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A Review of National Policies, and Regulatory Frameworks for  
Alignment and Coherence with Relevant Regional and Global  
Biodiversity Conservation and Environmental Management  
Instruments for the Arab Republic of Egypt

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## Acronyms

ABES:	African Blue Economy Strategy
AU:	African Union
AUDA-NEPAD:	African Union Development Agency/New Partnership for African Development
BE:	Blue Economy
CBD:	Convention on Biological Diversity
CC:	Climate Change
EEZ:	Exclusive Economic Zone
GDP:	Gross Domestic Product
IUU:	Illegal Unreported and Unregulated Fishing
LME:	Large Marine Ecosystem
MSP:	Marine Spatial Planning
PFRS:	Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa
REC:	Regional Economic Committees
EEAA:	Egyptian Environmental Affairs Agency
CBD:	Convention Biological Diversity
MoT:	Ministry of Tourism
NBSAP:	National Biodiversity Strategy and Action Plan
NCS:	Nature Conservation Sector
Pas:	Protected Areas
SDGs:	Sustainable Development Goals

## 1. Background

In reference to the specific mandate of the African Union Inter-African Bureau for Animal Resources (AU-IBAR) which is mainly dedicated supporting and coordinate the utilization of livestock, fisheries, aquaculture and wildlife as resources for both human well-being and economic development in the African Member States (AU-MS). The AU-IBAR's intervention in the fisheries, aquaculture and other Blue Economy Sectors is guided by the Policy Framework and Reform Strategy, (ABES), both of which aim at socio-economic transformation of Africa, underpinned by increased sustainable contribution to food security, livelihoods and wealth creation within the framework of the African Union Agenda 2063 (AU-Agenda 2063).

The African aquatic ecosystems are inhabited by living and non-living resources. The biotic component of the Seas, Oceans, Lakes and Rivers is constituent of a significant number of biodiversity and bio-ecosystems that provide sources of livelihoods, food security and wealth. These vital resources are however exposed to continuous and unsustainable exploitation and threaten the natural resources, biodiversity and hence environmental sustainability. Not only overexploitation of living species that threaten the aquatic biodiversity in Africa, but pollution (air and water), entry of exotic species, poor or unplanned urban development and industries (e/g/ mining, coastal tourism and infrastructure, erosion and climate change are also other significant threats (UNECA, 2016).

## 2. Introduction

The African Continent is adjacent to highly productive marine ecosystems including the seven African Large Marine Ecosystem (mentioned below) and endowed with networks of freshwater Rivers and Lakes.

The seven African Large Marine Ecosystem (LEMs) are:

1. Agulhs Current LME,
2. Benguela Current LME,
3. Guinea Current LME,
4. Canary Current LME,
5. Mediterranean Sea LME,
6. Red Sea LME and
7. Somalia Current LME

The recently endorsed African Blue Economy Strategy (ABES) is mainly aiming at addressing the major challenges for the AU-Member States to sustainably harness the resources of aquatic ECOSYSTEMS. The ABES envisioned an inclusive and sustainable Blue Economy that significantly contribute to Africa's future transformation and growth. ABES has incorporate some key aspects to promote the Continent Blue Economy development. The main aspects of the strategy include; fisheries, aquaculture and ecosystem biodiversity conservation; shipping, maritime safety and trade; climate change mitigation and environmental sustainability and ecotourism; sustainable energy and extractive mineral resources; governance, institutions and job creation (AU-IBAR, 2019b).

## 2.1 The concept of “Blue Economy”

The Blue Economy, encompassing diverse sectors such as fisheries, aquaculture, maritime transportation, renewable energy, and coastal tourism, holds immense significance for coastal Nations Worldwide. With vast marine resources and ecosystems, harnessing the potential of the Blue Economy can drive economic growth, create employment opportunities, and provide food security. However, sustainable utilization of these resources is crucial to avoid depletion and environmental degradation (European Commission, 2022). The Blue Economy (BE) idea combines aquatic ecosystem preservation with commercial exploitation of the resources found in Lakes, Rivers, and other bodies of water. It serves as a foundation for the sensible and sustainable use of natural resources (both renewable and non-renewable), as well as the protection of those resources and their natural ecosystems (AU-IBAR, 2019a).

Africa, with its extensive coastline and rich marine resources, possesses significant potential for the Blue Economy. The continent is blessed with abundant fisheries, diverse marine ecosystems, vast mineral and energy resources, and a burgeoning coastal tourism industry. The fisheries sector alone provides a vital source of livelihood for millions of Africans, offering employment, food security, and export opportunities. Furthermore, Africa’s coastal areas hold immense potentials for renewable energy generation, such as offshore wind and tidal energy. Additionally, the Continent’s pristine beaches, coral reefs, and marine biodiversity attract tourists from around the world, contributing to economic growth and local development. With proper management and sustainable practices, Africa’s Blue Economy Resources can be harnessed to drive inclusive and sustainable economic development while ensuring the long-term health and resilience of its marine ecosystems.

The growth of Africa’s Blue Economy is however, hampered by environmental irrationality, indiscriminate single-use plastic waste disposal, and pollution from toxic waste dumps. The effects that climatic variability and change are already having on Africa’s aquatic ecosystems and total food production are now well acknowledged. Underpinning these problems are major institutional and governance challenges that continue to constrain the ability of African Union Member States to successfully create and execute Policies linked to the growth of the relatively new Blue Economy idea. Furthermore, many Member States still adhere to outdated environmental Laws and Regulations from a time when concerns about the Blue Economy and climate change were not as high as enough on the development priority list.

Egypt, with its extensive coastline along the Mediterranean Sea and the Red Sea, possesses a wealth of resources within its Blue Economy. The Country’s marine resources encompass diverse sectors, including fisheries, aquaculture, maritime transportation, offshore oil and gas, renewable energy, and coastal tourism. Egypt’s fisheries sector plays a vital role in providing food security, employment, and economic opportunities for coastal communities. The aquaculture industry is also thriving, producing a variety of fish and seafood products for both domestic consumption and export. In terms of maritime transportation, Egypt’s strategic location along major international shipping routes makes its ports and waterways crucial for Regional and Global trade. Furthermore, Egypt has been exploring and developing its offshore oil and gas reserves, contributing to its energy sector. One of the most significant economic sectors in Egypt is tourism, which accounts for 12.6% of all employment and 11.3% of the Country’s GDP (UNDP, 2015). The coastal tourism industry, with its pristine beaches, coral reefs, and historical attractions, attracts millions of visitors each

year, bolstering the economy and supporting local communities. The rapidly growing ecotourism sector in Egypt is supported by the protected areas, which also have a huge potential to help the poorest rural people. Egypt's protected areas now bring in around \$5 million USD year, but they could easily make \$10-20 million USD, which would be sufficient for their technical and financial viability. Additionally, biodiversity offers stabilizing and assisting functions. Coral reefs and mangroves are valued at 80 million EGP per km<sup>2</sup> in protecting Red Sea coastal Regions from erosion, and the annual economic loss to Egypt from the fall in pollinator populations brought on by pesticide usage is estimated to be in the hundreds of millions of EGP (Temraz, T.A. et al., 2016).

These vast resources, if managed sustainably and with appropriate Regulations and Strategies, can fuel Egypt's economic growth, secure food and welfare, create employment opportunities, and ensure the preservation of its marine ecosystems for future generations (Shahhat, M.A., 2019).

## 2.2 Aquatic Biodiversity

Biodiversity is the word that best captures the essence of life as we know it on Earth. It is the natural capital that ensures the survival of life and the source of resources like food and medicine. Marine biodiversity is a large repository of substances, animals, and materials that are useful from an economic, scientific, and environmental standpoint. Maintaining the health of marine ecosystems depends on biodiversity (Pullaiah, 2021).

Biodiversity, especially marine biodiversity, is an issue of great importance at the African level, as 38 African Countries have coasts on it. Therefore, many Policies, Laws, and Agreements have been developed at the continental African level. The African Union (AU) is aware of the difficulties that Member States must overcome in order to reap the full advantages of the various sectors of the Blue Economy, particularly the growing threat of illicit fishing in the Exclusive Economic Zones (EEZ). The marine environment of the Mediterranean and Red seas in Egypt is characterized by a variety of habitats and endangered species, such as the mangrove trees, all marine mammals (17 species), marine turtles (4 species), sharks (more than 20 species), and white-eyed gulls, sooty falcons, and ospreys. This is in addition to the enormous marine biodiversity (more than 5000 species) represented by 800 different species of Seaweed, 209 different species of coral reefs, more than 800 different species of molluscs, 600 different species of crustaceans, 350 different species of Echinodermata, as well as hundreds of other species that have never before been identified (EEAA, 2007). The biodiversity of Egypt benefits the economy and promotes human welfare. The usage of biological resources directly contributes significantly to Egypt's Gross Domestic Product (GDP). 14.7% of GDP comes from the agricultural, irrigation, and fishing industry. In 2017, it was projected that agriculture produced food for 12% of the GDP and employed 20.6% of the labour force. The fishing industry contributes 0.4% of the total GDP. In Egypt, the fishing industry employs more than 250,000 people. From 790,000 tonnes in 2001 to 1.6 million tonnes in 2017, fish output has grown. In 2017, there were roughly 1.6 million tonnes of fish produced annually, with a market value of about 25 billion Egyptian pounds (Temraz, et al., 2016).

The loss of biodiversity is continuing at the same rate, according to scientific evidence. In actuality, biodiversity has been declining over the past 40 years. Despite this loss, research shows that pressures put

on biodiversity by humans are growing. The attempts to halt the extinction of biodiversity have fallen short. Loss of biodiversity has cascading effects that have the potential to be disastrous; this risky trend has to be stopped immediately (Rafferty, 2023). Without healthy marine ecosystems, which supply a wide range of products and services, sustainable development cannot be attained. Ecosystems that have undergone degradation and lost biodiversity are predicted to be less resistant to growing stressors, such as climate change.

The marine environment's ecosystem services are vital for ensuring food security and eradicating poverty. It is crucial to acknowledge that maintaining the health and economic viability of Ocean systems is a top priority for sustainable development. It has been established that habitat loss, pollution, and exploitation have a direct impact on marine biodiversity. According to scientific analyses, the Ocean's capacity to produce food, maintain water quality, and recuperate from the negative effects of stress is being negatively impacted by the loss of marine biodiversity.

### *3. Marine Governance and Ocean Management*

Many International and Regional Policies and Agreements have been Agreed upon among all Countries of the World (most of) to preserve biological diversity, which are incorporated into the internal Laws of Countries in order to achieve their goals aiming at preserving environmental resources and biological diversity. The most important of these Agreements is the United Nations Convention on Biological Diversity (CBD), which has become the mother and cover Agreement for all Competent endeavours to conserve biodiversity. For the aforementioned reasons, Egypt is one of the most important Countries entrusted with setting Policies and Laws Regulating the conservation of biological diversity, as well as participating in International, Regional and Continental Agreements aimed at preserving biological diversity. Mentioning this, it is important to assess how these Rules and Regulatory issues are implemented and how value they are on the environment and people.

The Global community has recognized the urgent need for comprehensive Policies and Regulations to address the challenges of biodiversity loss and environmental degradation. Several International Instruments and Agreements have been established to promote biodiversity conservation, sustainable resource management, and environmental protection. These Global Instruments provide a foundation for Countries to develop and implement their own National Policies and Regulations, fostering a collaborative and unified approach to biodiversity conservation and environmental management at a Global scale. Over the decades, human activities have increased dramatically in and near the World's Oceans, with serious negative consequences for the state of our marine environment. Scientists are seeing more and faster change, with Ocean health deteriorating faster than previously expected (Franke, A. et al. 2020).

Today we live in an age of climate change, and there is no part of the Ocean that has not been touched by human influence. Some areas, particularly those located near large population centers, are affected by multiple pressures. There are many threats facing the Oceans, including; unsustainable and destructive fishing practices; illegal and unreported fishing; pollution from land-based and ship-based sources; habitat destruction; the introduction of invasive species; Ocean noise; ship strikes (collisions between cetaceans and

ships); metal mining; and extraction of oil and gas. The adverse effects of these activities work cumulatively with the effects of Ocean acidification, Ocean warming, shift currents, reduced mixing, and reduced oxygen levels (IPCC, 2014, 2022). While marine ecosystems and species may be able to withstand one type of impact or their respective intensities, they are affected much more when there is a combination of impacts. The overall effect is often greater than the sum of its parts. The declining health of the Oceans has devastating consequences for people, their livelihoods, and their entire economies, with the poorest communities that depend on Ocean resources often the hardest hit. The multiple human pressures affecting the Oceans also have a real impact on how effective Governance is implemented. The management of marine and coastal areas in many Countries and in International waters is primarily a sectoral process.

The need to understand and manage the interactions and cumulative effects of multiple stressors has been identified as one of the most important questions in the marine environment today. What could complicate matters further, the marine environment is generally considered as “public domain” and the areas beyond the National jurisdiction are referred to as the Global commons. This lack of ownership can lead to a problem of “the commons” which creates areas of often “out of concern, leading to a decline in biodiversity in Ocean Regions. Hence, an important element for moving forward in Ocean Governance is the understanding by both decision-makers and the general public that all of humanity depends on the Oceans for its survival, and therefore everyone has a stake in the Oceans

From a Governance perspective, marine areas beyond the National jurisdiction present particular challenges. Even if the need for integrated and coherent approaches to address the multiple threats to the Oceans are well-understood, no State, organization, or institution has the overall administrative responsibility for marine areas beyond their National jurisdiction. All the existing Regulations and institutional arrangements are sectoral in nature, except the United Nations Convention on the Law of the Sea (UNCLOS). Hence the decision was taken by the United Nations General Assembly in its resolution 69/292 to establish a Preparatory Committee to provide recommendations on the conservation and sustainable use of marine biological diversity in marine areas beyond National jurisdiction. This certainly represents an opportunity to significantly improve Ocean Governance

In fact, there is a general Agreement in International politics on the need for an ecosystem approach to improve Ocean management, but application in practice remains limited. This is largely due to the significant difficulties in implementation, including the availability of appropriate information and the lack of analytical and scientific tools to support the process. This may be particularly, due to the limited understanding of what exactly constitutes an ecosystem approach, including its provisions for the broad participation of all stakeholders. There are many different ecosystem approaches, including those used by the Convention on Biological Diversity (CBD) and the Food and Agriculture Organization of the United Nations (FAO), which are highly compatible with each other. A good example of the approaches that can help Countries undertake this task is marine spatial planning (MSP), which provides a way to incorporate human activities without compromising conservation values. Similar to ICZM, it provides for operationalizing the ecosystem approach through a planning process that includes all stakeholders (Ehler & Fanny, 2009). Through marine spatial planning, stakeholders can put forward their vision for an area. Determine the human activities (including marine activities, shipping, fishing, aquaculture, tourism, mining, and other activities) that are

currently occurring and where they are desirable to take place in the future.

