy forward. Greater rapid economic progress could create employment opportunities for the 200 million youths in Africa. This would benefit national security and decrease economic migration [31].

Transformative change is characterized by its multifaceted approach to transforming various systems thus leading to the transformation of the structure of the economy and society, while coordinating with other cross-cutting policies, including tax policy, economic policy, social policy. Finally, Schot et al. (2018) adds that there are “multi-level policy coordination failures to overcome between local, regional, national, and international policy” [24]. For example, the majority of regional economic communities succeed at achieving resource management and environmental sustainability; however, they fail to develop systems to advance the blue or ocean economy [36]. Transformative change requires a holistic integrative regional approach; however, this approach is likely to encounter bureaucracy, high costs, and corruption by different interest groups that benefit from dominant socio-technical systems [24]. The analysis above raises questions about the usefulness of national research and innovation councils in Africa to support transformation if their coordination efforts are undermined.



#### 4. Conclusions and Recommendations

The blue spaces in Africa are experiencing a high level of degradation, overexploitation, and decreasing human activity because of global warming, pollution, overpopulation, oil spills, and mining activities, which damage ecosystem habitats. The management of these water spaces has been gradually fragmented, abandoned, and often overlooked, especially in regions where transboundary spaces are shared by millions of people in different countries [17]. The blue economy is a highly multifaceted and interdependent economy, thus making it difficult to manage and monitor. The different sector activities of the ocean economy are interdependent, which results in various effects throughout the supply chain when one sector impacts other industries [37]. The transition to sustainability needs both innovations in the economy and governance.

The analysis above demonstrates the importance of setting a road map and vision for sustainable development of the ocean economy [27]; the need to establish a regulatory framework; and different institutional science, technology, and innovation (STI) approaches for the blue economy, including setting up a ministry for the blue economy, coordination of the blue economy at a high office level, such as the office of the president, prime minister, or the creation of an inter-ministerial coordination mechanism. The discussion also highlights the importance of institutional planning, monitoring, and evaluation for the blue economy [31], exploring ways that new higher education strategies could create opportunities for a sustainable blue economy for decades to come [22]. This initiative could drive the launch of innovative programs to attract students from various educational and social backgrounds to foster a new generation of blue economy leaders [20]. Regional economic communities, intergovernmental organizations, and state's partnerships should be strengthened within the framework of AU Agenda 2063 and the AU 2050 AIMS. The success of these partnerships should result in a wider knowledge base, multifaceted socioeconomic and political integration, and possibly the establishment of a new geopolitical space [38], developing an African-grown paradigm incorporating all sustainable development dimensions.

Furthermore, we agree with the assertion by Schot et al. (2018) that it is mutually beneficial if both the Global South and the Global North use their unique geographical and political settings to experiment. This would result in transformative change that is more impactful. However, as mentioned before, this transformation framing should create alternative and new pathways that support local generation and experimentation. Most important should be the willingness to embrace and adapt to the complex system changes that will advance transformation. Wide-scale regional change will require more than STI policies, it will be a combination of various other policies. This highlights the importance of existing actors in actively engaging in this multifaceted historical process. Transformation innovation policy will lead to an effective blue ocean governance if policy makers and governments respond to "what is happening in and to the contemporary world in transition" [24].

Lastly, this review highlights the need for further research in emphasizing how informal institutions and policy can regulate human behaviour in the new philosophy of the blue economy. Such research will further explore practical dimensions to better implement environmental and people-centred policies driven by continental universities, think tanks, private companies, civil society organizations, and communities. These studies will focus on existing blue economy practices and will build on these. Achieving this provides opportunity for better implementation of policies that impact the wider society. We believe the aim of the blue economy should be to protect blue spaces while creating a good quality life for the African population.

In conclusion, the challenges outlined in the SGDs and in Agenda 2063 affect people every day on the continent, and this reiterates the need for policy makers and researchers in this area to develop new frameworks and to pursue experimentation with alternative policy practices [24]. This review recommends that Africa prioritise the generation of homegrown innovations in the economy and governance because only then can Africa address the

social and environmental challenges that are crippling the blue ocean governance and start a journey towards a smooth and low-cost transition to new socio-technical systems.

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