Any solutions seeking to improve the management of the interconnected Ocean will need to have two components:

- 1) To support the manageable coastal systems, which may include traditional marine management systems of indigenous peoples and local communities based wholly or partially on traditional knowledge, and
- 2) To provide protection and improved management of economically, socially, and culturally important species and their habitats by addressing threats and using tools and dynamic new conservation technologies.

There are many lessons that can be learned from coastal management and the efforts of coastal communities that can be transferred and can benefit the management of human activities in Ocean ecosystems everywhere, including:

- ✓ the establishment of mechanisms for effective coordination and cooperation between sectoral institutions and levels of Government;
- ✓ building trust and facilitating stakeholder participation in a way that ensures that everyone's voice is heard, even those of those not generally involved in management processes;
- ✓ Incorporating the best available science, including traditional knowledge, into management, particularly where the science is immature; and,
- ✓ Existence of ways in which the costs and benefits of conservation and management are shared equitably, so that coastal communities do not bear a disproportionate burden when, for example, a marine protectorate is been established.

#### 4. *Objectives and approach*

The development of a well-defined strategy and effective regulations for the Blue Economy everywhere in the world thus becomes imperative. Such measures ensure the preservation of marine ecosystems, the conservation of biodiversity, and the long-term sustainability of economic activities. By striking a balance between economic development and environmental protection, a robust framework can be established to foster the growth of the Blue Economy while safeguarding the health and resilience of our Oceans and coastal areas (Shahhat, M.A. 2019).

SDG 14, with its comprehensive set of targets, provides an opportunity to bring Ocean Governance to the forefront of the Global dialogue on sustainable development. It is not only an opportunity for a rich exchange of ideas, but also to bring together Ocean stakeholders and agree on a new roadmap for better Ocean Governance that can benefit ecosystems as well as people and their livelihoods. To achieve this, a new sense of responsibility for managing the Oceans is required, supported by the application of a

comprehensive and integrated ecological approach to managing all human activities that affect the Oceans.

Africa has recognized the importance of harnessing its coastal and marine resources sustainably, leading to the development of various Regional Instruments to guide the Blue Economy, environmental management, and biodiversity conservation. These African Instruments collectively guide the Continent towards sustainable and inclusive development, ensuring the protection and wise utilization of its Blue Economy Resources, while safeguarding its rich biodiversity and fragile ecosystems.

Egypt has implemented Policy and Regulatory Instruments to guide the sustainable development of its Blue Economy, environmental management, and biodiversity conservation. The Egyptian Government has formulated the “Egypt Vision 2030” as a roadmap for comprehensive development, which includes the sustainable management of coastal and marine resources. The “National Strategy for Biodiversity Conservation in Egypt” focuses on preserving Egypt’s rich biodiversity through the establishment of protected areas, the promotion of sustainable use of natural resources, and the integration of biodiversity considerations into various sectors. In terms of the Blue Economy, Egypt has developed the “National Master Plan for Fisheries Development” to ensure the sustainable exploitation of fisheries resources and the growth of the aquaculture industry. Moreover, Egypt has enacted Laws and Regulations for environmental protection, including the “Environmental Law” and the “Law on Nature Protectorates”, which aim to regulate activities that may impact the environment and biodiversity. These Policy and Regulatory Instruments demonstrate Egypt’s commitment to balancing economic development with the conservation of its natural resources and the protection of its unique ecosystems.

Although, Egypt has implemented such successful Policies and Regulations in these domains; an examination of potential gaps can provide valuable insights for enhancing the effectiveness and sustainability of current approaches. By identifying areas of misalignment with Regional and International Standards, as well as weaknesses in enforcement, compliance, and coordination, Policymakers, and stakeholders can work towards bridging these gaps (Fouda, M.M. 2019). Such analysis would highlight areas where Policy adjustments, capacity building, and increased collaboration are needed to ensure the long-term health and resilience of Egypt’s marine resources, promote sustainable economic development, and safeguard the invaluable biodiversity and ecosystems upon which both present and future generations depend.

This report is mainly targeting analysing the status-Co in the National Policy Instruments pertaining to Egypt’s Blue Economy, environmental management, and biodiversity, and their validity and consistency with the Regional/Continental and Global trend to preserve biodiversity and sustain all other Blue Economic Resources. It is also to define the major obstacles weaknesses and gaps in legalisation and Regulation Instrument to enable providing solution options that might guide the decision-making system to preserve this vital ecosystem and enhance their environmental services; this analysis is crucial for identifying areas that require improvement and strengthening.

This report will be functioning using the Global-Continental-National Approach (GCN top-bottom approach) in assessing the coherence of the National legislation and Regulatory Instrument in Egypt with the Regional and the Global Instruments. This will be conducted by presenting the legislation Instrument

devoted to the Blue Economy, biodiversity conservation and environmental management at the Global level, then display the Continental relevant Policies and Regulations implemented in Africa and finally assess the National efforts in these domains in Egypt.

Approach applied in this report is shown in the flowchart below

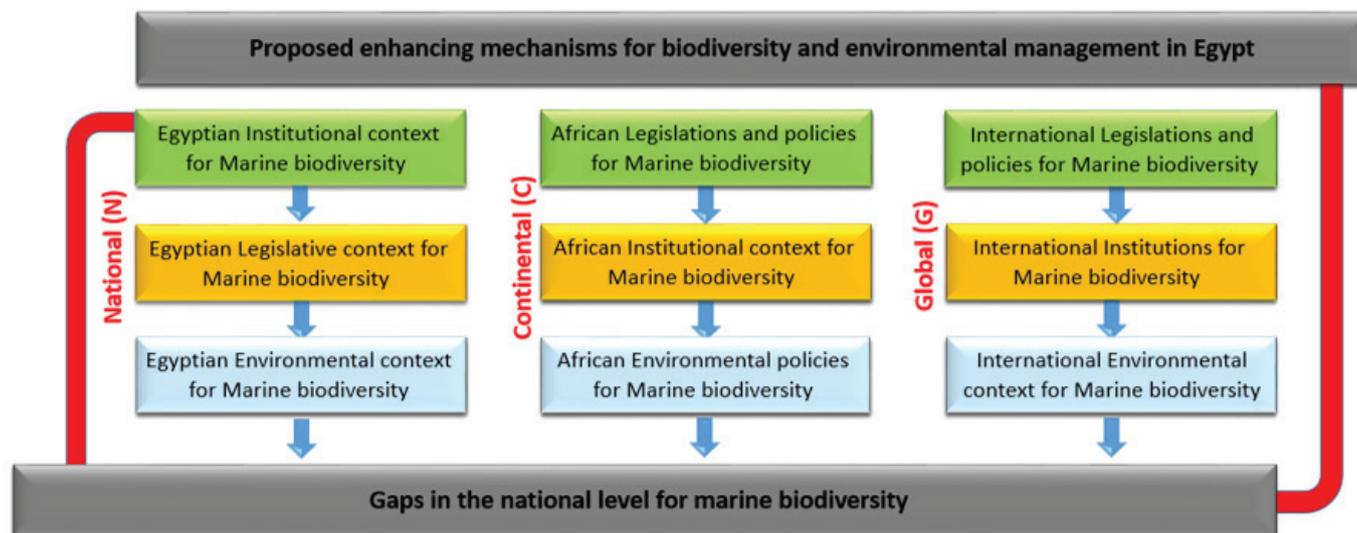


Figure 1 Flowchart of the report analyses approach (the GCN approach) of displaying Policies, Regulations and legislation Instruments at the Global, Continental and National levels

## 5. Key Global Policies and Regulations relevant to the Blue Economy

The sustainable use and conservation of the World's Oceans and their resources have become an increasingly urgent concern, leading to the development of various Global Policies and Frameworks related to the Blue Economy.

Following are some of the key Global Policies and Regulations relevant to the Blue Economy:

1. **United Nations Convention on the Law of the Sea (UNCLOS):** UNCLOS is a comprehensive International Treaty that establishes the Legal Framework for the use and conservation of the World's Oceans and their resources. It defines the rights and responsibilities of Countries in relation to marine spaces, including the Exclusive Economic Zone (EEZ) and the Continental shelf, and addresses issues such as marine biodiversity, navigation, and marine scientific research
2. **Sustainable Development Goal 14 (SDG 14) - Life below water:** SDG 14 is part of the United Nations' 2030 Agenda for Sustainable Development and specifically focuses on the conservation and sustainable use of Oceans, Seas, and marine resources. It calls for actions to address marine pollution, sustainably manage fisheries, protect coastal ecosystems, and promote sustainable tourism in the marine sector

It's important to note that the Blue Economy is a rapidly evolving concept, and new Policies, Regulations, and initiatives may continue to emerge at the Global level as Countries and International Organizations work together to promote sustainable development in the marine and coastal sectors

3. **Regional and Bilateral Agreements:** Many Regions have developed their own Regional Agreements and initiatives to support sustainable development in the Blue Economy. Examples include the African Union's Integrated Maritime Strategy, the Caribbean Community's Caribbean Blue Economy Strategy, and the European Union's Blue Growth Strategy. Bilateral Agreements between Countries may also address specific aspects of the Blue Economy, such as marine resource sharing, joint research, or cooperative management
4. **International Maritime Organization (IMO) Regulations:** The IMO is the specialized agency of the United Nations responsible for the safety and security of International shipping and the prevention of marine pollution. The IMO develops and enforces regulations related to maritime safety, marine pollution prevention, and the reduction of greenhouse gas emissions from ships. These Regulations contribute to the sustainability of the shipping industry, which plays a significant role in the Blue Economy
5. **International Maritime Spatial Planning (MSP) Initiatives:** Various International initiatives focus on promoting sustainable maritime spatial planning to balance competing uses and activities in marine areas. Examples include; the MSP Global Initiative led by UNESCO's Intergovernmental Oceanographic Commission and the Joint Roadmap to accelerate Maritime/Marine Spatial Planning processes Worldwide developed by various International organizations and Governments
6. **Blue Economy Guidelines and Best Practices:** International organizations, such as the World Bank, United Nations Development Programme (UNDP), and the Food and Agriculture Organization (FAO), have developed guidelines and best practices to promote sustainable development in the Blue Economy. These documents provide guidance on topics such as fisheries management, coastal zone management, marine spatial planning, and sustainable tourism.

## 6. *Global Policies and Regulations for biodiversity conservation and environmental management*

There are several key Global policies and Regulations that aim to address biodiversity conservation and. Below are some of the most significant ones:

- **Convention on Biological Diversity (CBD):** The CBD is an International Treaty that sets out principles for the conservation and sustainable use of biodiversity. It includes provisions for the protection of ecosystems, species, and genetic resources, as well as the fair and equitable sharing of benefits derived from genetic resources. The specific objectives of The CBD Treaty are to guide the efforts of CBD Member Countries in addressing the Global challenges of biodiversity loss, habitat degradation, and unsustainable resource use. The CBD encourages International cooperation, the development of National Strategies and action plans, and the integration of biodiversity considerations into various sectors and decision-making processes to achieve these objectives
- **United Nations Framework Convention on Climate Change (UNFCCC):** The UNFCCC is an International Treaty focused on addressing climate change. It aims to stabilize greenhouse gas

concentrations in the atmosphere and prevent dangerous anthropogenic interference with the climate system. It includes; provisions for adaptation to climate change impacts and the mitigation of greenhouse gas emissions. The UNFCCC has specifically defined five main objectives, for which an annual Conference for Parties is scheduled enabling all Countries to negotiate and implement measures to address climate change. The most notable outcome of the UNFCCC process is the Paris Agreement, which sets specific targets for greenhouse gas emissions reduction and provides a framework for international cooperation on climate actions.

- **Paris Agreement:** The Paris Agreement is an International Treaty under the UNFCCC, adopted in 2015. The agreement emphasizes the need to enhance adaptive capacity and promote sustainable development. Objectives of this Agreement collectively aim to address climate change comprehensively and foster Global cooperation to tackle the challenges posed by a changing climate. Its major goal is to limit Global warming to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius. While the Paris Agreement primarily focuses on addressing climate change, it also recognizes the close relationship between climate change and biodiversity. The Agreement acknowledges that climate change exacerbates the loss of biodiversity and that the conservation and sustainable use of biodiversity can contribute to mitigating climate change and enhancing resilience to its impacts.

The Paris Agreement contributes to biodiversity conservation in the following ways; examples are as follows:

Ecosystem Resilience:

1. Synergies with Biodiversity Goals:
2. Ecosystem-Based Adaptation:
3. Co-Benefits for biodiversity conservation:
4. Financial Support:

Overall, the Paris Agreement recognizes the important interlinkages between climate change and biodiversity and aims to promote the conservation and sustainable use of biodiversity as a means of enhancing resilience to the impacts of climate change and mitigating its causes. Although the agreement does not have specific objectives related to biodiversity conservation, it indirectly supports biodiversity conservation through its overarching goals and provisions.

- **Ramsar Convention on Wetlands:** The Ramsar Convention is an intergovernmental treaty that provides a framework for the conservation and wise use of wetlands. It aims to halt the loss and degradation of wetlands and promote their sustainable use. Wetlands play a vital role in supporting biodiversity and providing important ecosystem services.

The main objectives of the Convention are as follows:

1. Conservation of Wetlands:
2. Sustainable Use of Wetlands:
3. International Cooperation:
4. Wetland Inventory and Assessment:

5. Research and Capacity Building:
6. Public Awareness and Education:

By pursuing these objectives, the Ramsar Convention aims to protect and sustainably manage wetland ecosystems, recognizing their ecological significance, their importance for biodiversity, and their essential role in providing valuable ecosystem services

- **CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora):** CITES is an International Agreement that Regulates the trade of endangered species. It aims to ensure that International trade does not threaten the survival of wild plants and animal.

The main objectives of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) are as follows:

1. Regulation of International Trade:
2. Protection of Endangered Species:
3. Sustainable Use and Conservation:
4. Collaboration and Cooperation:
5. Combating Illegal Wildlife Trade:
6. Public Awareness and Education:

Pursuing these objectives, CITES aims to ensure that International trade does not contribute to the decline of endangered species, promote their conservation, and foster sustainable use practices that benefit both species and communities reliant on them.

- **Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal:** The Basel Convention is an International Treaty that aims to minimize the generation of hazardous wastes and control their transboundary movements. It promotes environmentally sound management of hazardous wastes and prohibits their disposal in a manner that may cause harm to human health or the environment.

The main objectives of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal - Basel Convention are as follows:

1. Minimize Transboundary Movements of Hazardous Wastes:
2. Environmentally Sound Management of Hazardous Wastes:
3. Prior Informed Consent:
4. Promote Waste Minimization and Resource Recovery:
5. Capacity Building and Technology Transfer:
6. International Cooperation and Information Exchange:

By pursuing these objectives, the Basel Convention seeks to protect human health and the environment from the adverse effects of hazardous wastes, promote sustainable waste management practices, and foster International cooperation to address the challenges associated with transboundary movements of

hazardous wastes

- **Stockholm Convention on Persistent Organic Pollutants (POPs):** The Stockholm Convention addresses the production, use, and release of persistent organic pollutants. It aims to protect human health and the environment from the adverse effects of these chemicals. The Convention calls for the reduction and elimination of POPs, and it promotes alternatives and best practices for managing these substances.

The objectives of the Stockholm Convention on Persistent Organic Pollutants (POPs) relevant to biodiversity are as follows:

1. Protecting Human Health:
2. Protecting the Environment:
3. Minimizing or Eliminating Releases:
4. Promoting Sustainable Alternatives:
5. Enhancing Scientific Understanding and Cooperation:

These Global Policies and environmental management Instruments provide a Framework for International cooperation and action to address biodiversity conservation, climate change, wetland conservation, and trade in endangered species, hazardous waste management, and the reduction of persistent organic pollutants.

By pursuing these objectives, the Stockholm Convention aims to reduce the impact of persistent organic pollutants on both human health and the environment, including biodiversity. It calls for international cooperation, the exchange of information and experiences, and the implementation of effective measures to address POPs throughout their life cycle. Ultimately, the Convention contributes to the conservation and sustainable use of biodiversity by minimizing the risks posed by POPs to ecosystems and the species they support.

These are just a few examples of Global Policies and Regulations for biodiversity conservation and environmental management. Many other Regional and National Frameworks and Instruments exist to address specific issues related to biodiversity, ecosystems, pollution, and sustainable development.

## **7. Continental context of Blue Economy**

Africa has recognized the potential of the Blue Economy and has been developing Policies and Regulations to support sustainable development in its marine and coastal sectors. While the specifics may vary across Countries and Regions, here are some key Policies and Regulations related to the Blue Economy in Africa. As such, Blue Economy is part of a number of African and Global Policies and initiatives that are elaborated in a more detailed manner as follows:

- **The African Union's Agenda 2063** - The strategic framework for the socio-economic transformation of the Continent over the next 50 years and includes a strong focus on sustainable development and environmental conservation. It refers specifically to the Blue and Ocean Economy as the Goal 6 for accelerated economic growth especially for the priority areas of Marine Resources and Energy; and Ports Operations and Marine Transport. While it does not have specific objectives solely dedicated

to biodiversity, Goal 7 also addresses BE by having priority areas such as Sustainable natural resource management and Biodiversity conservation; Sustainable consumption and production patterns; Water security; Climate resilience and natural disasters preparedness and prevention; Renewable energy that are integral to BE Development in Africa.

The following are key areas of Agenda 2063 that relate to biodiversity:

1. Sustainable Development:
2. Climate Change Adaptation and Mitigation:
3. Integrated Water Resource Management:
4. Sustainable Agriculture and Food Security:
5. Conservation of Protected Areas:
6. Research and Innovation:

By integrating biodiversity considerations into these broader objectives, Agenda 2063 seeks to ensure the conservation, sustainable use, and equitable sharing of Africa's rich biodiversity for the benefit of present and future generations

- **The 2014 Africa's Integrated Maritime Strategy (2050 AIMS);** The African Union has developed the AIM Strategy, which provides a framework for sustainable development of the maritime sector in Africa. It aims to promote integrated Governance, sustainable resource management, maritime security, and the development of maritime-related industries. The Strategy was designed as a tool to solve Africa's marine issues for competitiveness and sustainable development. By creating a robust marine economy and using the full potential of sea-based activities in an ecologically friendly way, it seeks to promote greater wealth generation from Africa's Oceans, Seas, and inland waterways. The strategy outlines several BE sectors and components (conservation, research, education, and governance), however, they are mostly restricted to maritime and marine regions, whereas the BE strategy will also effectively address inland water bodies. In the AIMS 2050, extractive minerals, oil and gas, novel finance methods, as well as the problem of ecosystem services like blue carbon and its uses for climate change, were not taken into consideration. Africa depends on environmentally friendly maritime domains and self-sustaining biological systems that include many kinds of organisms.

This requires the preservation of the variety of life, by:

- 1) Ensuring the sustainable use, conservation, and regeneration of the maritime resources;
  - 2) Promoting the economic, social, and environmental importance of the sea and inland waterways; and,
  - 3) Establishing a set of indicators to evaluate the sustainable performance of the activities and their monitoring.
- **Regional Integrated Coastal Zone Management (ICZM) Policies:** Several African Regions, such as the Western Indian Ocean Coastal Challenge (WIO-CC) and the Benguela Current Commission (BCC), have developed ICZM Policies. These Policies focus on sustainable coastal development, ecosystem management, and integrated planning to balance economic activities with environmental conservation

- **Fisheries Management and Conservation:** African Countries have implemented Policies and Regulations to manage fisheries sustainably and combat illegal fishing practices. This includes setting catch limits, establishing protected areas, promoting responsible fishing practices, and implementing monitoring and surveillance systems
- **Marine Spatial Planning (MSP):** Several African Countries are adopting MSP Frameworks to guide the sustainable use of marine resources. MSP helps balance competing activities, such as fisheries, aquaculture, tourism, energy, and conservation, to ensure long-term sustainability and minimize conflicts.
- **Environmental Impact Assessment (EIA):** EIA Regulations are crucial for assessing the potential environmental impacts of proposed projects in the marine and coastal areas. African Countries have developed EIA Frameworks to ensure that development activities in the Blue Economy sector are conducted in an environmentally sustainable manner
- **Marine Pollution Control:** Policies and Regulations are in place to address marine pollution in African coastal and marine environments. These include; measures to control land-based sources of pollution, regulation of shipping activities, promotes the control of oil spill
- **The 2014 Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa - PFRS** - The provisions of the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) incorporate best practices for sustainable fisheries management and responsible aquaculture development which have been identified as priorities by stakeholders. The rational implementation of the PFRS entails the identification of user-friendly appropriate strategies that would facilitate the alignment of National and Regional fisheries and aquaculture Policies to these provisions of the PFRS. This document has been developed as a complementary document to the parent PFRS to provide guidance for the implementation of the PFRS. It, therefore, describes the criteria/parameters for the alignment of National and Regional Policies and Strategies to the provisions of the PFRS, the indicators to monitor the progress of alignment of National and Regional Policies to the PFRS, implementation as well as the mechanism to support or facilitate its implementation of the PFRS. The Guide also includes indicators to measure the medium and long-term impact of the anticipated reforms in the sector that are gendered by this pan-African Policy and other Instruments.
- **The 2015 UN Agenda 2030 (Sustainable Development Goals, SDGs); SDG14** - Being part of the Sustainable Development Goal 14 (SDG14) on Life below Water, African coastal States have endorsed the achievement of a series of targets by 2030 from which most of which relate to better exploitation of the Sea, preservation of the environment and prevention of pollutions and other harmful changes resulting from human activities. All African States are furthermore working towards the accomplishment of the SDG6 dedicated to clean water and sanitation in direct linkage with the Continental dimension of the Blue Economy.

- **The 2016 African Charter on Maritime Security and Safety and Development in Africa** - Lomé Charter - The Charter refers to the security and safety of the BE. It aims at preventing and curbing National and transnational crime, especially terrorism, piracy, and armed robbery against ships, as well as all forms of trafficking at sea. It also aims at protecting the environment in general and particularly the maritime environment in coastal and island States, as well as strengthening cooperation in the field. The Charter commits signatories to create National, Regional, and Continental institutions to promote maritime security and safety.
- **Capacity Building and Research:** African Countries are investing in capacity building initiatives and research to enhance knowledge and skills related to the Blue Economy. This includes supporting education and training programs, scientific research on marine and coastal ecosystems, and promoting knowledge-sharing platforms

### *7.1 African Policies and Regulation for biodiversity*

The African Continent has several key Policies and Regulations for biodiversity and environmental management.

The following are some of the main ones:

- **The African Convention on the Conservation of Nature and Natural Resources (Algiers Convention):** The Algiers Convention is a Regional Treaty that aims to promote the conservation and sustainable use of Africa's natural resources. It provides a framework for cooperation among African Countries to protect and manage their biodiversity and ecosystems.
- **African Strategy for Biosafety:** The African Strategy for Biosafety was developed to guide African Countries in the safe handling, transport, and use of genetically modified organisms (GMOs). It aims to ensure the protection of biodiversity and human health while promoting agricultural biotechnology for sustainable development.

The main objectives of the African Strategy for Biosafety are as follows:

1. Safeguarding Human and Environmental Health:
2. Promoting Agricultural Biotechnology for Sustainable Development:
3. Strengthening National Biosafety Systems:
4. Enhancing Scientific Research and Development:
5. Facilitating Regional and International Cooperation:
6. Public Participation and Awareness:

These objectives collectively aim to ensure the safe and responsible use of biotechnology, particularly in relation to GMOs, while protecting human health and the environment. The Strategy seeks to strike a balance between harnessing the potential benefits of agricultural biotechnology and addressing potential risks through robust biosafety measures and informed decision-making

*Overall, the objectives of the African Strategy on Sustainable Development and the Environment are geared towards achieving sustainable development outcomes, promoting environmental conservation, addressing climate change, and fostering inclusive and equitable green growth in Africa*

- **African Strategy on Sustainable Development and the Environment:** This strategy, adopted by the African Union, provides a roadmap for African Countries to achieve sustainable development while addressing environmental challenges. It emphasizes the integration of environmental considerations into Policies, planning, and decision-making processes across various sectors. It outlines a comprehensive Framework for promoting sustainable development and addressing environmental challenges in Africa.

The Strategy has several key objectives, including:

1. Integrating Environment and Development:
  2. Enhancing Natural Resource Management:
  3. Addressing Climate Change:
  4. Promoting Green Economy and Sustainable Consumption and Production:
  5. Strengthening Environmental Governance:
  6. Enhancing Knowledge, Research, and Education:
- **African Elephant Action Plan:** The African Elephant Action Plan is a comprehensive Strategy developed by African elephant range States to conserve and manage elephant populations and their habitats. It focuses on combating poaching, reducing human-elephant conflict, and promoting sustainable elephant conservation measures.

The main objectives of the African Elephant Action Plan, which are relevant to biodiversity conservation, are as follows:

1. Conservation and Recovery of African Elephant Populations:
2. Habitat Conservation and Restoration:
3. Prevention and Mitigation of Human-Elephant Conflict:
4. Law Enforcement and Anti-Poaching Measures:
5. Collaboration and Cooperation:

By pursuing these objectives, the African Elephant Action Plan seeks to conserve African elephants and their habitats, thereby contributing to the protection and conservation of biodiversity in the Regions where elephants exist. The plan recognizes the importance of elephants as keystone species and their role in maintaining healthy ecosystems, which supports the survival of a wide range of plant and animal species.

- **Regional Economic Community Policies (REC):** Regional Economic Communities in Africa, such as the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC), have developed Policies and Regulations for biodiversity conservation and environmental management. These Regional Frameworks aim to harmonize efforts, promote cooperation, and address common environmental challenges at the regional level.

*These objectives collectively aim to promote regional integration, economic development, peace and security, social well-being, environmental sustainability, and institutional capacity within the respective Regional Economic Communities*

The objectives of Regional Economic Community Policies may vary depending on the specific REC and its focus areas. However, in general, the objectives of REC policies are as follows:

1. Economic Integration and Development:
2. Regional Cooperation and Coordination:
3. Peace and Security:
4. Social and Human Development:
5. Environmental Sustainability:
6. Institutional Strengthening and Capacity Building:

## **8. Regional Policies, Regulations and institutions addressing aquatic biodiversity and environmental management**

### **8.1 The National Regulatory and Policy Instrument**

Egypt has been actively developing Policies and Regulations related to the Blue Economy, which focuses on sustainable economic activities in the marine and coastal sectors and biodiversity conservation, such as the National Biodiversity Strategy and Action Plan, the Protected Areas Law, and the Environmental Law. These Policies and Regulations are in line with the Convention on Biological Diversity (CBD), which is a Global Agreement signed by many Countries to protect biodiversity.

It is also worth mentioning that several National entities are continue working to enhance the Governance structure and the legislation Instrument by updating and/or emerging new Policies and Regulations for this vital aspect with special concern for biodiversity and environmental management. These ongoing activities (e.g., The National Strategy for Blue Economy - SBE) are not yet accessible to the public until officially submitted and the most up-to-date information is not still available to conduct extensive research, however, some general information on National Policies and Regulations for biodiversity in Egypt. Based on the available up-to-date sources for the most current information on Blue Economy Policies and Regulations in Egypt.

The following is a general overview of some key aspects:

- A. Sustainable Fisheries Management:** Egypt has implemented Regulations and measures to ensure the sustainable management of its fisheries sector. This includes setting catch limits, establishing protected areas, promoting responsible fishing practices, and combating Illegal, Unreported, and Unregulated (IUU) fishing activities.
- B. Coastal Zone Management:** The Egyptian Government has been working on coastal zone management plans to regulate human activities in coastal areas. These plans aim to balance economic development with the conservation of coastal ecosystems, including measures to protect coral reefs, mangroves, and other coastal habitats

*It is worth noting that the specific Policies and Regulations related to the Blue Economy in Egypt may continue to evolve as the Country further develops its Strategies and implements measures to support sustainable economic activities in the marine and coastal sectors*

**C. Marine Pollution Control:** The Egyptian Government has implemented Regulations and initiatives to address marine pollution and protect coastal and marine environments. This includes measures to control land-based sources of pollution, Regulate shipping activities, and enhance oil spill response capabilities

## *8.2 National Policies/Regulations for biodiversity conservation and environmental management:*

Egypt established a system and legislation for the conservation of its natural heritage. Of these, the most important are Law 48 (1982) for the Protection of the Nile River and Water Channels, Law No. 124 (1983) for Fishing, Aquatics and Regulating Aquaculture, Law 102/1983 as the Legal Framework for the declaration and management of protected areas (followed by the declaration of Ras Mohammed in South Sinai as the first protected area in Egypt), Law 124 /1983 for the Regulation and management of fisheries, Law 101/1985 to secure a suitable source of funding for protected areas, Law 4/1994 on environmental protection, which constituted supportive National legislation helping to fulfil Egypt's obligations under the CBD and Regulating hunting of wild animals and prohibiting the destruction of their natural habitats.

Most recently, the new constitution (2014) contains many articles for the conservation of biological diversity and natural resources in Egypt; Article (29) calls for the protection of agricultural lands from infringement, Article (30), Protecting the Fisheries Resources, Article (32) Preserving the natural resources of the State and making good use thereof, and taking into account the rights of future generations, Article (44) Protection of the Nile and Groundwater, Article (45) Protection of the Seas, beaches, Lakes, waterways and protected areas, and Article (46) for A healthy environment and the rational use of natural resources to achieve sustainable development.

There are also several Laws that have been approved and have articles that deal with protected areas and rehabilitation and restoration such as Quarries and Mineral resources and other Laws that were amended such as the Law on Protection of the Environment, and still others being amended such as Law on Fisheries Regulations and newer Laws are being considered by the Egyptian Parliament such as Establishment of Protected Areas Agency, Biosafety and ABS Laws. In addition, a new Agency for Waste Management and Regulations was established in 2015. Furthermore, the National Strategy for Sustainable Development is being updated and the environment is one of the main cross-cutting sectors Egyptian policies and laws related to biodiversity in Egypt are concerned with several Government Agencies charged with implementing, developing, and monitoring them. In this regard, there are several National vital Statutory Organizations involved that have a great impact on biodiversity conservation and development in Egypt.

The key examples of which these organizations are listed below: (See diagram, Fig 2):

➤ **The Ministry of State for Environmental Affairs (MSEA) through the Egyptian Environmental Affairs Agency (EEAA)** is responsible for environmental Regulations and management, including the vetting of Environmental Impact Assessments (EIAs). The EEAA through its senior management is Egypt's Operational Focal Point for the GEF. It also oversees the Nature Conservation Sector (NCS), which is part of the EEAA and hosts the CBD National Focal Point and is in charge of the monitoring and

management of Egypt's biodiversity and protected areas with a mandate that also extends beyond the protected areas system into production landscapes through sectoral engagement.

➤ **The Ministry of Tourism (MoT) with its affiliated agencies the Egyptian Tourism Authority (ETA) and Tourism Development Authority (TDA)** are responsible for supporting and promoting the tourism industry, establishing a coherent legal, Regulatory, and enabling Framework for tourism development, and for allocating public lands for tourism development projects. The TDA in particular is the principal agency involved in allocating State land for tourism development. The ETA is responsible for Egypt's overall tourism product and as such is involved in promoting and diversifying tourism and in licensing tourism operations of all kinds. The EEAA and the TDA are required to work closely together with developers and design specialists at the conceptual stage of each new tourism development in order to influence and provide technical inputs to the design and environmental protection measures. The TDA has an Environmental Department (ED) organized under the Directorate of Tourist Area Development. This department is intended to advise a proponent of a project on the conduct of the EIA and submits the EIA to the EEAA for approval.

➤ **Lakes and Fish Resources Agency for the Protection and development agency – LFRPDA;** (previously; The General Authority for Fish Resources Development - GAFARD) with the aim to (i) protect, develop and exploit the Lakes, their streams, tourism, beaches and sanctuaries; (ii) protect and develop fisheries and aquatic life with a view to developing the National economy. The Agency includes representatives of the different concerned Ministries as well as representatives of the Cooperative Union for Water Resources and the General Union of Agricultural and Fishing Workers.

The main tasks of these agencies are:

- a. Laying down the general Policy for the protection and development of Lakes, their drains and beaches, preventing them from encroachment and pollution;
- b. Exploiting the potentials of Lakes, their Seawaters, beaches, sanctuaries, resources, and their development, and conducting the necessary research and studies;
- c. Granting approvals for the establishment of projects of public interest;
- d. Protecting and developing fisheries wealth and their sources, and supervising the implementation of fishing Laws;
- e. Laying out plans related to fisheries and fish processing projects;
- f. Establishing rules, conditions, and procedures for granting the necessary licenses;
- g. Setting training and guidance plans and programs in the field of fisheries protection and development;
- h. Establishing joint stock companies with the aim of working in the field of protecting and developing lakes and fisheries and exploiting them in a manner that does not conflict with free fishing;
- i. Regulating the exploitation of fishing areas, marinas, and fish farms in Lakes and fish farming areas, working on their maintenance and development, ensuring compliance with the environmental standards for the quality of the waters of Lakes and fish areas;
- j. Developing the fishing craft using modern methods, spreading awareness and technical training among fishermen, and issuing the necessary decisions to prevent crafts and actions harmful to fisheries;
- k. Preparing maps of fish stocks;

- l. Cooperating with International and Regional bodies in everything related to the protection and development of Lakes and fisheries;
- m. Suggesting the marketing and price Policy for local and imported fish;
- n. Conducting technical and economic feasibility studies for projects related to fisheries;
- o. Preparing an emergency plan and coordinating between the concerned authorities to prepare programs to confront disasters in the lakes and to protect fisheries wealth electronically; and,
- p. Establishing controls for the management and use of the lands allocated to the Agency; (xvii) Supervising management and operation of all fishing ports and their development, as well as expressing an opinion justifying the establishment of new fishing ports. The Agency's Board of Directors is the supreme authority controlling and managing its affairs, and setting the general Policy that it follows.



Figure 2 Diagram of the Egyptian organizations and Regulatory context for Marine Biodiversity conversation

The following (Table 1) include some of the specific roles of each organization working for marine biodiversity conservation and environmental management.

Table 1. List and role of the official authorities and entities entrusted with protecting biodiversity in Egypt

Authority	Assigned role
<b>National level</b>	
Egyptian Environmental Affairs Agency (EEAA), Ministry of Environment	<u>Interest</u> : Primary, Environmental Policy and management <u>Influence</u> : The EEAA is the central institution concerned with environmental protection and coordination in Egypt. EEAA's responsibilities include: a) administering to the provision of Laws No. 4 (1994) and 102 (1983); b) setting up of general environmental preservation Policies and programs; c) adjusting and drafting environmental legislation; d) preparation of environmental studies, standards, specifications and conditions for the control of environmental pollution, and e) management of the protectorates. The Agency has the lead role in the preparation of the National Plan for Environmental Protection, National Oil Spill Contingency Plan, the National Biodiversity Strategy and National Coastal Zone Management Framework Program.

Authority	Assigned role
Nature Conservation Sector (NCS)	<p><u>Interest:</u> Primary, Statutory Agency charged with managing the protected areas system and biodiversity outside the protected areas system</p> <p><u>Influence:</u> The NCS is the central institution concerned with protected areas management and biodiversity conservation and coordination in Egypt. NCS's responsibilities include: a) administering to the provision of Laws No. 4 (1994) and 102 (1983), and developing National plans for biodiversity conservation and protected areas management and management operation for protected areas and biodiversity in Egypt.</p>
Tourism Development Authority (TDA), Ministry of Tourism (MoT)	<p><u>Interest:</u> Primary, Statutory Autonomous Agency with substantial jurisdiction authority over tourism development areas and tourism planning.</p> <p><u>Influence:</u> TDA's roles are to: a) provide support for coherent private sector tourism development; b) provide an institutional framework for environmentally sound private investment participation in tourism development, and c) to help safeguard the resources of Egypt from environmental development degradation. TDA has the authority to acquire and sell tourism development lands and retain the income; to charge fees for the assessment and monitoring of projects; and to borrow, repay loans, and receive grants from National and International institutions. The TDA is a driving force behind the tourism development along the Red Sea having jurisdiction over the large tracks of coastline that it sells to investors. The TDA has strategically located local offices which provide information and promotional materials and also play a role in facilitating the release of visitor permits.</p>
Egyptian Tourism Promotion Authority (ETA), Ministry of Tourism,	<p><u>Interest:</u> Primary, tourism Policy, and marketing Agency.</p> <p><u>Influence:</u> The ETA comes under the jurisdiction of the Ministry of Tourism (MOT). Established in 1991 the ETA has responsibility for planning, coordinating, and promoting new tourism development projects within the framework of the Country's general Policy and its economic plan.</p>
Ministry of Defence and Military Production	<p><u>Interest:</u> The Ministry of Defence and Military Production (MoD) is primarily concerned with National security issues and all the project areas fall within what can be considered sensitive areas (e.g. close to National borders, etc.)</p> <p><u>Influence:</u> Present in and oversees important tracts of lands, some of which hold valuable natural habitats in good condition. Moreover, ongoing and planned demining operations will over the coming years open up important new spaces for tourism and other economic development – especially across Egypt's north-western Region.</p>
Agency for the protection and development of Lakes and fisheries	<p><u>Interest:</u> The Statutory Authority in charge of Regulating and developing fisheries and fish resources in Egypt.</p> <p><u>Influence:</u> The Agency has a large interest in any management measures that might affect the fish production in any Region.</p>
Governorate Administration	<p><u>Interest:</u> Local administration, infrastructure, social and economic development.</p> <p><u>Influence:</u> Although the responsibilities and powers are centralized in sectoral Ministries, the Governorates have budgets and administration, social and economic development at the provincial level. The Governorate controls the local administration of two municipalities. Within the Governorate boundaries, the Governor has the responsibilities for co-coordinating activities of different Ministries, promoting tourism development construction, for issuing building permits and for selling municipal and Governorate controlled land within the town limits. All municipal zoning, tourism projects and building permits are authorized and issued by the Governorate.</p>
Non-Governmental Organizations (NGO) and Civil Society Organizations (CSO)	<p><u>Interest:</u> Various from conservation, community empowerment and mobilisation, awareness and conservation education.</p> <p><u>Influence:</u> NGOs and CSOs can play important roles in supporting biodiversity conservation and sustainable use practices in target areas.</p>
Higher Council for Antiquities	<p><u>Interest:</u> Statutory Agency in charge of archaeological sites</p> <p><u>Influence:</u> Influential Agency with responsibility for surveying and protecting antiquities and archaeological sites, many of which are either included in the protected areas system or are tied to the development of a desert tourism product and face similar pressures from tourism use.</p>
Ministry of Interior	<p><u>Interest:</u> Concerned with security.</p> <p><u>Influence:</u> The Ministry of Interior has under its authority the Police (including its various branches). It is the executive authority for Egyptian civil legislation.</p>

Authority	Assigned role
Border Guards	<p><b>Interest:</b> Security.</p> <p><b>Influence:</b> The Border Guards have the responsibility of protecting all border Regions of Egypt, including its coasts. Border Guards control access to the marine environment, and they request the issuance of permits for non-Egyptian visitors to off road Region. They control access to the site and provide security permits to all visitors entering the desert in and outside the protected areas including the Protected Areas staff themselves in some cases.</p>
Private Sector and Investors	<p><b>Interest:</b> Largely profit and in some few instances sustainability, product diversification and social and environmental responsibilities.</p> <p><b>Influence:</b> The private sector represented by large and medium size enterprises delivering different visitors services and operations. Investors and beneficiaries (hotel owners, tour operators, dive boats, guides, desert safari companies, etc.) of the areas ecosystem have a direct stake in the ecological state of the Region, and should have an interest in maintaining a high quality environment in the Region.</p> <p>An important assumption should be that there will be inequalities in the means and the manner in which the different private sector interests can and will influence the project and the process.</p>

## 9. Legislative context of the Aquatic Biodiversity Conservation in Egypt

The sectors that are directly related to biodiversity have been divided into seven sections, as these sectors affect the existence and continuity of living organisms, as well as directly affect the extent of benefiting from them without compromising sustainability. These sectors are: fisheries and fish farming, tourism, maritime transport, oil excavation. All The information, data and statistics contained in this chapter were relied upon on several reports issued by several institutions, whether local, Governmental, Continental or International, in order to find out the current status of Egyptian Laws and Policies related to biodiversity, the challenges and conflicts of interest, as well as the obstacles facing this issue. The principal Policy document which biodiversity conservation in Egypt, namely National Biodiversity Strategy and Action Plan (NBSAP) 2017-2030.

- **Egypt's National Biodiversity Strategy and Action Plan (NBSAP)** was submitted to the Convention on Biological Diversity (CBD) in 1998. It recognized the many risks posed by tourism on biodiversity and cited un-managed hunting, off-road vehicle use and the development of infrastructures as some of the related threats, indicating that coastal Regions are “under intense threat of tourism development”. The NBSAP underlined the need for “Laws governing environmental affairs and tourism” but also calls for promoting “the utilization of certain protected areas as a high premium, ecologically sensitive tourism resource”. The NBSAP calls for the further development of “the management and infrastructure of the protected area network, including the development and implementation of management plans. These plans should address the integration and development needs of local communities, the sustainable utilization of the resources which they contain, [and] the potential for eco-tourism”. UNDP is currently working with the NCS on Egypt's 2<sup>nd</sup> National Biodiversity Strategy and Action Plan.

In addition to these key Policy Instruments there are a number of other plans and Laws which provide the enabling environment which surrounds tourism development and biodiversity management in Egypt:

- **Law 102/1983** provides the legislative framework for establishing and managing protected areas in Egypt. The sole category referred to in this Law is the natural protectorate, which is defined as “any area of land or coastal or inland water characterized by flora, fauna and natural features having cultural, scientific, tourist or aesthetic value.” These are designated by Prime Minister’s Decrees upon recommendations of the EEAA, which proposes boundary maps and is entrusted with the management and supervision of such protected areas. According to Law 102/1983, it is forbidden to undertake actions, activities or procedures, which would destroy, damage or degrade the natural environment, or harm terrestrial, marine or plant life, or detract from its aesthetic quality in a protected area.
- **Law 4/1994** for the Environment (amended by Law 9/2009) contains additional provisions for inside and outside protected areas. The law assigns a major role to EEAA in the management and monitoring of protected areas, including the management of the licensing and permit system for any activity undertaken in protected areas requiring EIAs. All activities carried out in protected areas are to be subject to the EEAA’s control, which can take steps to enforce the Rules and stop any illegal activity. The Executive Regulations prohibit hunting inside and outside protected areas and gives the EEAA responsibilities for coordinating hunting management. Importantly this Law calls for the establishment of an environmental protection fund and a system of incentives to encourage the protection of the environment. The EEAA has prepared guidelines on the EIA procedure which list the establishments and projects that are required to conduct an EIA.
- **Law No. 146 of 2021** for the Protection and Development of Lakes and Fisheries this Law, consisting of 64 articles divided into 5 Chapters, aims at protecting and developing fisheries wealth, and its provisions apply to Lakes (specified by a Decree of the President of the Republic), all water bodies both marine and freshwater, and lands for fish farming (determined by a Decree of the Prime Minister). Article 2 establishes the Agency for the Protection and Development of Lakes and Fish Resources
- There is a **National System Plan for Protected Areas** developed in 1998 by the Egyptian National Protected Area Identification Mission with financial support from the European Union (EU), which had the primary goal of defining the future shape and size of Egypt’s Protected Area Network. This mission conducted a thorough and systematic examination of potential and existing protected areas, identifying the main priorities and future needs. After being discussed at a National workshop, the National Protected Area Identification Mission Report was formally adopted and is serving as the National System Plan for Protected Areas.

The recommendations of this plan are being implemented and have been integrated into National Strategies and plans with several important proposals, including for example;

- I. The plan proposed a total of 19 new protected areas for declaration, totalling some 100,000km<sup>2</sup>, nearly doubling the size and number of sites. To date, 30 sites have been declared as protected areas, including Siwa, White Desert, Wadi El Gemal, El-Sallum, El-Gelf El-Kabir combined with the existing protected areas, the total area would be 150,000 km<sup>2</sup> or about 15% of the total land of Egypt.

2. The Proposed protected areas were evaluated and identified according to predefined criteria. The new additions focused on habitats, natural regions, and resources underrepresented in the current protected areas network; and on sites of exceptional potential for nature-based economic activities.
3. The proposed expanded network greatly improves the coverage and representation of all recognized natural Regions in Egypt and of critically important biodiversity resources. This expansion goes beyond mere increase in size, but also increases the diversity of resources represented in the network, and attempts to promote and accommodate a broader function for protected areas in the Egyptian economy in the future.

While these Policies, Laws, and plans provide a comprehensive framework for both tourism development and biodiversity management it is important to note that they are intersected by various other Policies, Laws, edicts, and customary Laws particularly relating to land ownership resulting in a complex and often unpredictable situation particularly as there is often weak enforcement of the Law.

## *10. Specific Policy and Regulations for definite sectors*

Egypt has established several other Policies and Regulations in specific that implemented to conserve and sustain specific coastal/marine domains there are several Policies and Regulations have been established to manage and conserve a certain marine sector, few examples of which are in the following section:

### *10.1 Policies and Regulations for fisheries sustainability*

Egypt has implemented several Policies and Regulations to promote sustainable fisheries and aquaculture practices and ensure the protection of aquatic ecosystems and support the conservation of aquatic biodiversity in Egypt. The Government continues to review and update these Policies to address emerging challenges and promote the sustainable use of aquatic resources

Here are some of the main policies and regulations in Egypt.

- **Law No.146 of 2021 for the Protection and Development of Lakes and Fisheries** this Law, consisting of 64 articles divided into 5 Chapters, aims at protecting and developing fisheries wealth, and its provisions apply to lakes, all water bodies both marine and freshwater, and lands for fish farming. Article 2 establishes the Agency for the Protection and Development of Lakes and Fish Resources
- **Law No. 124/1983 on Fisheries:** This Law provides the legal framework for the management and conservation of fisheries resources in Egypt. It includes provisions related to fishing licenses, gear restrictions, closed seasons, and the establishment of protected areas. The Law also aims to prevent overfishing and promote sustainable fishing practices.
- **National Aquaculture Development Strategy:** Egypt has developed a National Aquaculture Development Strategy to guide the sustainable growth of the aquaculture sector. The strategy focuses

on promoting environmentally friendly aquaculture practices, improving aquaculture production techniques, and ensuring the responsible use of water resources. It also emphasizes the importance of enhancing market access and competitiveness for aquaculture products

- **Marine Protected Areas:** Egypt has established several marine protected areas (MPAs) to conserve and protect critical marine habitats and biodiversity. These MPAs help safeguard fish stocks, protect spawning grounds, and preserve important marine ecosystems. Fishing activities may be restricted or regulated within these protected areas to support conservation objectives
- **Environmental Impact Assessment (EIA):** Development projects related to fisheries, aquaculture, and other activities impacting aquatic ecosystems in Egypt often require an Environmental Impact Assessment (EIA). The EIA process assesses potential environmental impacts and helps ensure that mitigation measures are in place to minimize adverse effects on aquatic ecosystems
- **National Biodiversity Strategy and Action Plan:** Egypt has developed a National Biodiversity Strategy and Action Plan (NBSAP), which includes measures to protect and conserve aquatic biodiversity. The NBSAP outlines strategies for sustainable fisheries management, the establishment of protected areas, and the conservation of threatened aquatic species
- **Monitoring and Enforcement:** Egypt has established monitoring and enforcement mechanisms to ensure compliance with fisheries and aquaculture Regulations. This includes; monitoring fishing activities, enforcing gear restrictions and closed seasons, and conducting inspections to verify compliance with aquaculture Standards and Regulations

## *10.2 Policy and Regulations for Shipping, transportation, trade, maritime security, safety, and enforcement*

Egypt has implemented several Policies and Regulations to regulate shipping, transportation, trade, maritime security, safety, and enforcement.

The following are some of the main Policies and Regulations in Egypt for these marine domains:

- **Egyptian Maritime Transport Law:** The Egyptian Maritime Transport Law governs various aspects of shipping and transportation in Egypt. It includes; provisions related to ship registration, vessel safety standards, crew qualifications, liability and insurance, port operations, and maritime labour. The Law aims to ensure safe and efficient maritime transportation within Egyptian waters
- **Port Regulations:** Egypt has specific Regulations governing the operations of ports and harbours. These Regulations cover aspects such as vessel traffic management, cargo handling, customs procedures, port security, and environmental protection. They ensure efficient port operations, facilitate trade, and promote safety and security in ports

- **International Maritime Organization (IMO) Conventions:** Egypt is a signatory to several International Conventions and Protocols developed by the IMO. These Conventions cover various aspects of maritime safety, security, and environmental protection. Examples include the International Convention for the Safety of Life at Sea (SOLAS), the International Ship and Port Facility Security (ISPS) Code, and the International Convention for the Prevention of Pollution from Ships (MARPOL).
- **Trade and Customs Regulations:** Egypt has Regulations and Procedures related to International trade and customs. These Regulations govern the import and export of goods, customs duties and tariffs, customs clearance procedures, and trade facilitation measures. They ensure compliance with International trade standards and facilitate smooth trade operations
- **Maritime Security Measures:** Egypt has implemented measures to enhance maritime security and counter maritime threats. This includes; the implementation of the ISPS Code to ensure port and vessel security, cooperation with International maritime security initiatives, and efforts to combat piracy, smuggling, and other maritime crimes
- **Enforcement and Inspection:** Egypt has enforcement mechanisms to ensure compliance with maritime Regulations and Standards. This includes; inspections of vessels, ports, and maritime facilities to verify compliance with safety, security, and environmental regulations. Penalties and fines may be imposed for non-compliance

It's important to note that these Policies and Regulations are subjected to continuous updates and revisions, and it is advisable to regularly refer back and consult the relevant authorities and official National sources for the most current and detailed information regarding shipping, transportation, trade, maritime security, safety, and enforcement in Egypt.

### *10.3 Policy and Regulations for coastal and maritime tourism, marine ecosystem, environment, and infrastructure*

Egypt has implemented several Policies and Regulations to regulate coastal and maritime tourism, protect marine ecosystems and the environment, and ensure the proper management of related infrastructure.

#### Examples:

1. The Ministry of Tourism and Antiquities oversees coastal and maritime tourism activities and is responsible for enforcing Regulations related to licensing, safety, and environmental protection.
2. The Ministry of Environment monitors and regulates activities that may have adverse effects on the marine environment, including waste management, coastal erosion, and coral reef protection.
3. The Coastal Zone Management Authority and the General Organization for Physical Planning work together to manage coastal zones and infrastructure development, including the implementation of coastal protection measures and the establishment of marine protected areas.

4. The Red Sea Governorate has established a regulatory framework for the sustainable development of the Red Sea coastal zone, which includes guidelines for tourism activities, waste management, and conservation of marine biodiversity.

In addition;

5. Environmental protection is addressed through Policies that focus on preserving sensitive ecosystems, such as coral reefs and mangroves, and minimizing the impact of tourism activities on the marine environment. These Policies aim to strike a balance between tourism development and the conservation of coastal resources, ensuring that Egypt's coastal and maritime tourism sector remains sustainable and environmentally responsible

#### *10.4 Policy and Regulations for mining and sustainable & hydrothermal energy (dams) and innovative industries*

Egypt established some Regulatory Frameworks for mining, and mineral resources, sustainable hydrothermal energy, and promote innovative industries.

The following is a general overview of these Policies based on knowledge back to the year 2021/2022, however, these Regulations and Frameworks can change over time:

- **Mining activities in Egypt**

These are regulated by the Egyptian Mineral Resources Authority (EMRA), which operates under the Ministry of Petroleum and Mineral Resources. The EMRA is responsible for granting exploration and exploitation licenses, setting mining policies, and enforcing Regulations in the mining sector.

Key Regulations and Laws related to mining in Egypt include:

- **Law No. 198 of 2014:** This Law sets the Regulations for mineral wealth exploration, exploitation and development in Egypt.
- **Executive Regulations of Law No. 198 of 2014:** These Regulations provide further details on the implementation of the Law and cover various aspects of mining operations, including licensing procedures, environmental protection, safety measures, and financial obligation.
- **Sustainable & Hydrothermal Energy (Dams) in Egypt:**  
Egypt utilizes various renewable energy sources, including hydrothermal energy. While Egypt is not known for its large-scale hydrothermal power generation, it does have a few dams that provide hydroelectric power. The Regulatory Framework for hydrothermal energy in Egypt primarily falls under the jurisdiction of the New and Renewable Energy Authority (NREA), which operates under the Ministry of Electricity and Renewable Energy

**The key Laws and Regulations related to hydrothermal energy in Egypt include:**

- **Law No. 203 of 2014:** This Law establishes the Legal Framework for renewable energy projects in Egypt and sets the Rules and procedures for obtaining licenses and incentives for renewable energy projects,

including hydrothermal power

- **Ministerial Decrees and Regulations:** The NREA issues specific Regulations, Guidelines, and technical requirements for renewable energy projects, which include hydrothermal energy project
- **Renewable Energy Feed-in Tariff (FiT) Program:** Egypt has launched a FiT program to encourage the development of renewable energy sources. The program provides long-term contracts and guaranteed prices for renewable energy producers, fostering investment in solar, wind, and other clean energy projects.
- **Energy Efficiency Initiatives:** Egypt has implemented various energy efficiency programs and Policies aimed at reducing energy consumption and promoting sustainable practices. These initiatives include the implementation of energy-efficient building codes, the promotion of energy-efficient appliances, and the introduction of energy management systems.
- **Innovative Industries in Egypt**
  - **Industrial Innovation and Start-up Support:** Egypt has introduced Policies to promote innovation and entrepreneurship in various industries. The Government has established innovation hubs, technology parks, and business incubators to support the development of innovative industries and start-ups, fostering a culture of innovation and economic diversification;
  - **Strategic Industrial Development Plans:** Egypt has formulated strategic plans to guide the development of key industries, such as manufacturing, information technology, and renewable energy. These plans aim to attract investment, create job opportunities, and enhance competitiveness while ensuring sustainability and environmental protection; and,
  - **Green Industrial Zones:** Egypt has initiated the establishment of green industrial zones to encourage environmentally friendly practices and technologies. These zones provide incentives for industries to adopt sustainable production methods, promote resource efficiency, and reduce environmental impacts.

These Policies reflect Egypt's commitment to sustainable energy, responsible mineral resource management, and fostering innovation in industries. By promoting renewable energy, energy efficiency, responsible mining practices, and supporting innovative industries, Egypt aims to achieve sustainable development, reduce environmental impact, and drive economic growth. It is important to note that specific requirements, licensing procedures, and environmental Regulations can vary depending on the scale and location of mining and hydrothermal energy projects in Egypt. It is recommended to consult with relevant authorities such as the EMRA for mining-related inquiries or the NREA for hydrothermal energy projects to obtain the most accurate and up-to-date information.

## 10.5 Policy and regulations for climate change, resilience in coastal and marine ecosystems

Egypt has implemented several Policies and initiatives to address climate change and enhance the resilience of coastal and marine ecosystems.

### Here are some of the main Policies in place:

- **National Climate Change Strategy:** Egypt has developed a National Climate Change Strategy that outlines the Country's approach to mitigate greenhouse gas emissions, adapt to climate change impacts, and promote sustainable development. The Strategy focuses on various sectors, including energy, agriculture, water resources, and coastal areas.
- **National Adaptation Plan:** Egypt has formulated a National Adaptation Plan (NAP) to address the impacts of climate change. The NAP aims to enhance the resilience of vulnerable sectors, including coastal and marine ecosystems, through the development and implementation of adaptation measures and strategies.
- **Coastal Protection Projects:** Egypt has undertaken coastal protection projects to safeguard vulnerable coastal areas from erosion, Sea-level rise, and storm surges. These projects involve the construction of protective structures, such as breakwaters and Seawalls, to reduce the risks posed by climate change-induced coastal hazards.
- **Marine Protected Areas:** Egypt has established a network of Marine Protected Areas (MPAs) to conserve and sustainably manage its coastal and marine ecosystems. These MPAs serve as critical habitats for biodiversity and support the resilience of marine species and ecosystems in the face of climate change.
- **Blue Carbon Initiatives:** Egypt has initiated projects to preserve and restore coastal ecosystems, such as mangroves, Seagrass meadows, and salt marshes. These ecosystems act as "blue carbon" sinks, absorbing and storing significant amounts of carbon dioxide, thereby mitigating climate change impacts.
- **Renewable Energy Development:** Egypt has placed a strong emphasis on renewable energy development to reduce greenhouse gas emissions and combat climate change. Projects such as the construction of wind farms and solar power plants contribute to mitigating climate change while supporting the transition to a low-carbon economy.

By integrating climate considerations into planning and management practices, Egypt aims to safeguard its vulnerable coastal areas, protect biodiversity, and promote sustainable development in the face of a changing climate.

## 11. Recent regulatory efforts for Aquatic biodiversity Conservation in Egypt:

Egypt has been actively developing new Policies and Regulations (or/and developing the existent ones) related to the Blue Economy, which focuses on sustainable economic activities in the marine and coastal sectors. While I can provide a general overview, it's important to consult up-to-date sources for the most current information on Blue Economy Policies and Regulations in Egypt. Egypt has also established a number of Policies and Regulations related to biodiversity conservation, such as the National Biodiversity Strategy and Action Plan, the Protected Areas Law, and the Environmental Law. These Policies and Regulations are almost in line with the Convention on Biological Diversity (CBD), which is a Global Agreement signed by many Countries to protect biodiversity.

Here are some key aspects

1. **National Blue Economy Strategy:** Egypt has formulated a National Blue Economy Strategy to guide its efforts in harnessing the potential of its marine and coastal resources. The Strategy aims to promote sustainable economic development while ensuring the conservation and protection of marine ecosystems and biodiversity
2. **Marine Spatial Planning:** Egypt is developing Marine Spatial Planning Frameworks to guide the sustainable use of its marine resources. These plans help identify and allocate areas for different activities, such as fisheries, aquaculture, tourism, renewable energy, and conservation, in order to minimize conflicts and ensure the sustainable development of the Blue Economy.
3. **Tourism and Coastal Development:** Egypt's Policies and Regulations also address the sustainable development of coastal tourism. This involves promoting environmentally friendly practices in the tourism sector; ensuring the protection of sensitive coastal areas, and integrating sustainable tourism principles into development plans

*It's worth noting that the specific Policies and Regulations related to the Blue Economy in Egypt may continue to evolve as the Country further develops its Strategies and implements measures to support sustainable economic activities in the marine and coastal sectors*

### 4. Initiatives for the Future

- ✓ the Law No. 146 of 2021 for the Protection and Development of Lakes and Fisheries promulgated by Law
- ✓ National Development Plan, 2030
- ✓ The National Strategy for Climate Change, 2050
- ✓ The National Strategy for Blue Economy, 2050
- ✓ The Integrated Maritime Strategy for Africa for the year 2050

## 12. The Integrated Management of Coastal, Marine, and Lake areas in Egypt

The Egyptian coastline extends over the Mediterranean and the Red Sea for more than 3,200 km. The length of the Mediterranean coast is about 1,550 km, and the length of the Red Sea coast is about 1,705 km. Most coastal areas are characterized by aesthetic manifestations of ecosystems and natural habitats represented in coastal lagoons, salt marshes, mudflats, sand dunes, beaches along the Mediterranean coast,

mangrove trees, and coral reefs in the coastal Region of the Red Sea, in addition to the biodiversity associated with these marine and coastal habitats (Migratory coastal birds - turtles - fish). This diversity of resources and environmental characteristics of both the Mediterranean Sea and the Red Sea, the different conditions and environmental characteristics of each of them, and the coastal Region's exposure to severe and increasing pressures are among the challenges facing the integrated coastal management.

Population growth rates and economic growth rates also represent the most important social and environmental challenges faced by the integrated management of coastal zones, in addition to climate changes, which have become important issues because of their clear impact on most coastal lands, especially the low parts of them. And with the issuance of Law No. 4 of 1994 regarding environmental protection, amended by Law No. 9 of 2009 and its executive Regulations No. 1095 of 2011, the Ministry of Environment - EEAA was entrusted with preparing a National Strategy for integrated coastal management. The Strategy was prepared through a comprehensive review of coastal management systems. The Strategy included analyzing the current situation, defining priorities, drawing a road map and setting standards to measure the implementation of the strategy.

Among the most important pillars of the integrated coastal zone management Policy are:

- ❖ Issuing the Law No. 146 of 2021 for the Protection and Development of Lakes and Fisheries promulgated by Law
- ❖ Issuance of Environment Law No. 4 of 1994 and its executive Regulations
- ❖ Formation of the National Committee for Integrated Coastal Zone Management in 1994
- ❖ Issuing the “structural program for preparing the National plan for the integrated management of coastal zones in Egypt” in 1996
- ❖ Preparing Guidelines for environmental impact assessment procedures in 1996
- ❖ Preparing Guidelines for development in coastal areas in 1996
- ❖ Monitoring program for coastal waters, starting in 1998
- ❖ Preparing the second National environmental action plan in 2002
- ❖ Reforming and activating the Higher Committee for Integrated Coastal Zone Management in 2007
- ❖ Amending Environment Law No. 4 of 1994 by Law No. 9 of 2009 and the executive Regulations by Resolution No. 1095 of 2011 to include the concepts of the ICZM Protocol with specific articles.

The National Strategy for integrated coastal management was based on 3 main axes:

1. Strengthening support for an integrated coastal management Policy
2. Sustainable planning for the uses of coastal resources
3. Encourage and promote awareness-raising among stakeholders

In the framework of supporting the implementation of the National Strategy for integrated coastal management, a cooperation Protocol was prepared for the rehabilitation of the Northern Lakes and the Nile River Delta, and a number of guidebooks were prepared, namely:

1. Guidelines for studying the environmental impact assessment of River ports and marinas;
2. Guidelines for the application of environmental management systems in seaports; and,
3. Guidelines for preventing pollution from ships.

### 13. *Obstacles facing the National Regulatory Instrument in Egypt*

Although, little is currently known about the new Strategies emerging and the Regulatory documents that are currently developing at the National level for environmental management, biodiversity and Blue Economy Resources, the Regulatory mechanism and the legislation Instrument in Egypt is in coherence with the Regional, Continental and Global Instrument. However, there are still some gaps that might exist in National Policies and Regulations for biodiversity in Egypt compared to African and Global ones. Following is a general perspective on potential, based on historical trends for up to 2021.

#### 13.1 *General key gaps in the National Policies and Regulations for biodiversity in Egypt compared to Continental and Global ones*

- **Legal Framework:** One potential gap could be the absence or inadequacy of comprehensive biodiversity Laws and Regulations at the National level in Egypt, especially when compared to other African Countries or Global Frameworks. Effective Legal Frameworks provide a solid foundation for biodiversity conservation efforts and can help address specific issues and challenge
- **Institutional Coordination and Collaboration:** Effective coordination and collaboration among different institutions, government agencies, and stakeholders are crucial for biodiversity and environmental management. Ensuring effective interagency coordination, cooperation, and information sharing can help address gaps in Policy implementation and enhance overall environmental governance
- **Data Collection and Monitoring:** Reliable and up-to-date data on biodiversity and environmental indicators are crucial for evidence-based decision-making and effective monitoring. Gaps may exist in terms of data collection, monitoring systems, and the availability of comprehensive information. Enhancing data collection, monitoring, and knowledge-sharing mechanisms can help bridge this gap
- **Implementation and Enforcement:** One common challenge is the effective implementation and enforcement of existing Policies and Regulations. Gaps may exist in terms of the capacity, resources, and mechanisms needed to ensure compliance and enforce environmental Laws. Strengthening enforcement mechanisms and improving compliance is essential to effectively manage biodiversity and environmental issues
- **Integration of Biodiversity into Sectoral Policies:** Mainstreaming biodiversity considerations into various sectoral Policies, such as agriculture, infrastructure, and energy, is vital for holistic environmental management. Identifying and addressing gaps in integrating biodiversity objectives across different sectors can help ensure sustainable development practices and minimize negative impacts on ecosystems
- **Protected Areas:** Egypt may have fewer protected areas and a smaller percentage of its land and marine territories designated as protected areas compared to some African Countries and Global Standards. Expanding protected areas can help safeguard critical habitats and ecosystems. The following

are the major obstacles facing this vital domain:

1. Protected areas are largely undeveloped for tourism and are often regarded as a block to tourism development due to the Regulations that become an obstacle.
  2. The severe delay in introducing Marine Spatial Planning to Egyptian Laws and Policies, and even as a way to start managing protectorates optimally while benefiting from them in a sustainable and effective manner.
  3. Involving the public sector in Policy making for protectorates.
- **Species Conservation:** There might be gaps in species-specific conservation efforts. Some African Countries have specific Policies and Regulations focused on the protection of endangered or endemic species. Egypt might need to enhance its efforts in this regard, both at the National level and through International collaborations
  - **Biodiversity Monitoring and Research:** The availability and quality of biodiversity data, monitoring programs, and research initiatives in Egypt might be limited compared to other African Countries or Global Standards. Strengthening these aspects can provide a better understanding of the Country's biodiversity and support evidence-based decision-making
  - **International Commitments:** Egypt may have variations in the alignment of its National Policies and Regulations with International commitments and Agreements related to biodiversity conservation. Strengthening the integration of Global priorities, such as the Convention on Biological Diversity (CBD), can help ensure consistency and alignment with Regional and Global efforts

*It is important to recognize the progress that has been made and to continue to work towards effective biodiversity conservation efforts. Such Regulatory documents will provide the most accurate and up-to-date information on the specific gaps in National Policies and Regulations for biodiversity in Egypt and will certainly enhance this gap analysis.*

- **Financial Resources and Investment:** Adequate financial resources and investment are essential for effective biodiversity conservation and environmental management. The availability of funding for environmental projects, research, monitoring, and conservation efforts can be a significant gap. Strengthening financial mechanisms and exploring innovative funding sources can help bridge this gap

Overall, there may be gaps in Egypt's National Policies and Regulations for biodiversity conservation compared to other African and Global Policies. It is important to note that these gaps are based on citations, publications and general observations back to 2021 and may not reflect the current state of affairs in Egypt.

As announced earlier from official Government sources, enhanced documents are going to emerge in near future. Therefore, it's important to verify and consult up-to-date sources for the most current information on Egyptian Policies and Regulations regarding biodiversity and environmental management.

### 13.2 Specific gaps in Regulatory mechanism for specific marine domains

### 13.2.1. Gaps in Policy and regulations for Fisheries

While Egypt has implemented Policies and Regulations to regulate sustainable fisheries, aquaculture, and the protection of aquatic ecosystems, there may be gaps compared to Regional and International Instruments. Here are some potential gaps to consider

- **Ecosystem-Based Approach:** There may be a need to further integrate an ecosystem-based approach into fisheries and aquaculture Policies. This approach considers the interactions and dependencies between species, habitats, and ecosystems to ensure the sustainable management of fisheries and the protection of aquatic biodiversity
- **Fisheries Management Plans:** Egypt could benefit from developing comprehensive and science-based fisheries management plans. These plans provide a roadmap for sustainable fisheries, including measures catch limits, fishing seasons, and gear regulations. Incorporating long-term sustainability goals and adaptive management strategies can enhance the effectiveness of fisheries management.
- **Marine Spatial Planning:** Integrating Marine Spatial Planning into fisheries and aquaculture Policies can help address conflicts and optimize the use of marine resources. Spatial planning considers the various uses and activities in marine areas, including fisheries, aquaculture, conservation, and tourism, to promote sustainable and coordinated development
- **Data Collection and Monitoring:** Strengthening data collection and monitoring systems is crucial for informed decision-making in fisheries and aquaculture management. Robust data on fish stocks, catch composition, and ecosystem health can support evidence-based Policies and adaptive management approaches
- **Illegal, Unreported, and Unregulated (IUU) Fishing:** Enhancing measures to combat IUU fishing is important to protect fish stocks and promote sustainable fisheries
- **Strengthening surveillance, monitoring, and enforcement efforts,** as well as promoting Regional and International cooperation, can help address IUU fishing activities
- **Certification and Traceability:** Implementing certification schemes and traceability systems can enhance transparency and market access for fisheries and aquaculture products. Compliance with Internationally recognized standards, such as those developed by the Marine Stewardship Council (MSC) for sustainable fisheries, can support sustainable practices and market competitiveness
- **International Cooperation:** Strengthening Regional and International cooperation on fisheries and aquaculture management can help address shared challenges and promote sustainable practices. Collaborative efforts can include information sharing, joint research initiatives, and harmonization of Policies and Regulations
- **Climate Change Adaptation:** Given the impacts of climate change on aquatic ecosystems, integrating

climate change adaptation strategies into fisheries and aquaculture Policies is crucial. This can involve measures such as promoting resilient aquaculture practices, incorporating climate projections into fisheries management, and supporting adaptation initiatives for coastal communities

There is a significant gap in the Egyptian Laws and Policies related to aquaculture and fisheries, despite the advanced position achieved by the state in this field in particular.

According to the "Assessment of the integration of fisheries and aquaculture in Policy development" in Africa accomplished by food and agriculture organization of the united nations (FAO), which aims at assisting African Countries and Regional Economic Communities to improve the integration of the fisheries and aquaculture sector into their Policy documents, that deal with poverty eradication, foreign currency generation, food security, ecosystem approach to fisheries and to aquaculture, and gender mainstreaming. The Egyptian Policies and Strategies have many obstacles and defects in the following points (Table 2)

Table 2. Summary of the obstacles hinder improving the tourism Regulatory Instrument

Obstacle in the National Policies and Regulations	Description	The addressed Laws and Regulations
Inclusion of fisheries and aquaculture in poverty eradication at Country level (including the problem of fishing prohibiting months)	Fisheries and aquaculture are usually included in the assessment of the main economic sectors, but their potential to contribute to poverty eradication is fused within other components of the agricultural sector. It is interesting to note that the Countries that scored the highest in this dimension had specifically provided for the poverty eradication theme in their national fisheries and aquaculture plans. In reference to utilizing and promoting aquaculture, the approach taken is usually geared at improving household livelihoods by preventing exploitation of wild fish stocks, and to improve and sustain them.	Law No.146 of 2021 for the Protection and Development of Lakes and Fisheries  NBSAP 2017-2030
Inclusion of fisheries and aquaculture in foreign exchange generation at the Country level	Inclusion of Policies to take advantage of fisheries and aquaculture to introduce foreign currency, which is very important, through the operations resulting from fishing and aquaculture to export high-quality products	
Inclusion of fisheries and aquaculture in food security at the Country level		
Inclusion of fisheries and aquaculture in the ecosystem approach at the Country level		
Inclusion of fisheries and aquaculture in gender mainstreaming at the Country level		

The scoring methodology in the FAO report has been proposed for each indicator based on direct rating judgements. The score "negligible" (0) is given to Countries and Regional Economic Communities where there is little or no mention of the fisheries and aquaculture sector promoting the themes. In order to assign the score of "very high", the examined Policy documents must include an evaluation and/or assessment of the current situation of the fisheries and aquaculture sector and indicate consideration of the fisheries

and aquaculture sector with clear Policy proposals for action, e.g., goals, priorities and outcomes. For each Country, the Indicator of Inclusion of Fisheries and Aquaculture (IIFA) in the Policy documents is calculated by adding the scores assigned to each theme, as shown in Equation; poverty eradication ( $POV_{SCORE}$ ), foreign exchange generation ( $FEG_{SCORE}$ ), food security ( $FOOD_{SCORE}$ ), sustainable ecosystem ( $SUST_{SCORE}$ ) and gender mainstreaming ( $GEN_{SCORE}$ ). Identical numerical weights have been assigned to all themes.

For the fisheries sector, addressing these gaps requires continuous improvement and alignment with Regional and International Instruments, such as the Food and Agriculture Organization's Code of Conduct for Responsible Fisheries and the United Nations Sustainable Development Goals. It is essential to strengthen institutional capacity, promote stakeholder engagement, and prioritize sustainable practices to ensure the long-term health and productivity of fisheries and aquatic ecosystems in Egypt.

*13.2.2. Gaps in Policy and Regulations for Shipping, transportation, trade, maritime security, safety, and enforcement*  
While Egypt has implemented Policies and Regulations in the areas of shipping, transportation, trade, maritime security, safety, and enforcement, there may be gaps compared to Regional and International Instruments.

Here are some potential gaps to consider

- **Harmonization with International Standards:** Egypt's Policies and Regulations may not always fully align with International Standards and Conventions developed by organizations such as the International Maritime Organization (IMO). Harmonizing domestic Regulations with International Standards ensures consistency and promotes seamless International maritime operations
- **Regulatory Compliance and Enforcement:** The effectiveness of Regulatory compliance and enforcement measures in Egypt may vary. Strong and consistent enforcement is essential to ensure that Regulations are adhered to and that safety, security, and environmental Standards are upheld across the maritime sector
- **Regional Cooperation and Integration:** While Egypt has its own Policies and Regulations, there may be a need for further Regional cooperation and integration to address common maritime challenges. Collaborative efforts among neighbouring Countries can enhance maritime security, safety, and trade facilitation by promoting information sharing, joint operations, and harmonized approaches
- **Maritime Safety and Pollution Prevention:** Egypt may need to further strengthen its Regulations and practices concerning maritime safety and pollution prevention. This includes ensuring compliance with SOLAS and MARPOL Regulations, enhancing vessel inspection procedures, and promoting robust contingency plans for maritime accidents and oil spills
- **Trade Facilitation and Customs Procedures:** Simplified and efficient trade facilitation measures, including streamlined customs procedures, can enhance the competitiveness of Egypt's ports and promote International trade. Aligning trade and customs Regulations with International best practices can help reduce administrative burdens and facilitate smoother trade operations

- **Technological Advancements and Innovation:** Keeping pace with technological advancements and innovation in the maritime sector is crucial. Policies and Regulations should be responsive to emerging technologies such as digitalization, automation, and electronic documentation, which can improve operational efficiency and enhance safety and security
- **Capacity Building and Human Resources:** Ensuring sufficient capacity and expertise in the maritime sector is vital for effective implementation and enforcement of Policies and Regulations. Continued investment in training programs and the development of skilled professionals can strengthen Egypt's ability to address the evolving challenges in the maritime domain

It's important to note that these gaps are indicative and may vary depending on the specific aspects of Egypt's Policies and Regulations. Efforts are underway to bridge these gaps through Regional cooperation, capacity building, and continuous improvement of the Regulatory Framework to align with Regional and International Instruments

### *13.2.3. Gaps in Policy and Regulations for coastal and maritime tourism, marine ecosystem, environment and infrastructure*

While Egypt has implemented Policies and Regulations to regulate coastal and maritime tourism, protect marine ecosystems, and manage infrastructure, there may be some gaps that need attention.

The field of maritime transport is one of the most important fields affecting biodiversity, as there are many maritime navigation routes, and therefore the effects caused by ships during their voyages, such as spills, dumping of wastes, or even the impact it causes on the lives of marine organisms during their migration journey. Ballast water is one of the most important challenges facing marine biodiversity in Egypt and lack of restrictions and Regulations shall affect the whole marine ecosystems.

Therefore, the National and International interest in Policies and Laws related to maritime transport was great. Most of the legal gaps affecting biodiversity have been covered through International and Regional Agreements.

The most important of these Agreements are:

- ✓ The International Convention for the Prevention of Pollution from Ships (MARPOL)
- ✓ International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)
- ✓ Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LC), 1972 (and the 1996 London Protocol)
- ✓ International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004
- ✓ International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990

The following section include some suggestions for potential areas where improvements could be made:

((see also Table 3))

- **Enforcement and Compliance:** Strengthening enforcement mechanisms and enhancing compliance with existing regulations is essential. This includes ensuring that tourism operators, businesses, and individuals adhere to environmental protection measures and follow sustainable practices.
- **Integrated Coastal Zone Management:** There may be a need for improved coordination and integration among various Government Agencies responsible for coastal and maritime tourism, marine ecosystem conservation, and infrastructure development. This can help address potential conflicts and ensure a holistic approach to coastal zone management.
- **Sustainable Tourism Practices:** Enhancing Policies and Guidelines that promote sustainable tourism practices is important. This could include encouraging eco-friendly tourism activities, responsible waste management, and minimizing the impact of tourism on sensitive coastal ecosystems.
- **Climate Change Adaptation:** Integrating climate change adaptation strategies into coastal and maritime tourism Policies can help mitigate the impacts of climate change on coastal areas. This may involve considering sea-level rise, storm surge risks, and other climate-related challenges in infrastructure planning and development.
- **Stakeholder Engagement:** Ensuring active involvement and participation of local communities, non-governmental organizations, and relevant stakeholders in decision-making processes is vital. Engaging stakeholders can lead to a more inclusive and participatory approach to policy development and implementation.
- **Data Collection and Monitoring:** Strengthening data collection and monitoring systems related to coastal and maritime tourism, marine ecosystems, and environmental indicators is crucial. Robust data can inform evidence-based Policy-making, support monitoring of ecosystem health, and guide decision-making processes.
- **Infrastructure Planning and Management:** Improving infrastructure planning and management in coastal areas is necessary to ensure sustainable development. This involves considering the carrying capacity of the environment, minimizing the ecological footprint of infrastructure projects, and integrating nature-based solutions into coastal development plans.

Addressing these gaps would require continuous evaluation, stakeholder engagement, and Policy revisions to ensure that coastal and maritime tourism activities in Egypt are aligned with sustainable practices, protect marine ecosystems, and enhance the resilience of coastal areas in the face of environmental challenges.

Table 3 Summary of the obstacles hinder improving the tourism Regulatory Instruments

Obstacle	Description
conflicts between developing a mass market for tourism and discounting the environment and biodiversity	
Insufficient Policies to involve public sector in biodiversity conservation	Local communities have little interaction with tourism and ecotourism developments and there are few opportunities to improve habitat and species conservation management through engagement of such local stakeholders
the institutional framework is not sufficiently capacitated and mandated, for effectively mainstreaming biodiversity management	Vertical and horizontal coordination between relevant stakeholders (National versus Regional, Inter-Ministerial, etc.) is weak. Restrictions on tourism projects are implemented primarily through the EIA process overseen by EEAA and TDA. However, even if rigorously conducted, EIAs are site and project-specific tools that cannot assess cumulative impacts of different developments over larger areas.
There are conflicting Policy objectives between the tourism and the environmental enabling framework which are creating inefficiencies and ignoring the opportunity costs created by tourism development that largely discounts biodiversity values	
Scientific calculations for carrying capacities for every recreational site in the National Regulations to avoid loss of resource	
Tourism (and other sector planning), political and economic thinking and decision-making is focused largely upon short-term development gains particularly of mass tourism. Underpinning this thinking is a basic assumption that the number of hotel beds will equate to economic prosperity.	
EIA process is not supported by a SEA, there are no guidelines and after two decades it has not controlled tourism development. EIAs are essentially site specific and do not consider inter-connectedness and externalities affecting biodiversity.	Environmental impact assessment studies are prepared for projects separately without integration between the different projects, which may lead to the accumulation of environmental loads for the disposal of liquid waste in the Seas, as well as pollution loads that may lead to cumulative damage to marine organisms.
Important habitats, landscapes, species and ecosystem processes are vulnerable to tourism development and are outside the protected areas system, or in protected areas with weak management	
Ecotourism Policies are not defined well in Egyptian National Policies and Strategies	There are not enough voluntary procedures and incentives to encourage sound corporate environmental management and investment in tourist projects that support biodiversity. High-level statements in favour of ecotourism have so far had little tangible impact on the industry and have not stopped significant changes in important habitats.

#### 13.2.4. Gaps in Policy and Regulations for climate change, resilience in Coastal and marine ecosystems

Egypt has taken steps to address climate change and enhance resilience in coastal and marine ecosystems; however, there may be some gaps in existing Policies.

Here are potential areas where improvements could be made:

- **Implementation and Enforcement:** Ensuring effective implementation and enforcement of climate change and resilience Policies is crucial. There may be a need to strengthen monitoring and compliance mechanisms to ensure that proposed measures are effectively carried out and followed by relevant

stakeholders.

- **Integrated Coastal Zone Management:** Enhancing integration and coordination among different Government Agencies and sectors involved in coastal and marine ecosystem management and climate change adaptation is essential. This can help streamline efforts, avoid duplication, and foster a more comprehensive approach to coastal zone management.
- **Climate Change Adaptation in Coastal Infrastructure:** It is important to incorporate climate change considerations, such as Sea-level rise and increased storm intensity, into the planning and design of coastal infrastructure projects. This could involve updating design standards and guidelines to ensure the resilience of infrastructure to future climate impacts.
- **Monitoring and Research:** Strengthening monitoring systems and research efforts related to climate change impacts on coastal and marine ecosystems is necessary. This can help improve understanding of specific vulnerabilities, assess the effectiveness of adaptation measures, and inform evidence-based decision-making.
- **Community Engagement and Capacity Building:** Promoting community engagement and capacity building programs to raise awareness and empower local communities in climate change adaptation and resilience-building efforts is important. This can foster local ownership, knowledge sharing, and the implementation of community-based adaptation strategies.
- **Ecosystem-Based Adaptation:** There may be a need to further promote and prioritize ecosystem-based adaptation approaches in coastal and marine ecosystems. This involves recognizing the role of natural ecosystems, such as mangroves, Seagrass beds, and coral reefs, in enhancing coastal resilience and integrating them into adaptation strategies.

Addressing these gaps would require continuous evaluation, Policy revisions, and stakeholder collaboration. By addressing these gaps, Egypt can enhance its climate change resilience Strategies, protect its coastal and marine ecosystems, and ensure the long-term sustainability of its coastal areas in the face of a changing climate.

#### *13.2.5. Gaps in Policy and Regulations sustainable & hydrothermal energy, mining and innovative industries*

While Egypt has implemented policies to regulate sustainable energy, mineral resources, and promote innovative industries, there may be some gaps that need attention.

Here are potential areas where improvements could be made:

- **Policy Integration and Coordination:** Enhancing coordination and integration among different Government Agencies and sectors involved in sustainable energy, mineral resources, and innovative industries is essential. This can ensure a more coherent and comprehensive approach to Policy implementation and avoid potential conflicts or overlaps.
- **Renewable Energy Market Diversification:** While Egypt has made significant progress in promoting

renewable energy, there may be a need to diversify the renewable energy market further. Encouraging the development of various renewable energy sources, such as biomass, geothermal, and tidal energy, can help reduce reliance on specific technologies and enhance energy security.

- **Energy Efficiency Implementation:** Strengthening the implementation and enforcement of energy efficiency Policies and programs is crucial. This includes monitoring and ensuring compliance with energy efficiency standards in buildings, appliances, and industrial processes to maximize energy savings and reduce carbon emissions.
- **Sustainable Mining Practices:** There may be a need to further strengthen Regulations and enforcement mechanisms to ensure responsible and sustainable mining practices. This involves promoting environmental impact assessments, implementing stricter guidelines for mine reclamation and rehabilitation, and enhancing transparency and accountability in the mining sector.
- **Environmental Impact Assessment:** Strengthening the requirements for conducting comprehensive environmental impact assessments (EIAs) before granting mining and hydrothermal energy permits can ensure the sustainable development of these sectors and minimize their potential environmental impacts
- **Transparency and Ease of Doing Business:** Enhancing transparency in the licensing process and streamlining administrative procedures for obtaining mining and hydrothermal energy licenses could help attract more investment and promote ease of doing business in these sectors
- **Research and Development (R&D) Support:** Increasing investment in R&D and innovation in sustainable energy, mineral resources, and innovative industries can foster technological advancements and competitiveness. Providing financial support, incentives, and infrastructure for R&D activities can help drive innovation and facilitate the adoption of new technologies.
- **Social and Community Engagement:** Involving local communities and stakeholders in the decision-making process and ensuring their participation and benefit-sharing from mining and hydrothermal energy projects can help address social concerns and promote sustainable development
- **Compliance and Enforcement:** Strengthening mechanisms for monitoring and enforcing compliance with Regulatory requirements is crucial to ensure that mining and hydrothermal energy projects adhere to environmental, safety, and labour Standards
- **Rehabilitation and Closure Plans:** Requiring comprehensive plans for mine site rehabilitation and closure, as well as financial assurances or bonds to cover the costs, can help mitigate the potential long-term environmental and social impacts of mining operations
- **Capacity Building and Technical Expertise:** Building the capacity of Regulatory authorities,

improving technical expertise, and promoting knowledge sharing and collaboration between government agencies, industry stakeholders, and research institutions can help enhance the effectiveness of the regulatory frameworks

- **Access to Finance:** Enhancing access to finance for sustainable energy projects, mineral resource development, and innovative industries is crucial. This includes creating mechanisms to attract investment, providing financial incentives and support for small and medium-sized enterprises, and facilitating access to funding for clean energy and innovative projects.

Addressing these gaps would require continuous evaluation, stakeholder engagement, and Policy revisions. By addressing these gaps, Egypt can enhance its sustainable energy transition, ensure responsible mineral resource management, and foster a conducive environment for innovative industries to thrive, contributing to sustainable development and a green economy. It is important to note that the Egyptian Government may have already taken steps to address these gaps or introduced new Regulations since my last update.

#### *14. Recommendations to overcome the obstacles and challenges in Policies and Regulations on the National level:*

In conclusion, Egypt has established and implemented several Policies and initiatives that demonstrated Egypt's commitment towards addressing environmental management; biodiversity conservation and climate change; building the resilience of coastal and marine ecosystems. This National Regulatory mechanism and Policy Instrument are almost in coherence with the Regional, Continental and Global Instruments. Egypt is also committed to many International Agreements and commitments in the field of the Blue Economy,

including:

- ✓ United Nations Convention on the Law of the Sea
- ✓ Convention on Biological Diversity
- ✓ CBD for expressive waters
- ✓ Convention on Biological Diversity for Migratory Species
- ✓ Integrated Maritime Policy for Egypt 2030
- ✓ Integrated environmental management of coastal zones
- ✓ The Global Oceans Alliance and the Highly Ambitious Alliance for Nature and People initiative
- ✓ Waste management law

The following are some recommended suggestions to enhance the management mechanism and improve the value of Policies and Regulations on implementation

##### *14.1 For the integrated coastal marine area:*

The integrated coastal zone management (ICZM) method encourages the sustainable management of coastal zones and is dynamic, interdisciplinary, and iterative. It includes every stage of information gathering, planning (in the broadest sense), decision-making, management, and implementation monitoring. In order to evaluate the societal goals in a specific coastal area and take steps to achieve these goals, ICZM relies on

the informed involvement and collaboration of all stakeholders. Within the constraints imposed by natural dynamics, ICZM aims to balance environmental, economic, social, cultural, and recreational goals over the long run. In ICZM, the term “integrated” refers to both the integration of goals and the many tools used to achieve those goals. It entails integrating all pertinent Policy domains, industry sectors, and administrative levels. Preparation and implementation an integrated coastal marine area report (ICAM) is one of the most effective actions that shall solve the conflict between all the sectors in sustainable manner without causing negative impacts on marine biodiversity.

Egypt shall implement the ICZM due to the scarcity of marine resources and the mounting strain on beaches brought on by climate change impacts, which raise Sea levels and cause coastal erosion throughout the Mediterranean coast by causing mangrove retreats and coral reef bleaching in the Red Sea. Additionally, it is more crucial for the ICZM to lessen the cumulative effects of marine pollution from recreational facilities along the Egyptian coast, where shipping has increased and oil and gas exploration is being carried out in both the Red Sea and the Mediterranean, as well as the poor land-use planning along Egyptian coasts that extend to more than 3200 km in total both of the Red Sea and the Mediterranean.

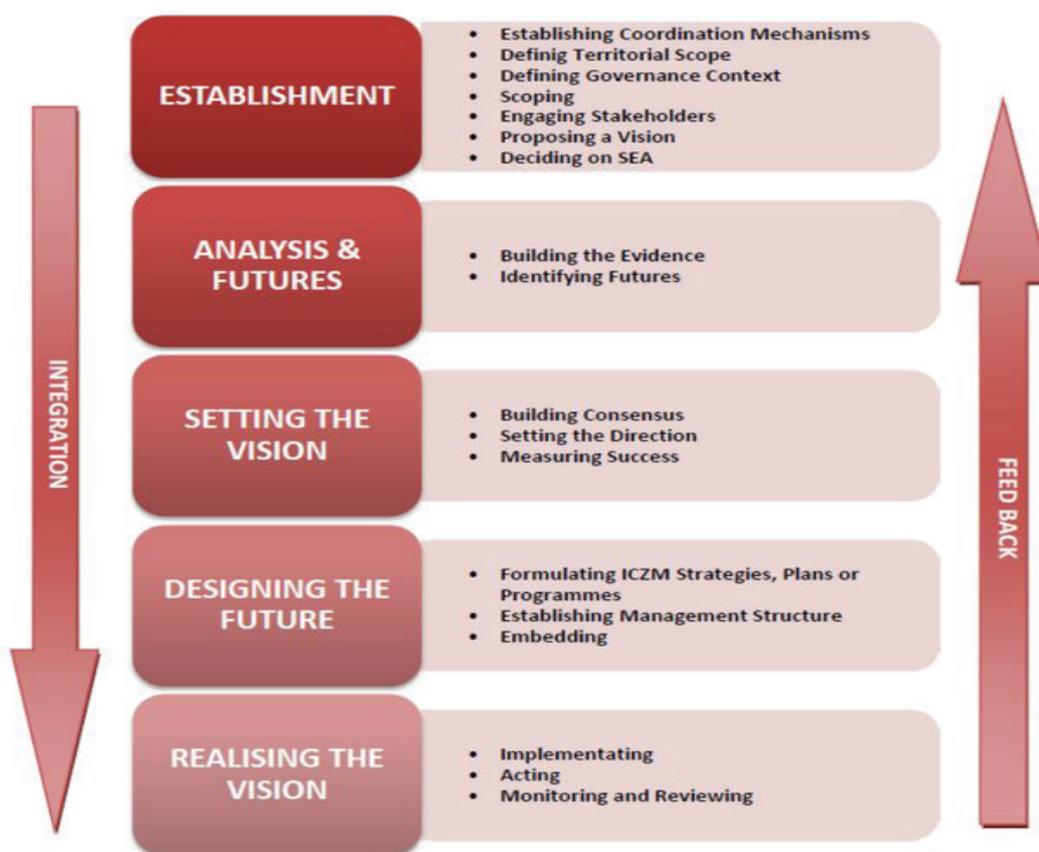


Figure 3 THE ICZM PROCESS Source: PAPIRAC, 2012

### 14.2 Marine Spatial Planning (MSP):

According to UNESCO the MSP is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that have been specified through a political process.

MSP is not an end in itself but a practical way to create and establish a more rational use of marine space

and the interactions among its uses, to balance demands for development with the need to protect the environment, and to deliver social and economic outcomes in an open and planned way. The following graph present the process and steps of Marine Spatial Planning (Ehler & Fanny, 2009)

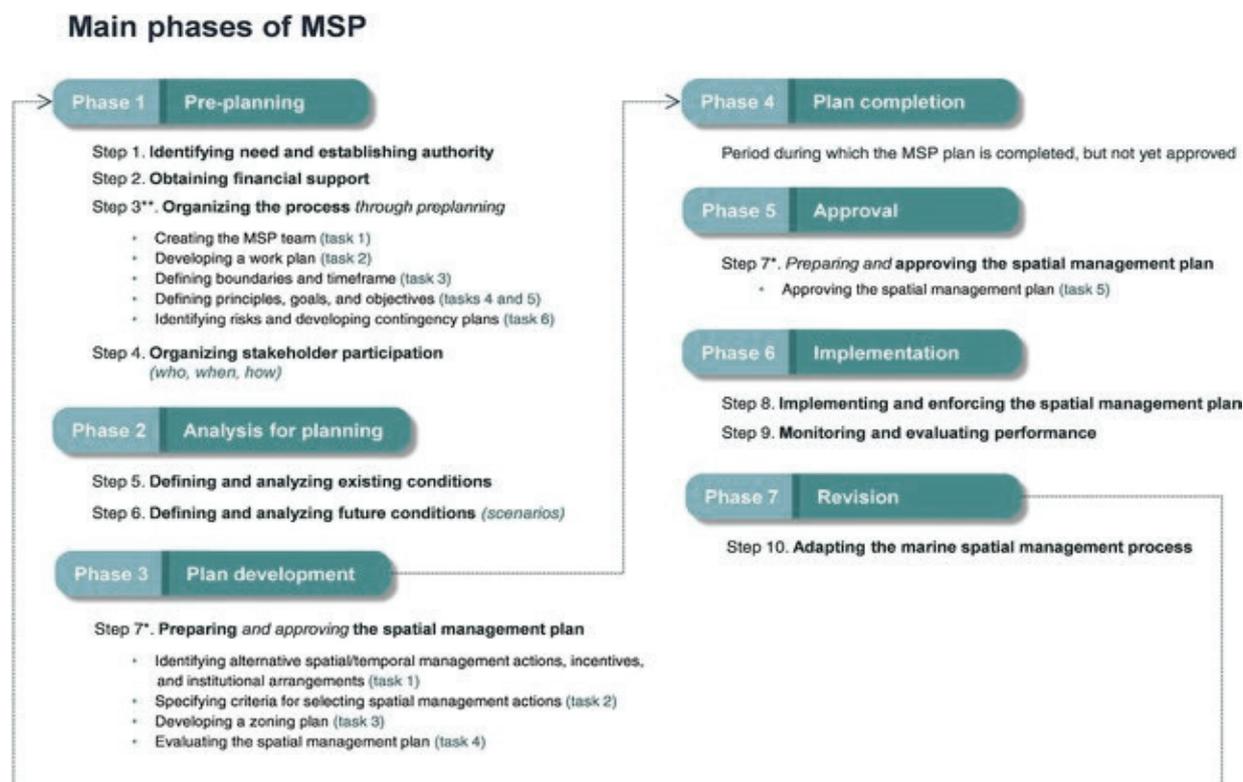


Figure 4 Main phases of Marine Spatial Planning (MSP). Phases are defined according to IOC-UNESCO (2017a), and corresponding key steps and tasks are defined as in the UNESCO's guide on MSP (Ehler & Fanny, 2009).

### 14.3 National red list for marine endangered species:

The process of launching a National Red List of Endangered Creatures is a big step towards preserving biodiversity in Egypt because it will help in many areas, whether controlling the current situation for preserving organisms. The list shall measure the pressures acting on species in the Egypt. In addition to the great scientific contributions that the list will be the cornerstone of, as the Egyptian coasts are very rich World rare organisms.

## 15 Recommendation to enhance the National legislation and Regulatory Instrument for Blue Economy and biodiversity:

### The need for comprehensiveness

Many of the activities that take place in the Seas, whether the Red Sea or the Mediterranean or even the Lakes, there may be weakness in presenting them clearly in view of the issue of biodiversity through National Policies and Laws. Damage to biodiversity and many other areas that need clear and solid Policies to preserve biological wealth from loss

### Treat Fragmentation

The lack of integration between different sectors on the National level is biggest challenge facing biodiversity sustainability and Policies due to the conflict of interests between different sectors giving a negative result on the big picture.

### **Necessity of transparency**

Lack of transparency in presenting the challenges and obstacles facing different sectors, either intentionally or unintentionally. In both cases, this problem is rooted at the National level, either for the interests of a beneficiary group, or to cover up a problem. We are here to talk about biodiversity and the imminent danger it faces through projects. It is not integrated within a clear National plan that seeks to conserve biodiversity.

## *16. Suggested Governance structure for Blue Economy in Egypt*

The Following is a diagram showing the proposed Governance structure and Regulatory mechanism for Blue Economy Strategy, biodiversity and marine environmental management.

Considering the Prime Minister is the highest authority responsible for overseeing the Blue Economy Strategy and providing overall direction. The Ministries play a crucial role in the implementation of the Strategy. The Ministry of Environment focuses on environmental conservation and sustainable practices, while the Ministry of Fisheries ensures the responsible management of marine resources

Other relevant Ministries, such as the Ministry of Energy and the Ministry of Transportation, contribute to the Strategy by promoting renewable energy sources and sustainable maritime transportation. The Ministry of Education and the Ministry of Science work together to support research, education, and innovation related to the Blue Economy.

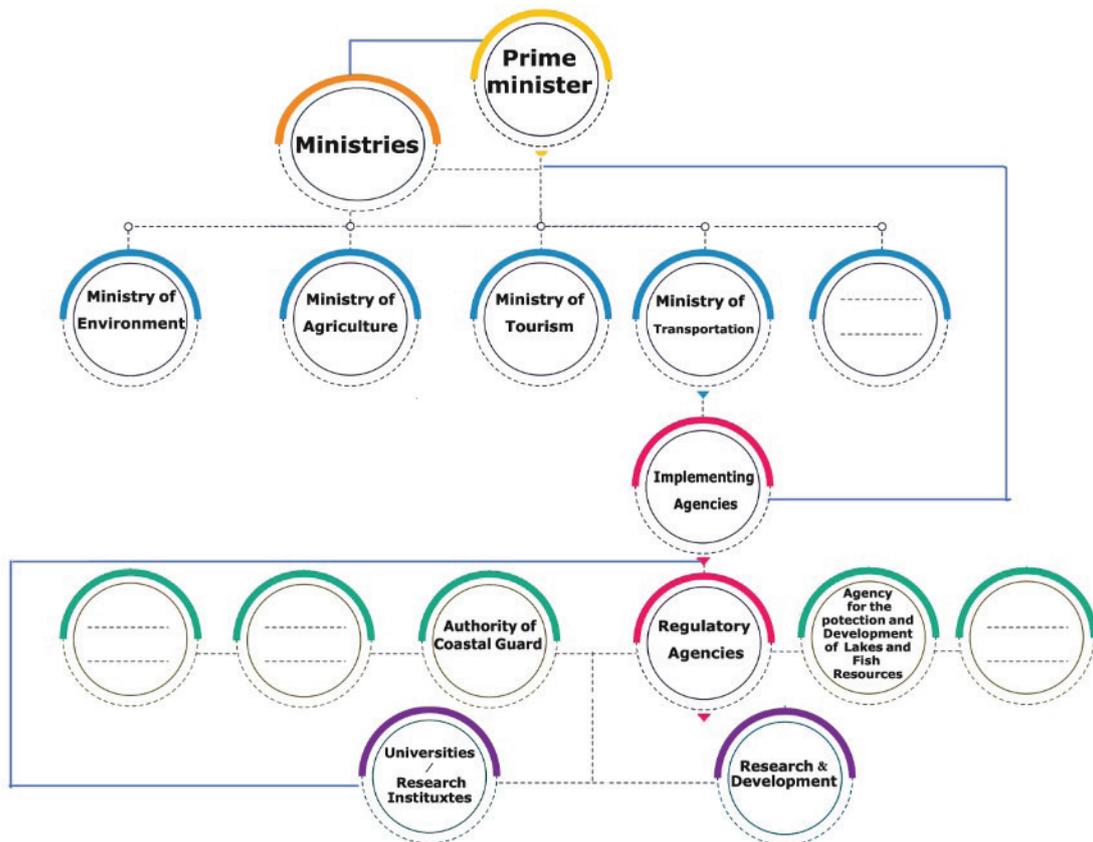


Figure 5. diagram showing the proposed Governance structure and Regulatory mechanism for Blue Economy Strategy, biodiversity and marine environmental management

Implementation Agencies are responsible for executing specific initiatives and projects outlined in the Strategy. Research and Development Agencies, along with Regulatory Agencies, provide scientific expertise, conduct research, and ensure compliance with relevant Regulations. Universities play a crucial role in conducting research, offering specialized programs, and fostering innovation in the Blue Economy Sector.

The Coast Guard plays a vital role in enforcing Regulations, ensuring maritime safety, and protecting marine ecosystems. Please note that this diagram provides a high-level overview and can be customized based on the specific context and requirements of the Blue Economy Strategy.

## 17. Summary and Conclusion

Egypt has established a comprehensive legislative framework and implemented relevant Policies and Regulations to support the development of the Blue Economy, marine biodiversity, and environmental management. These measures demonstrate the Country's commitment to sustainable practices in utilizing its marine resources. However, despite having sufficient legislation that is almost in-line with Regulatory Instruments at both the Continental and Global levels, there are gaps in the implementation Strategy that need to be addressed. To enhance the effective execution of the Blue Economy Strategy, a proposed Governance Structure has been put forward, with the Prime Minister serving as the highest authority. This Structure includes relevant Ministries, such as Environment, Fisheries, Energy, Marine Transportation, and Education/scientific research, working in coordination to ensure the successful implementation of the Strategy. Additionally, in the hierarchy of the proposed Governance, the implementation Agencies, research and development entities, Regulatory Agencies, Universities, and the Coast Guard play essential roles

in executing initiatives, providing scientific expertise, enforcing Regulations, and fostering innovation in the Blue Economy Sector. By adopting this proposed Governance Structure, Egypt aims to bridge the implementation gaps and fully capitalize on its marine resources while ensuring sustainability and environmental preservation.

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## 18.2 List of important links

- <https://www.eeaa.gov.eg/Topics/86/175/index>
- <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC206844/>
- <https://www.un.org/ar/chronicle/article/19988>

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